

Chalmers & Kubeck, Inc.

Valve Division

Quality System

Manual

Chalmers & Kubeck, Inc
Valve Division
100 Commerce Drive
Aston, PA 19014
(610) 494-7030

For the Assembly and Testing of Pressure Relief Valves
Conforming to ASME Code Section I and Section VIII Division 1

For the Repair of ASME Code Section I and VIII Division 1
Pressure Relief Valves in accordance with the
National Board Inspection Code (NB 23)

ISO 9001:2008

Control #: V00

Rev. 3
(09-01-09)

Chalmers & Kubeck, Inc. Valve Division Quality System Manual		Process No. VCK-TOC
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Chalmers & Kubeck, Inc. Approvals:

 9/1/09
Valve Division Quality Control Manager Date

 9-1-09
Quality Manager / Date
Management Representative

 9-1-09
President Date

National Board Acceptance:

National Board Date

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VP-9	DOT Procedure	VP-9	-	08-30-05

Chalmers & Kubeck, Inc. Approvals:

Joe Cohen _____ *9/1/09*
Valve Division Quality Control Manager Date

John P. ... _____ *9-1-09*
Quality Manager / Management Representative Date

Dennis Kubeck _____ *9-1-09*
President Date

National Board Acceptance:

Henry J. M'Ever _____ *10/16/09*
National Board Date

Quality System Manual

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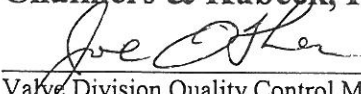
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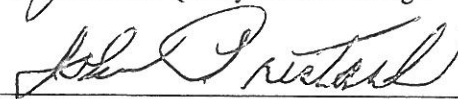
Reason for Revision: Update due to move to 100 Commerce Drive, Aston PA.; NBIC 3 Part Inspection Revision.

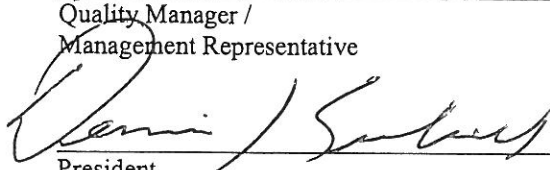
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Chalmers & Kubeck, Inc. Approvals:


Valve Division Quality Control Manager 12/4/08
Date


Quality Manager / 12/4/08
Management Representative Date


President 12/11/08
Date

National Board Acceptance:


National Board 12-4-08
Date

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VP-8	Field – Mobile Repair	VP-8	1	08-30-05
VP-9	DOT Procedure	VP-9	-	08-30-05

Chalmers & Kubeck, Inc. Approvals:

Joe O'Shea 8/31/05
 Valve Division Quality Control Manager Date

John Kubeck 8-31-05
 Quality Assurance Manager / Management Representative Date

John Kubeck 8/31/05
 President Date

National Board Acceptance:

Jim Hicke 8/31/05
 National Board Date

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VP-8	Field - Mobile Repair	VP-8	-	11-30-02

Chalmers & Kubeck, Inc. Approvals:

Joseph J. O'Hara 11/7/03
 Valve Division Quality Control Manager Date

John Prust 11-07-03
 Quality Assurance Manager / Date
 Management Representative

John Kubeck 11/7/03
 President Date

National Board Acceptances:

Kuang Satif 11/7/03
 National Board Date

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		<p>SUBJECT</p>	
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			ALL PREVIOUS REVISIONS OF CHALMERS & KUBECK, INC. QUALITY MANUAL ARE LOCATED ON THE FOLLOWING PAGES			
ALL	ALL	ALL	Previous editions of Quality Manuals incorporated into one Quality System Manual which also Complies with requirements cited in ISO9001:2000 (Initial Release of this QSM)		John Pristash	
Various	Various	Various	"VR" Shop Review and the renewal of the Certification for Section I and Section VIII Division I Pressure Relief Valves	1	<i>John Pristash</i> 8-31-05	<i>Janis Sutcliffe</i> 8/31/05
					John Pristash	Jim Hicks

CHALMERS & KUBECK, INC.

VALVE DIVISION
 East Brookhaven Rd., Brookhaven, Pa., 19015
 (215) 874-4366

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 APPROVED WJH

LOG OF REVISIONS

WITH COMPANY APPROVAL AND NATIONAL BOARD ACCEPTANCE

DATE	SECTION NO.	REVISION NO.	BRIEF DESCRIPTION	APPR.		NATL. BD. ACCEP.	
				INITIAL	DATE	INITIAL	DATE
4/2/81	ALL	1	"VR" SHOP REVIEW	<i>WJH</i>	4/2/81	HDR 109	4-27-8
3/16/84	ALL	2	"VR" SHOP REVIEW For renewal of air and acquisition of Steam and Field "VR"	<i>WJH</i>	3/16/84	<i>WJH</i>	6-15-8
2/28/85	ALL	3	"VR" Shop Review For extension to Sect. I Steam Valves Shop and Field	<i>WJH</i>	2/28/85	<i>WJH</i>	2/28/85
2/6/86	B	4	Nameplate change	<i>WJA</i>	2/6/86	JFB	2/7/86
11/16/99	ALL	10	VR SHOP REVIEW For renewal of air steam water acquisition of conversion	<i>J.C.F.</i>	11/17/99	<i>WJH</i>	11/17/99
8/28/02	ALL	11	VR SHOP REVIEW	<i>J.C.F.</i>	8/28/02	<i>K.J. Sauter Jr. E.S. Sougier</i>	8/28/02

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 DATE 1-13-85
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CHALMERS & KUBECK, INC.
 VALVE DIVISION
 150-80 COMMERCE DRIVE
 ASTON, PA. 19014
 (215) 494-7000

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WITH COMPANY APPROVAL AND NATIONAL BOARD ACCEPTANCE

DATE	SECT. NO.	REV. NO.	BRIEF DESCRIPTION	APPROVAL	NAT'L BOARD ACCEPTANCE
				INITL'S /DATE	INITL'S /DATE
1/11/88	ALL	5	"VR" Shop Review for renewal of certification at above location.	WJA 1-13-88	WRD 1-15-88
8/16/88	10	6	Addition of portable gauge calibration as shown in 2.4 "C".	WJA 8/16/88	WRD 8/16/88
2/1/91	ALL	7	"VR" Shop Review for the renewal of the certification for Section I and Section VIII Division I Pressure Relief Valves	WJA 2/1/91	JBC 2/1/91
1/11/94	ALL	8	National Board review for renewal of the "VR" Certification.	WJA 1/11/94	WRD 1/12/94
12/18/96	ALL	9	"VR" Shop Review for the renewal of the certification for Section I and Section VIII Division I Pressure Relief Valves.	JOS 12/18/96	JOS 12/18/96

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 APPROVED [Signature]

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				INITIALS / DATE	INITIALS / DATE
01/01/91	ALL	3	Manual Review for the renewal of Stamps for Section I and VIII Code compliance	WJM 2/1/91	Joc 2/1/91
01/11/94	ALL	4	Manual Review for the renewal of Stamps for Section I and VIII Code compliance	WJM 1-11-94	[Signature] 1/11/94
12/18/96	ALL	5	Manual Review for the renewal of Stamps for Section I and VIII Code compliance.	JOS 12-18-96	[Signature] 12/18/96
11/16/99	ALL	6	Manual Review for the renewal of Stamps for Section I and VIII Code compliance	JOS 11-17-99	[Signature] 11/17/99
8/28/02	ALL	7	MANUAL REVIEW FOR THE RENEWAL OF STAMPS FOR SECTION I AND VIII CODE COMPLIANCE.	JOS 8-28-02	K.J. Sumb... 8/28/02 C. G. Saugus

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 APPROVED WJA

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DATE	SECT. NO.	ENV. NO.	BRIEF DESCRIPTION	APPROVAL INITIALS /DATE	NAT'L BOARD ACCEPTANCE INITIALS /DATE
7/01/86	ALL	0	National Board shop review for the acquisition of Section I and Section VIII, Division I Code Stamps for the assembly of Consolidated Pressure Relief Valves	WJA 7/3/86	WJA 7/3/86
1/11/88	ALL	1	Early Renewal of V & UV Certifications at new location.	WJA 1/12/88	WJA 1/12/88
8/25/90	iiii	2	Letter of Authorization Revision	WJA 9/6/90	WJA 9/11/90
	3	2	Revised Water Test Capabilities	WJA 9/6/90	}
	3	2	3.1 Revise per Code Case 2079	WJA 9/6/90	
	10	2	Omit para. 3.1.2	WJA 9/6/90	
	13	1	Add. of Addendum to modify parts in accordance with Code Case 2079	WJA 9/6/90	
	7	2	2.1 Notation Added	WJA 9/6/90	
	12	2	Sales Order Form CK105 Revised due to computerization of the order processing.	WJA 9/6/90	WJA 9/11/90

Chalmers & Kubeck, Inc.

Valve Division

Quality System Manual

Scope

Chalmers & Kubeck Inc. Valve Division is a job shop that performs new assembly and repair of Valves. We provide Refineries, Chemical Companies, Steel Mills and Power Plants with new Valves, and also repair and refurbish valves in service. Our major fields of expertise are as follows:

- the assembly and testing of pressure relief valves which will bear the “V” or “UV” stamp
- the disassembly, repair and testing of pressure relief valves which will bear the “VR” stamp
- the disassembly, repair and testing of valves other than pressure relief

Chalmers & Kubeck, Inc. Valve Division has established, documented, implemented and maintains a Quality System for the Assembly and Testing of New and Repaired Valves in accordance with the National Board Inspection Code (NB 23) and A.S.M.E. Section I and Section VIII Division 1. Valves other than pressure relief shall be repaired in accordance with manufacturers and accepted industry standards.

Chalmers & Kubeck, Inc. Valve Division has established, documented, implemented and maintains a Quality Management System in accordance with ISO 9001:2008 requirements.

Chalmers & Kubeck, Inc.

Valve Division

Quality System Manual Master List

<u>Control Number</u>	<u>Assigned To</u>	<u>Area</u>	<u>Revision Level/Date</u>
V00	John Pristash	QA Mgr./Mgmt Rep.	Rev.3 / 09-01-09
V01	Dennis Kubeck	President	Rev.3 / 09-01-09
V02	Jim Moore Sr.	General Manager	Rev.3 / 09-01-09
V03	Joe O'Shea	Valve Division Manager	Rev.3 / 09-01-09
V04	Jim Moore Jr.	Valve Division Foreman	Rev. 3 / 09-01-09
V05	Dresser Industries		Rev. 3 / 09-01-09
V06	National Board		Rev. 3 / 09-01-09

Chalmers & Kubeck, Inc.

Valve Division

Product Work Scope

1.0 Purpose

- To ensure that all Pressure Relief Valves repaired and tested by Chalmers & Kubeck, Inc. in our shop and field locations, will again meet the requirements of the applicable sections of the A.S.M.E. Code Section I and Section VIII Division 1. All activities shall be controlled by this location.
- To ensure all Pressure Relief Valves assembled and tested (as authorized by Dresser Industries) are in accordance with the requirements of A.S.M.E. Code Section I and Section VIII Division 1.
- To ensure valves other than pressure relief are repaired and tested to meet manufacturer and industry standards.
- To ensure access to all drawings, calculations, specifications procedures, process sheets, repair procedures, records, test results and any other documents necessary for the A.S.M.E. Inspectors to perform their duties.

2.0 Scope

- 2.1 These procedures apply to all assembled and tested, and repaired and tested Pressure Relief Valves in accordance with National Board Inspection Code (NB 23) and A.S.M.E. Section I and Section VIII Division 1. Repaired valves
- (1) other than pressure relief are also included. These procedures address special processes including machining, welding, post weld heat treatment or non-destructive examination or combinations thereof.

3.0 Materials & Conversions

- 3.1 Only new unmodified parts purchased from Dresser Industries or their Assemblers shall be used in the assembly of "New" Pressure Relief Valves.
- 3.1.1 Rework of any "New" Pressure Relief Valve parts shall be limited to light lapping, machining, and conversion of parts as described in Procedure VP-1 Parts Conversion by Assemblers.
- 3.2 Pressure Relief Valve parts used for "Repaired" valves shall be purchased directly from the original manufacturer or its authorized representative. Only in an extreme emergency, when the part is not readily available, a consideration will be given to fabrication.
- 3.2.1 Any *material* used in the fabrication of "Repaired" valve parts shall be in accordance with manufacturer's specifications.

Chalmers & Kubeck, Inc.

Valve Division

Product Work Scope

3.0 Materials & Conversions (continued).

3.2.2 All *fabricated parts* used in “Repaired” valves shall be machined to manufacturer’s drawings and specifications.

3.2.3 Chalmers & Kubeck, Inc. may perform conversions on “Repaired” valves. Typical conversions may include:

- Installation of liquid trim;
- Installation of bellows;
- Installation of steam internals;
- Installation of soft seat.
- Changes in media service.

3.3 For repaired valves other than pressure relief, parts shall be purchased directly from the manufacturer or its authorized representative. Only in an extreme emergency, when the part is not readily available, a consideration will be given to fabrication.

4.0 Size and Pressure Limits of Pressure Relief Valves.

4.1 Steam

- (2)
- Inlet size up to 8 inch, max pressure 1500 psi;
 - When deemed necessary by valve performance, or when valves set are beyond these parameters, valves will be tested using a lift assist device.

4.2 Air

- (2)
- Inlet size up to 8 inch, max pressure 1500 psi;
- (1)
- Inlet size up to 2 ½ inch, max pressure 3000 psi;
 - When deemed necessary by valve performance, or when valves set are beyond these parameters, valves will be tested using a lift assist device.

4.3 Water

- Inlet size up to 6 inch, max pressure 1200 psi;
- For pressure exceeding capabilities of water test stand or when deemed necessary, test stand 010A and B will be used.
- When deemed necessary by valve performance, or when valves are set beyond these parameters, valves will be tested using a lift assist device.

Chalmers & Kubeck, Inc.

Valve Division

Product Work Scope

5.0 Valve types to be tested will include all safety, safety relief to include Pilot associated with Section I and Section VIII Division 1.

6.0 Valve Testing Capabilities:

- Ingersol Rand Air compressor-
 - maximum allowable working pressure 1600 psi;
 - maximum air test pressure 1500 psi;
- Air Accumulation of 85 cubic feet;
- Hydrosteam Industries Electric Boiler-
 - maximum allowable working pressure 1635 psi;
 - maximum steam test pressure 1550 psi;
- Steam Accumulation of 85 cubic feet;
- Air test vessels of:
 - 10 cubic feet, MAWP of 1500 psi, 3 inch nozzle;
 - 30 cubic feet, MAWP of 1750 psi, 8 inch nozzle;
- (1) -1/4 cubic feet, MAWP of 3000 psi, 2 1/2 inch nozzle;
- Steam test vessels of:
 - 10 cubic feet, MAWP of 1750 psi, 3 inch nozzle;
 - 40 cubic feet, MAWP of 1750 psi, 8 inch nozzle;
- Water test vessels of:
 - 22 cubic feet, 7.5 cubic feet, MAWP of 2275 psi, 6 inch nozzle;
- Dresser Electronic Valve Testers – Model # 2566-2; Model # 2567
- Dresser Model 1566-2 Hydroset Test Device
- Mobile Facilities – one mobile truck which includes a drill press, bench grinders, lapping facilities, portable boring, milling and facing machinery, air motors, hand tools, NDE equipment and hydraulic testing equipment.
- (1) ● VA Power Steam Generator, MAWP 1750 psi, maximum steam pressure 1550 psi;
- (1) ● Pilot Valve Test fixture – MAWP 3000 psi.
- (1) ● Nitrogen Bottle Test fixture – MAWP 3000 psi
- (2) ● Portable Test Stand Air/Gas, MAWP 1500 psi
- (2) ● Portable Test Stand Water, MAWP 5200 psi

Chalmers & Kubeck, Inc.

Valve Division

Statement of Responsibility and Authority

Chalmers & Kubeck, Inc. Valve Division has established, documented, implemented and maintains a Quality System for the Assembly and Testing of New and Repaired Pressure Relief Valves in accordance with the National Board Inspection Code (NB 23) and A.S.M.E. Section I and Section VIII Division 1. All new assembled and tested, or repaired Pressure Relief Valves shall meet the requirements of that code. In addition, Chalmers & Kubeck, Inc. "VR" Stamp shall be applied only to pressure relief valves which meet both of the following conditions:

- Valves that are stamped with an ASME "V" or "UV" Code symbol stamp and have been capacity certified by the National Board;
- Valves which have been disassembled, inspected and repaired as necessary, such that the valves condition and performance are equivalent to the standards for new valves.


Valves other than pressure relief shall be repaired to meet manufacturers and accepted industry standards.

The requirements of this Quality System Manual shall be followed. The Quality Control Manager, or his appointed designee, shall have full authority to stop production and any work where, in his opinion, the quality of the work is insufficient to meet the ASME or National Board Code requirements. This authority shall also apply to valves other than pressure relief. In the event of disagreement concerning the above, or regarding the implementation of Quality Control function described herein, they will be referred directly to the President of the company for resolution.

The Quality Assurance Manager is responsible for the preparation, issuance and maintenance of the Quality System Manual, as well as the identification and resolution of system nonconformities. Revision approval, additions and deletions to the written Quality System Manual will be the responsibility of the Quality Assurance Manager. Authority to carry out these activities, according to the specifications of this manual and the authorized agency (National Board) is granted by the management of Chalmers & Kubeck, Inc.

All revisions to the written Quality System Manual as described herein shall be submitted to the National Board by transmittal letter for acceptance prior to implementation.

Chalmers & Kubeck, Inc. Valve Division has established, documented, implemented and maintains a Quality Management System in accordance with ISO 9001:2008 requirements.

 9-01-09
Dennis Kubeck – President Date

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.1
SUBJECT: MANAGEMENT RESPONSIBILITY	Page: 1 of 3
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

1.0 Management Commitment

Executive Management shall provide evidence of its commitment to the quality management system and continually improving its effectiveness by:

- a) Communicating to the organization the importance of meeting customer as well as statutory and regulatory requirements.
- b) Establishing the quality policy and quality objectives.
- c) Conducting Executive Management Reviews.
- d) Ensuring the availability of resources.
- (3) e) Maintaining customer focus to ensure that customer requirements are determined and are met with the aim of enhancing customer satisfaction.

2.0 Quality Policy

- (3) *To exceed customer expectations by continuously improving the effectiveness of the Quality Management System through management leadership, employee involvement and compliance with ISO 9001:2008 requirements.*

Executive Management is responsible for ensuring the Quality Policy and Quality Objectives are communicated and understood at all levels throughout the organization.

3.0 Quality Objectives

- The achievement of products which satisfy customers needs, expectations and requirements;
- Continual improvement of the products, processes and Quality Management System within Chalmers & Kubeck;
- Ensure an environment where people are fully involved through provision of adequate resources;
- Ensure continued suitability of the Quality Policy, Quality Objectives and Quality Management System through Management Reviews.

4.0 Organization

4.1 Resources

4.1.1 Executive Management is responsible for identifying resource requirements and to provide necessary resources, work environment and infrastructure including the assignment of competent personnel, for management, performance of work, and verification activities.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.1
SUBJECT: MANAGEMENT RESPONSIBILITY	Page: 2 of 3
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(3) **4.1.2** Executive Management is responsible for determining the necessary competence of personnel performing work affecting conformity to product requirements. Competence shall be determined based on appropriate education, training, skills and experience. Responsibilities, Duties and Qualifications are determined through use of Position Descriptions (VPD – Section 6) and the Organizational Chart (VOrgChart).

4.1.3 Executive Management shall ensure that communication processes are established within the organization and that communication takes place regarding the effectiveness of the Quality Management System. This shall be accomplished through employee ISO Training, Internal Quality Audits, Management Reviews, Nonconformance Reports, and the organization intranet.

4.2 Quality Management System Planning

(3) **4.2.1** Executive Management shall ensure that the planning of the quality management system is carried out in order to meet the requirements of the ISO 9001:2008 standard, as well as the quality objectives. And, that the integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.

(3) **4.2.2** Outsourced processes shall be controlled per VCK-4.6 (Purchasing).

4.3 Management Representative

4.3.1 The Management Representative in conjunction with the Quality Manager are responsible for the Quality Management System; responsible for:

- (3)
- ensuring that a Quality Management System is established, implemented, and maintained in accordance with ISO 9001:2008;
 - reporting on the performance of the Quality Management System to Executive Management for review and as a basis for continuous improvement of the Quality Management System;
 - ensuring the promotion of awareness of customer requirements throughout the organization.

4.3.2 The Management Representative has the full authority of the President to enforce adherence to the Company's Quality Management System.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.1
SUBJECT: MANAGEMENT RESPONSIBILITY	Page: 3 of 3
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

5.0 Management Review

The Management Representative ensures that Executive Management reviews the Quality Management System twice per calendar year to verify its continuing suitability, adequacy and effectiveness. Records of these reviews shall be documented using the Executive Management Review Checklist (VMRCkList) and maintained per VCK-4.16, Control of Quality Records.

6.0 References

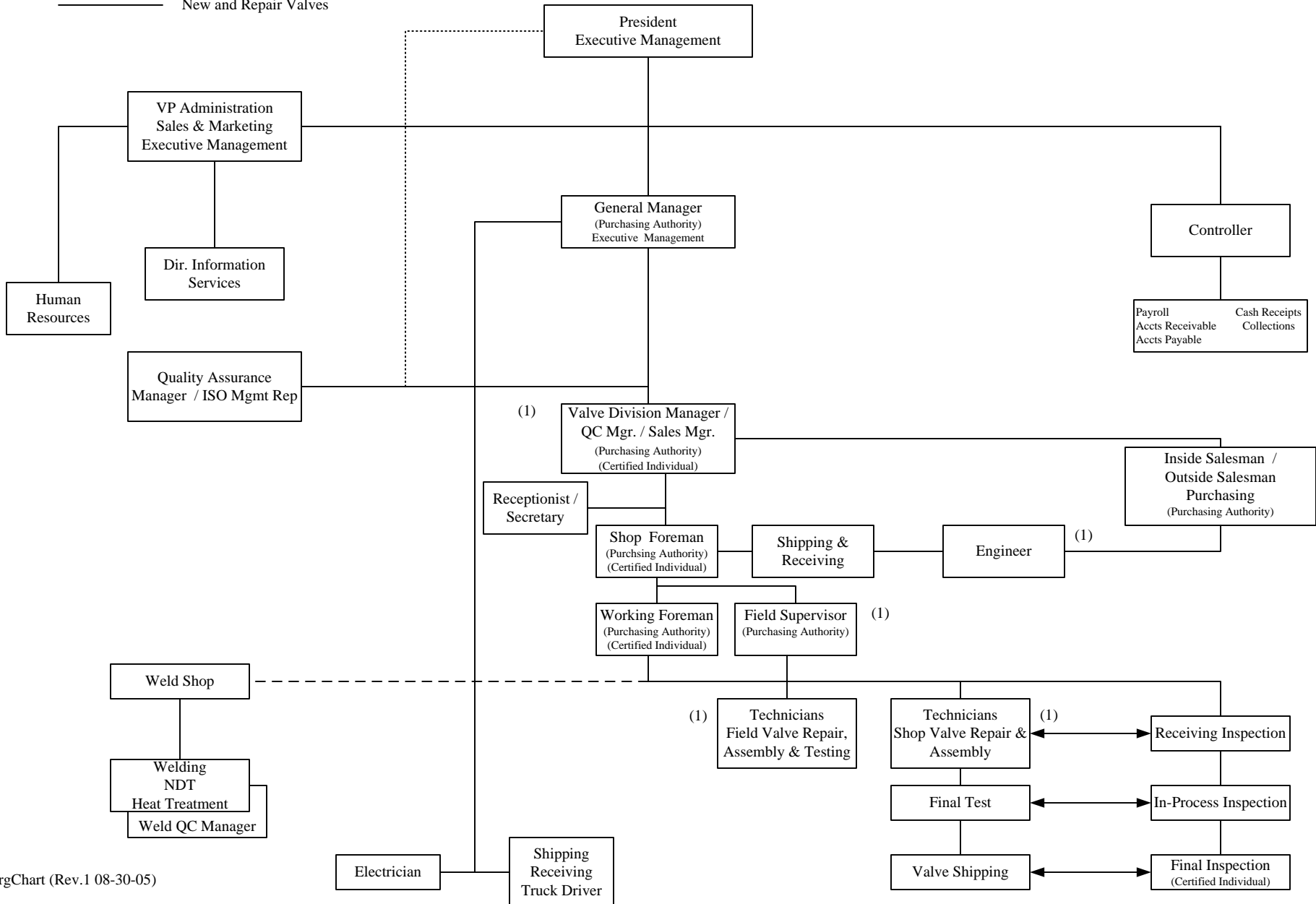
- (3) ISO 9001:2008 Clause 5 - Management Responsibility
 - Position Descriptions (VPD- Section 6)
 - Organizational Chart (VOrgChart)
 - Executive Management Review Checklist (VMRCkList)

Chalmers & Kubeck, Inc.

Valve Divisional - Organizational Chart

Legend:

- - - - - Repair Valves Only
- New and Repair Valves



Chalmers & Kubeck Inc.
Valve Division
Executive Management Review Checklist

Date:

Attendees:

● ***Management Review Inputs:***

● Results of Internal/External Quality Audits:

● Customer Feedback:

● Process Performance and Product Conformity:

● Status of Preventive and Corrective Actions:

Chalmers & Kubeck Inc.
Valve Division
Executive Management Review Checklist

- Follow- up Actions from previous Management Reviews:
- Changes that could affect the Quality Management System:
- Recommendations for Improvement:
- Suitability of Existing Quality Policy and Quality Objectives:
- Review Effectiveness of Existing Quality Management System:

Chalmers & Kubeck Inc.
Valve Division
Executive Management Review Checklist

● ***Management Review Outputs: (Decisions and Actions to be Taken Related To:)***

- Improvement of the Effectiveness of the Quality Management System and Its Processes:

- Improvement of Product Related to Customer Requirements:

- Resource Needs:

- Conclusions:

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.2
SUBJECT: QUALITY MAMAGEMENT SYSTEM	Page: 1 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

1.0 Purpose

- The realization of products and services the quality of which satisfy customer needs, expectations and requirements;
- To provide confidence to our customers in Chalmers & Kubeck, Inc. ongoing capability to satisfy their requirements.

2.0 Scope

The Quality Management System refers to all activities within Chalmers & Kubeck, Inc. which relate to quality, including products and services, processes, operations and customer satisfaction.

3.0 Responsibility

- 3.1** Executive Management is responsible for effectively implementing the Quality Management System.
- 3.2** Executive Management shall ensure the integrity of the Quality Management System when changes to the Quality Management System are planned and implemented.
- 3.3** The Management Representative is responsible for maintaining and revising the Quality System Manual.
- 3.4** Quality Planning is carried out by ensuring that **all employees** follow the Safety Valve In-Process Inspection and Work Report, the Valve Inspection Work Sheet (line valves), the Repair & Inspection Report for Control Valves, the Limatorque Inspection Worksheet, the Procedures/Process Maps and Work Instructions as identified in the Quality System Manual.
- 3.5** The Department Manager and Foreman are responsible for planning and carrying out production and servicing under controlled conditions. Controlled conditions shall include, as applicable:
- a) the availability of information that describes the characteristics of the product;
 - b) the availability of work instructions, as necessary;
 - c) the use of suitable equipment;
 - (3) d) the availability and use of monitoring and measuring equipment;
 - e) the implementation of monitoring and measurement;
 - (3) f) the implementation of product release, delivery and post-delivery activities.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.2
SUBJECT: QUALITY MAMAGEMENT SYSTEM	Page: 2 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

4.0 Documentation of the Quality System

The Quality Management System documentation consists of the following:

- a) statement of Quality Policy and Quality Objectives;
- b) the Quality Manual;
- c) documented procedures required by ASME Section I A-300
- d) documented procedures required by ASME Section VIII Division 1 Appendix 10
- e) documented procedures required by National Board Inspection Code NB-23
- (3) f) documented procedures and records required by ISO 9001:2008;
- (3) g) documents, including records needed by Chalmers & Kubeck, Inc. to ensure effective planning, operation and control of its processes;
- h) records required by ASME Section I A-300
- i) records required by ASME Section VIII Division 1 Appendix 10
- j) records required by National Board Inspection Code NB-23

5.0 References

- ASME Section I
- ASME Section VIII Division 1
- National Board Inspection Code NB-23
- (3) Clause 4.0 of ISO 9001:2008 Quality Management System
- Quality System Matrix (VQSMTRX)
- Quality System Process Matrix (VQSPMTRX)

Chalmers & Kubeck, Inc.

Valve Division

Quality Management System Matrix

C&K Process No.	CUSTOMER	QA MANAGER / MANAGEMENT REPRESENTATIVE	DEPARTMENT	GENERAL MANAGER	SALES AND MARKETING	FINANCE AND ADMINISTRATION
4.1		MANAGEMENT RESPONSIBILITY				
4.2	△	QUALITY MANAGEMENT SYSTEM	⊗	⊗	⊗	
4.3	⊗		CONTRACT REVIEW			⊗
4.4			DESIGN & DEVELOPMENT			
4.5		DOCUMENT CONTROL			⊗	
4.6		PURCHASING				
4.7	△		CUSTOMER PROPERTY			
4.8			IDENTIFICATION & TRACEABILITY			
4.9		CONTROL AND VALIDATION - PRODUCT & SERVICE PROVISION				
4.10			MONITORING & MEASUREMENT			
4.11		CONTROL MONITOR/ MEASURING DEVICES				
4.12			MONITOR/MEAS STAUSE OF PRODUCT			
4.13		CONTROL OF NONCONFORMING PRODUCT				△
4.14	△	CORRECTIVE & PREVENTIVE ACTION				
4.15	△		PRESERVATION OF PRODUCT			
4.16		CONTROL OF QUALITY RECORDS				
4.17		INTERNAL QUALITY AUDITS	⊗	⊗	⊗	
4.18		COMPETENCE, AWARENESS AND TRAINING				



= Major Contributor



= Receives output



= Lead Responsibility

Chalmers & Kubeck, Inc.
Valve Division Quality System Manual Section

PROCESS MATRIX	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11	4.12	4.13	4.14	4.15	4.16	4.17	4.18	DEF	PD	
Executive Management	●	●							●					●					●	●	
ISO Mangement Rep.	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Information Services																		●	●		
General Manager	●	●	●	●	●	●			●	●						●		●	●	●	
Purchasing		●			●	●		●					●	●	●			●	●		
Department Manager		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Foreman		●	●		●	●	●	●	●	●	●	●	●	●	●	●		●	●		
Working Foreman		●	●		●	●	●	●	●	●	●	●	●	●	●	●		●	●		
Machinist, Mechanic		●			●			●	●	●	●	●	●		●			●	●		
Draftsman		●			●			●	●		●							●	●		
Shipping & Receiving, Truck Driver		●			●			●	●				●		●			●	●		
Electrician		●			●			●										●	●		
Salesman		●	●	●	●									●				●	●		

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.3
SUBJECT: Contract Review	Page: 1 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev.3 09-01-09

1.0 Purpose

- 1.1** Before submission of a tender, or at the acceptance of a contract or order the tender, contract, or order will be reviewed to ensure that:
- (3) a) requirements specified by the customer, including the requirements for delivery and post delivery activities are adequately defined and understood (current revision levels of applicable documents are available and legible);
 - b) any differences between the contract or order requirements and those in the tender are resolved;
 - c) Chalmers & Kubeck, Inc. has the ability to meet the defined requirements, including the requirements for delivery and post-delivery activities;
 - (3) d) Statutory and Regulatory requirements applicable to the product are met.
 - e) verify that the latest applicable drawings, design calculations, specifications and instructions, required by the Code, as well as authorized changes, are used for the manufacture, assembly, examination, inspection and testing.
 - (3) f) any additional requirements considered necessary.
- 1.2** Amendments/changes to existing orders are processed as in Paragraph 1.1 above and correctly relayed to the appropriate functions per Work Order Work Instructions (VWOWI-4.3 - paragraph 6).

2.0 Scope

This procedure applies to quotation development and any resulting contract.

3.0 Responsibility

- 3.1** The General Manager is responsible for preparing quotations for blanket contracts and purchase orders; completing Work Orders, per Work Order Work Instructions (VWOWI-4.3); completing the Job Number Log entry; reviewing blanket contracts, purchase orders and amendments/changes, documenting the review and relaying changes to the appropriate personnel.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VCK-4.3
SUBJECT: Contract Review		Page: 2 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.		Rev.3 09-01-09

- 3.2** The Department Manager, Foreman or Salesman are responsible for preparing quotations for blanket contracts and purchase orders; completing Work Orders per Work Order Work Instructions (VWOWI-4.3) and Field Service Reports (CK-206) for field services; completing the Safety Valve In Process Inspection and Work Report (CK101), or the Valve Inspection Worksheet for line valves (CK-202), or the Repair & Inspection Report for Control Valves (CK-203), or
- (3) the Limitorque Inspection Worksheet (CK-204) or Valve Inspection Worksheet (Valve 1 – 5/9/94) or Valve Inspection Worksheet (Valve 1 – 2/5/93) as appropriate; completing the Job Number Log entry; reviewing blanket contracts, purchase orders and amendments/changes, documenting the review and relaying
- (2) changes to the appropriate personnel, assuring all requirements of ASME have been met
- 3.3** Contract/purchase order review records are maintained per Control of Quality Records (VCK-4.16). The completed Work Order/Traveler and/or approved blanket contract shall serve as objective evidence of Contract/Purchase Order review.
- (3) **3.4** Where the customer provides no documented statement of requirement, the customer requirements shall be confirmed before acceptance. Confirmation shall be accomplished by mail, e-mail or fax. Verbal confirmation may be used as a last resort.

4.0 References

- ASME Section I A300 paragraph A-302.3
- (3) Clause 7.2 of ISO 9001:2008 Customer Related Processes
Blanket Order Contract Review Process Map (VPM-4.3a)
Purchase Order Contract Review Process Map (VPM-4.3b)
Work Order Work Instructions (VWOWI-4.3)
Work Order
CompGen WO
Safety Valve In Process Inspection and Work Report (CK101)
Valve Inspection Worksheet (CK-202)
Repair & Inspection Report for Control Valves (CK-203)
Limitorque Inspection Worksheet (CK-204)
Field Service Report (CK-206)
- (3) Valve Inspection Worksheet (Valve 1 – 5/9/94)
- (3) Valve Inspection Worksheet (Valve 1 – 2/5/93)

Chalmers & Kubeck, Inc.
Valve Division Quality System Manual

Procedure No.

VPM-4.3a

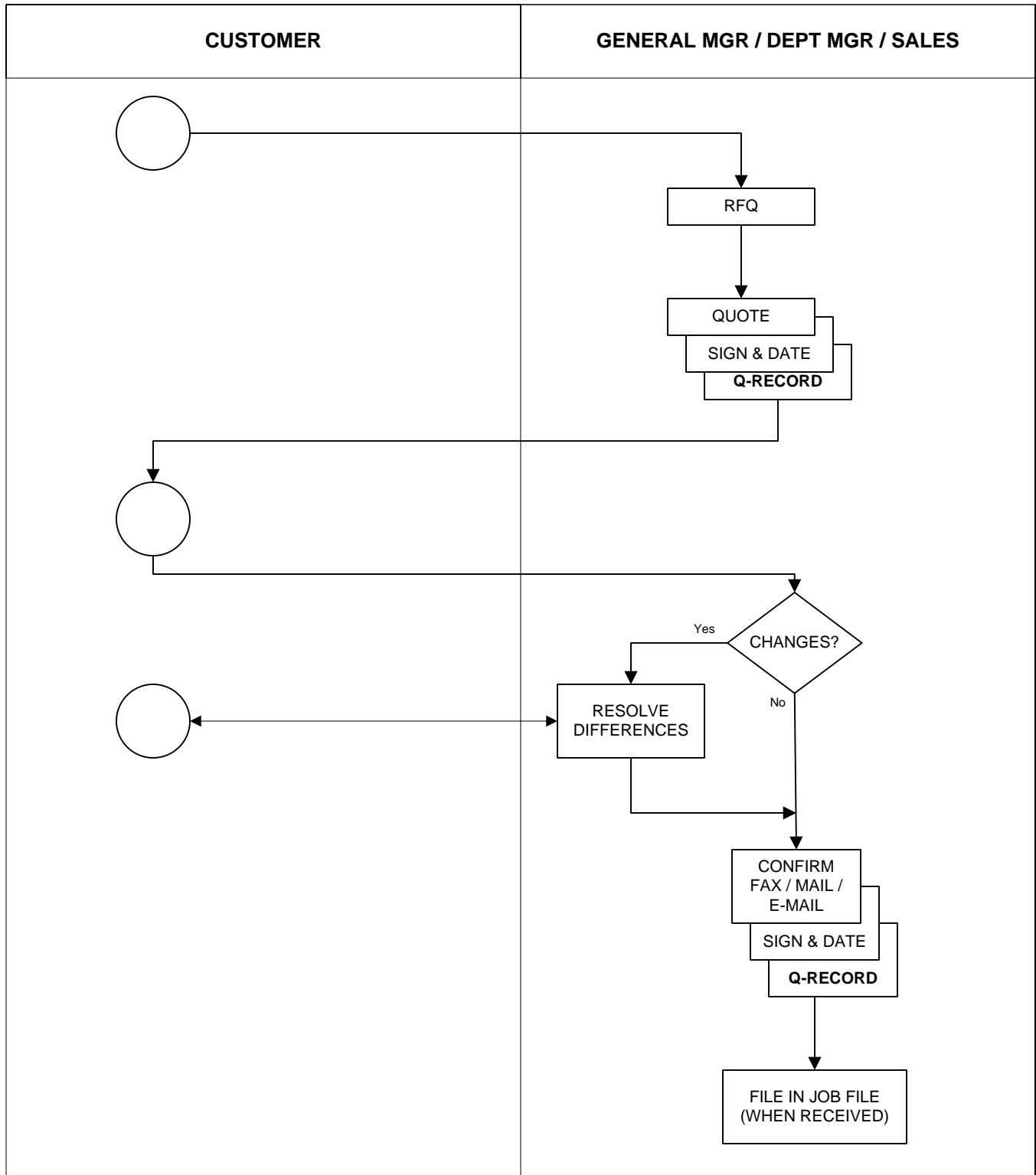
SUBJECT:

CONTRACT REVIEW - BLANKET CONTRACTS

Page:
1 of 1

Reason for Revision: Revise to ISO 9001:2008 requirements.

Rev.3
09-01-09



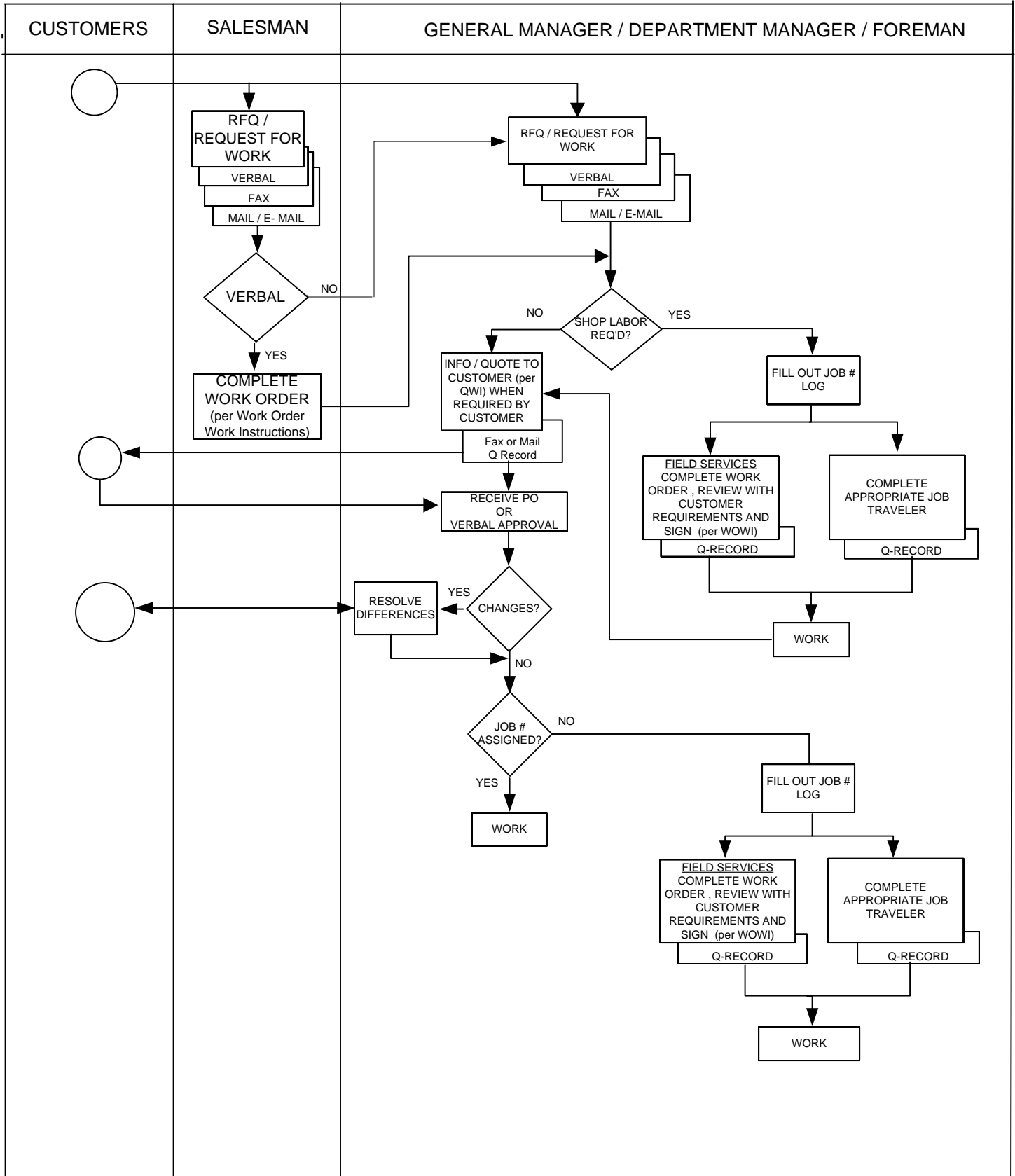
SUBJECT:

CONTRACT REVIEW - PURCHASE ORDERS

Page:
1 of 1

Reason for Revision:

Rev.-
11-30-02



<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VWOWI-4.3
SUBJECT: WORK ORDER WORK INSTRUCTIONS	Page: 1 of 3
Reason for Revision:	Rev. - 11-30-02

Work Instructions for completing Work Orders

- 1.0 The Work Order is a Quality Record.

- 2.0 There are 4 types of Work Orders:
 - 2.1 Quote only
 - 2.2 Disassemble & Quote
 - 2.3 Time & Material
 - 2.4 Breakdown

- 3.0 A Work Order is prepared for all Work done for a customer.
 - 3.1 If the quotation is accepted by the customer the Chalmers & Kubeck formal quote or Chalmers & Kubeck Work Scope shall be attached to the Job Work Order (where appropriate) and be distributed as in 5.1, 5.2 and 5.3 below.

 - 3.2 Changes
 - 3.2.1 All work scope changes **from the Customer** require that the Working Foreman make the necessary changes to the Job File Work Order (See 6.0 Below).
 - 3.2.2 All Work Scope changes **initiated by Chalmers & Kubeck** shall be faxed to the Customer and placed in the Job File (See 6.0 Below).

- 4.0 Work Order preparation instructions:
 - 4.1 Instructions for Salesmen - Complete the following:

Type of Work Order block (top right corner)

 - 4.1.1 Sales Rep name and date
 - 4.1.2 Type of Work Order – check one
 - 4.1.3 Sales Estimate, if given to customer
 - 4.1.4 Customer Requesting Quote

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VWOWI-4.3
SUBJECT: WORK ORDER WORK INSTRUCTIONS	Page: 2 of 3
Reason for Revision:	Rev. - 11-30-02

Other Information (if available):

- 4.1.5 Customer and Customer ID:
- 4.1.6 Purchase Order:
- 4.1.7 Cust. Contact: – may be different than Cust. Requesting Quote
- 4.1.8 Phone: <customer contact>
- 4.1.9 Due date or weeks ARO
- 4.1.10 Rush? Yes or No
- 4.1.11 Work Scope, including drawings and proper revisions if required

- 4.2 Instructions for Department Managers, Foremen and others- Complete the following:

Type of Work Order block (top right corner) – check one

Other Information:

- 4.2.1 Customer and Customer ID:
- 4.2.2 Purchase Order:
- 4.2.3 Cust. Contact:
- 4.2.4 Phone: <customer contact>
- 4.2.5 Due date or Weeks ARO
- 4.2.6 Rush? Yes or No
- 4.2.7 Work Scope, including drawings and proper revision levels if required
- 4.2.8 Operations / Activities and estimated hours, as appropriate
- 4.2.9 Department Assigned
- 4.2.10 Material and / or outside services estimate
- 4.2.11 Contract Reviewed By: sign and date

- 5.0 Work Order snap set distribution:

- 5.1 Office Control Copy to Department Manager
- 5.2 Job File copy to Department job file
- 5.3 Job Traveler copy goes with Technician to job site.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VWOWI-4.3
SUBJECT: WORK ORDER WORK INSTRUCTIONS	Page: 3 of 3
Reason for Revision:	Rev. - 11-30-02

6.0 Amendments / Changes to a Work Order

- 6.1 Amendments/ Changes to the Work Order will be reviewed to ensure that:
- a) the requirements are adequately defined and understood (current revision levels of applicable documents are available and legible);
 - b) any differences between the amendment requirements and those on the Work Order are resolved;
 - c) Chalmers & Kubeck, Inc. has the ability to meet the defined requirements, including requirements for delivery and post delivery activities;
 - d) Statutory and Regulatory requirements related to the product are met
- 6.2 Amend / Change Work Order in Job File.
- 6.3 Enter the Change # in the block to the right of the Job Number.
- 6.4 Enter the Changed information only.
- 6.5 Change Reviewed By: sign and date.

CHALMERS AND KUBECK INC.
VALVE DIVISION

CUSTOMER _____

DATE RECEIVED _____

P.O. NO. _____

JOB NO. _____

FORM CK 101

VALVE DESCRIPTION: SIZE _____ MANUFACTURER _____ SET PRESSURE _____ PSIG
B.D. _____ LIFT _____ SEAT DIA. _____

MODEL OR TYPE: _____ SERIAL NO. _____ CAPACITY _____ GPM
 SCFM
 SAT

APPLICABLE ASME CODE: SECTION I V SECTION VIII UV N.A. PSV NO. _____

PART DESCRIPTION	OK	MACHINE	WELD	FABRICATE	REPLACE	SEE COMMENTS
CAP						
LEVER/FORK						
ADJUST SCREW						
LOCKNUT						
BONNET						
BODY						
BOLTING MATERIAL						
SPRING						
WASHERS						
SPINDLE						
GUIDE						
DISC HOLDER						
DISC						
NOZZLE						
GUIDE RING						
NOZZLE RING						
RETAINING PINS						
GASKETS						
BELLOWS						

INSPECTION SIGN OFF:

EXISTING JOB # _____ COMMENTS: **ASME STAMP U V V** SPRING NO. _____
VR # _____ COMPANY _____ RANGE _____
VR APPLIED YES NO

BELLOW YES NO
NR SETTING _____
GR SETTING _____
ADJ SETTING _____

DISASSEMBLED BY: _____ ASSEMBLED BY: _____

VALVE CONVERSION INFORMATION
NEW MODEL # _____
PROCEDURE USED

PRETEST: SET _____ PSIG BLOWDOWN _____ PSIG SET _____ PSIG BLOWDOWN _____ PSIG

TIGHTNESS TEST: BUBBLE _____ PSIG AUDIO _____ PSIG VISUAL _____ PSIG

TESTED BY: _____ DATE _____ GAUGE NO. _____ GAUGE RANGE _____

FINAL TEST: SET _____ PSIG COLD SET _____ PSIG BLOWDOWN _____ PSIG

TIGHTNESS TEST: BUBBLE _____ PSIG AUDIO _____ PSIG VISUAL _____ PSIG BACK PRESSURE _____ PSIG

TESTED BY: _____ DATE _____ GAUGE NO. _____ GAUGE RANGE _____

APPROVED BY: _____ VR STAMP APPLIED YES NO TEST MEDIUM _____

NR SETTING	COMMENTS
GR SETTING	

SHIPPED BY: _____

CHALMERS & KUBECK, INC. PHONE 610-494-7030 FAX: 610-497-9777		VALVE INSPECTION WORKSHEET			JOB NUMBER:				
					DATE:				
COMPANY NAME:		CUSTOMER PO:			MFG./MODEL:				
SIZE:		RATING:	TYPE:		SERIAL NUMBER:		OPERATOR TYPE:		
PLANT		UNIT		VALVE ID					
VALVE CONDITION:		CLEAN		DIRTY		SEIZED		DAMG.	
WORKSCOPE:		STD		AD.WORK		MODIFY		PRETEST	
COMMENTS									
DISMANTLED:		INSPECTED:			ASSEMBLED:			SHIPPED:	
STEM OD		PACKING							
STUFF BOX ID		TYPE							
GLAND OD		SIZE							
GLAND ID		# RINGS							
WORK PREFORMED									
VALVE PART	OK	MACH.	GROUND	LAPPED	WELDED	POLISHED	REPLACED	FAB	MAT'L
GASKET AREA									
END CONNECT.									
BODY									
SEATS									
BONNET/INSERT									
BACK SEAT									
WEDGE									
DISC/PLUG									
STEM									
BOLTS PACKING									
YOKE BUSHING									
SEAL RING									
BOLT MAT'L									
COMMENTS:									
PRETEST		TESTER		WITNESS		FINAL TEST		TESTER	
SEAT	MIN	PSI			SEAT	MIN	PSI		
SHELL	MIN	PSI			SHELL	MIN	PSI		
PASS		FAIL		REMARKS					
COMMENTS									
FINAL INSPECTION:					DATE:				

Chalmers & Kubeck, Inc.
Repair & Inspection Report for Control Valve

JOB#	PO#	TAG#	
CUSTOMER:		DATE:	
MAKE:		SIZE/RATING:	
MODEL:		S/N #:	
CV:		TYPE OF PKG:	
BENCH SET:		PRETEST	YES <input type="checkbox"/> NO <input type="checkbox"/>
AIR TO: OPEN <input type="checkbox"/> CLOSE <input type="checkbox"/>	TRAVEL:	RESULTS:	
ACTION: DIRECT <input type="checkbox"/> REVERSE <input type="checkbox"/>			

INSPECTION & ASSEMBLY CHECK LIST

LEGEND	OK	REPLACE	WELD	FABRICATE
BODY		ACTUATOR		MODEL #
BODY CONDITION			YOKE	
INLET FLANGE			SPRING	
OUTLET FLANGE			SPRING ADJ	
BOTTOM FLANGE			DIAPHRAGM	
BONNET FLANGE			TRAVEL IND.	
STUDS			PACKING	
NUTS			POSITIONER	MODEL #
GASKET			POSITIONER	
BONNET		RELAY/PILOT		
FLANGE FACE			GAUGES	
PKG BOX		ID:	LEVER S/A	
GUIDE/BUSHING			O-RINGS	
PKG BOX STUDS			DIAPHRAGM	
PACKING SIZE		Amount:	HANDWHEEL	
PACKING GLAND			HANDWHEEL	
TRIM		STEM		
PLUG			PACKING	
SEATS			BRACKET	
STEM		OD:	FITTINGS	
SEALS			BEARINGS	

COMMENTS

DISMANT.	INSPECT.	ASSM.	SHIPPED
----------	----------	-------	---------

COMMENTS

FINAL TEST REPORT

LEAKAGE CLASS	PSI	ALLOWED	MIN	ACTUAL	TESTED BY:	WITNESS
SEAT TEST						
SHELL TEST						
STROKED		RANGE				
FINAL APPROVAL				DATE		

COMMENTS

VALVE INSPECTION WORKSHEET

Job Num:

Date:

Company Name		Cust PO		Mfg & Model #	
Size	Rating	Connection	Serial #:	Body Material:	
Operator Type:		Valve Type:			Gasket Type:
		<input type="radio"/> Gate <input type="radio"/> Globe <input type="radio"/> Check <input type="radio"/> Special <input type="radio"/> Plug <input type="radio"/> Butterfly <input type="radio"/> Ball <input type="radio"/> Slide			
Gasket Material:		Stud Size:		Stud Quantity:	Nut Size:

Valve Condition: Clean Seized Clogged Corroded *

Dirty Contaminated Damaged *

* Explanation:

Work Required: Pretest Std Repair Additional Work * Modify * Test Report

* Explanation:

WORK PERFORMED									Inspected By: _____
VALVE PART	OK	MACHINED	GROUND	LAPPED	WELDED	POLISHED	REPLACED	FAB	
Gasket Surfaces									
End Connections									
Spot/Back Face									
Body									
Seats									
Bonnet									
Back Seat									
Lantern Rug									
Wedge									
Plug									
Stem									
Bolts Packing									
Yoke Bushing									
Backseat									
Bolting Material									
Grease Fittings									
Yoke Bearings									
Handwheel Nut									

Pretest				Final Test			
Hydrostatic Seat Test:	___ Min	___ PSIG		Hydrostatic Seat Test:	___ Min	___ PSIG	Accept Yes No <input type="radio"/> <input type="radio"/>
Hydrostatic Shell Test:	___ Min	___ PSIG		Hydrostatic Shell Test:	___ Min	___ PSIG	<input type="radio"/> <input type="radio"/>
LP Air Seat Test:	___ Min	___ PSIG		LP Air Seat Test:	___ Min	___ PSIG	<input type="radio"/> <input type="radio"/>
LP Air Shell Test:	___ Min	___ PSIG		LP Air Shell Test:	___ Min	___ PSIG	<input type="radio"/> <input type="radio"/>
Pass <input type="checkbox"/>		Fail <input type="checkbox"/>		By: _____		Date: _____	
By: _____		Date: _____		Witness: _____		Date: _____	

CHALMERS & KUBECK, Inc.

(610) 494-7030 Fax (610) 497-9777

VALVE INSPECTION WORKSHEET

Job Num: _____

Date: _____

Page: _____

CRITICAL CLEARANCES

	ORG	FINISH	INSP BY
Stem Dia.	_____	_____	_____
Pack Box	_____	_____	_____
Gland ID	_____	_____	_____
OD	_____	_____	_____
Lantern ID	_____	_____	_____
OD	_____	_____	_____
Back Seat ID	_____	_____	_____

MATERIAL'S

Disc	_____
Seats	_____
Stem	_____
Body	_____
Packing	_____
Gasket	_____
Type	_____
Material	_____

NON-DESTRUCTIVE TEST

RESULTS

Dye Penetrant	<input type="checkbox"/>	_____	_____
Mag Particle	<input type="checkbox"/>	_____	_____
Radiograph	<input type="checkbox"/>	_____	_____
Other		_____	_____

Stencil By	_____
Dismantled By	_____
Assembled By	_____
Stroke By	_____
Ship By	_____

COMMENTS

QUALITY CONTROL - Final Visual Inspection

Accepted by: _____

Date: _____

CHALMERS & KUBECK, Inc.

(215) 494-7030 Fax (215)497-9777

VALVE INSPECTION WORKSHEET

Job Num:

Date:

Page: 1 of 4

Company Name:		Cust PO:		Mfg & Model #:	
Size:	Rating:	Connection:	Serial #:	Body Material:	
Operator Type:		Valve Type:		Gasket Type:	
		<input type="radio"/> Gate <input type="radio"/> Globe <input type="radio"/> Check <input type="radio"/> Special <input type="radio"/> Plug <input type="radio"/> Butterfly <input type="radio"/> Control <input type="radio"/> Regulator			
Gasket Material:	Stud Size:	Stud Quantity:	Nut Size:		

Valve Condition: Clean Seized Clogged Corroded *

Dirty Contaminated Damaged *

* Explanation:

Work Required: Pretest Std Repair Additional Work * Modify * Test Report

* Explanation:

CONTROL VALVE ACTUATOR / POSITIONAL DATA	
As Received Condition	As Shipped Condition
Actuator Set Set ___ PSIG To ___ PSIG	Actuator Set Set ___ PSIG To ___ PSIG
Positioner Set Set ___ PSIG To ___ PSIG	Positioner Set Set ___ PSIG To ___ PSIG
Regulator Set Set ___ PSIG To ___ PSIG	Regulator Set Set ___ PSIG To ___ PSIG
Signal ___ M.AMP	Signal ___ M.AMP
By: _____ Date: _____	By: _____ Date: _____

TEST DATA							
Pretest	Final Test						
Hydrostatic Seat Test: ___ Min ___ PSIG	Hydrostatic Seat Test: ___ Min ___ PSIG <table border="0"><tr><td>Accept</td><td>Yes</td><td>No</td></tr><tr><td></td><td><input type="radio"/></td><td><input type="radio"/></td></tr></table>	Accept	Yes	No		<input type="radio"/>	<input type="radio"/>
Accept	Yes	No					
	<input type="radio"/>	<input type="radio"/>					
Hydrostatic Shell Test: ___ Min ___ PSIG	Hydrostatic Shell Test: ___ Min ___ PSIG <table border="0"><tr><td></td><td><input type="radio"/></td><td><input type="radio"/></td></tr></table>		<input type="radio"/>	<input type="radio"/>			
	<input type="radio"/>	<input type="radio"/>					
LP Air Seat Test: ___ Min ___ PSIG	LP Air Seat Test: ___ Min ___ PSIG <table border="0"><tr><td></td><td><input type="radio"/></td><td><input type="radio"/></td></tr></table>		<input type="radio"/>	<input type="radio"/>			
	<input type="radio"/>	<input type="radio"/>					
LP Air Shell Test: ___ Min ___ PSIG	LP Air Shell Test: ___ Min ___ PSIG <table border="0"><tr><td></td><td><input type="radio"/></td><td><input type="radio"/></td></tr></table>		<input type="radio"/>	<input type="radio"/>			
	<input type="radio"/>	<input type="radio"/>					
By: _____ Date: _____	By: _____ Date: _____						
	Witness: _____ Date: _____						

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VALVE INSPECTION WORKSHEET

Job Num:

Date:

Page: 2 of 4

Company Name:

Cust PO:

Mfg & Model #:

Before

PHOTOGRAPHS

After

COMMENTS

CONDITIONED SHIPPED

Gasket Material:

Packing Type:

Bolting:

Paint:

Coat / Plate:

Name Plate:

Flange Cover:

Stem Projection:

Handwheel:

Rustproofing:

QUALITY CONTROL - Final Visual Inspection

Accepted by:

Date:

CHALMERS & KUBECK, Inc.

(215) 494-7030 Fax (215)497-9777

VALVE INSPECTION WORKSHEET

Job Num:

Date:

Page: 3 of 4

Company Name:

Cust PO:

Mfg & Model #:

CRITICAL DIMENTIONS

VALVE PART	RECEIVED	SHIPPED	INSPECTED by	DATE
End to End				
Flange Thickness	A _____ B _____	A _____ B _____		
Port Diameter	A _____ B _____	A _____ B _____		
Spot Back Face	A _____ B _____	A _____ B _____		
Gasket Surfaces				
Flg Thk - Body				
Flg Thk - Bonnet				
Wall Thk - Body				
Wall Thk - Bonnet				
Bhn Body				
Bhn Bonnet				
Bhn Wedge/Plug				
Bhn Stem				

WORK PERFORMED

VALVE PART	MACHINED	GROUND	LAPPED	WELDED	POLISHED	REPLACED	RECNDTNEED	REBUILT
Gasket Surfaces								
End Connections								
Spot/Back Face								
Body								
Bonnet								
Seats/Overlay								
Wafer								
Wedge								
Plug								
Stem (page 4)								
Yoke/Eye Bolts								
Yoke Bushing								
Backseat								
Actuator, Air								
Diaphram								
O-Rings								
Bolt Material								
Indication								
Lock Block Asmby								
Positioner								
Gauges								
Tubing								
Fittings								
Bellows								
Regulator								
Actuator, Gear								
Actuator, Motor								

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VALVE INSPECTION WORKSHEET

Job Num:

Date:

Page: 4 of 4

Company Name:	Cust PO:	Mfg & Model #:
---------------	----------	----------------

VALVE PART INSPECTIONS

STEM				BACK SEAT			
	RECEIVED	SHIPPED			RECEIVED	SHIPPED	CLEARANCE
Diameter				Inside Diameter			
Finish				Outside Diameter			
Taper				Length			
Runout				WELDING / OVERLAY			
Thread				PART PROCEDURE INSPECTED by DATE			
Back Seat				Body			
Teehead				Bonnet			
PACKING BORE				WEDGE / PLUG			
	RECEIVED	SHIPPED	CLEARANCE				
Diameter				Stem			
Finish				Wedge/Plug			
Lubricator				Seats			
GLAND				HEAT TREATMENT			
	RECEIVED	SHIPPED	CLEARANCE				
Inside Diameter				Bk Seat			
Outside Diameter				Flanges			
Length				P.W.H.T.		Case Hardened	
LANTERN				NON - DESTRUCTIVE TESTS			
	RECEIVED	SHIPPED	CLEARANCE				
Inside Diameter				Stress Relieved		Temperature	
Outside Diameter				Normailzed		Age	
Length				Hardness		Annealed	
SPACER				NON - DESTRUCTIVE TESTS			
	RECEIVED	SHIPPED	CLEARANCE				
Inside Diameter				Pressure	<input type="radio"/> Y <input type="radio"/> N	100% Mag Particle	<input type="radio"/> Y <input type="radio"/> N
Outside Diameter				Brinnell	<input type="radio"/> Y <input type="radio"/> N	Pos. Material ID	<input type="radio"/> Y <input type="radio"/> N
Length				Dye Penetrant	<input type="radio"/> Y <input type="radio"/> N	Radiograph	<input type="radio"/> Y <input type="radio"/> N
				Magnetic Particle	<input type="radio"/> Y <input type="radio"/> N		

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.4
SUBJECT: DESIGN AND DEVELOPMENT	Page: 1 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

1.0 Purpose

To ensure Chalmers & Kubeck, Inc. Design and Development activities are effectively planned and controlled to satisfy the needs and expectations of its customers.

2.0 Scope

- (2) This procedure applies to all Design and Development activities requested by the customer or suggested by Chalmers & Kubeck, Inc. Engineering. These activities shall include planning, product requirement inputs, design and development outputs, review, verification, validation and control of changes. The design and development section does not apply to ASME codes pressure relief valves.

3.0 Responsibility

The Engineer shall be responsible for all Design and Development activities. Design and Development activities shall be documented using Design and Development Record (VDDR-1). Engineering shall request additional resources and support as required to perform these activities and shall manage the interfaces between the different groups involved to ensure effective communication and clear assignment of responsibility. Outsourced Design and Development activities shall be documented using Outsourced Design and Development Record (VODDR-1).

- 3.1** Design and Development Planning shall be carried out in accordance with customer requirements. Planning shall follow the outline detailed in this procedure.
- 3.2** Design and Development Inputs shall be reviewed for adequacy and records of the review maintained per VCK-4.16. Requirements shall be complete, unambiguous and not in conflict. Reviews shall include as appropriate:
- functional and performance requirements
 - applicable statutory and regulatory requirements
 - information derived from previous similar designs
- (3) ● other requirements essential for design and development.
- 3.3** Design and Development Outputs shall be provided in a form that enables verification against the product design and development specifications and shall be approved prior to release. Outputs shall:
- (3) ● meet the input requirements for design and development;
- specifications of the characteristics of the product essential for its safe and proper use;
 - appropriate information for purchasing, production and servicing provision;
 - product acceptance criteria or reference to these.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VCK-4.4
SUBJECT: DESIGN AND DEVELOPMENT		Page: 2 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.		Rev. 3 09-01-09

- 3.4** Design and Development Review shall be conducted at appropriate stages as determined by Engineering. Reviews shall include all affected functions including the customer when necessary. Records of the review shall be maintained per VCK-4.16. The Review shall:
- evaluate the ability of the results of design and development to meet requirements;
 - identify problems and propose necessary actions
- 3.5** Design and Development Verification shall be performed to ensure that the design and development outputs have met the requirements of the design and development inputs. Records of verification shall be maintained per VCK-4.16. Verification shall include the following as appropriate:
- comparison of new design with a similar, proven design;
 - alternative calculations or methods;
 - testing, simulations or trials to check compliance with specific input requirement;
 - review of the design documents prior to release.
- 3.6** Design and Development Validation shall be performed to ensure that the resulting product is capable of meeting the requirements for the specified application or intended use. Where practical, validation shall be completed prior to the delivery or implementation of the product. Records validation shall be maintained per VCK-4.16.
- 3.7** Design and Development Changes shall be identified, documented, reviewed and approved by engineering prior to their realization using the Design and Development Change Record (VDDCR-1). The review of design and development changes shall include the following activities as appropriate:
- identification of the design and development changes;
 - maintenance of records of the identified changes per VCK-4.16;
 - review, verification and validation of changes as appropriate;
 - evaluation of the changes on constituent parts;
 - evaluation of the effect of the changes on product already delivered;
 - approval of changes before implementation.
- 3.8** Drawings and drawing changes shall be controlled per VCK-4.5 Document Control.

4.0 References

- (3) Clause 7.3 of ISO 9001:2008
Design and Development Process Map (VPM-4.4)
Design and Development Record (VDDR-1)
Outsourced Design and Development Record (VODDR-1)
Design and Development Change Record (VDDCR-1)

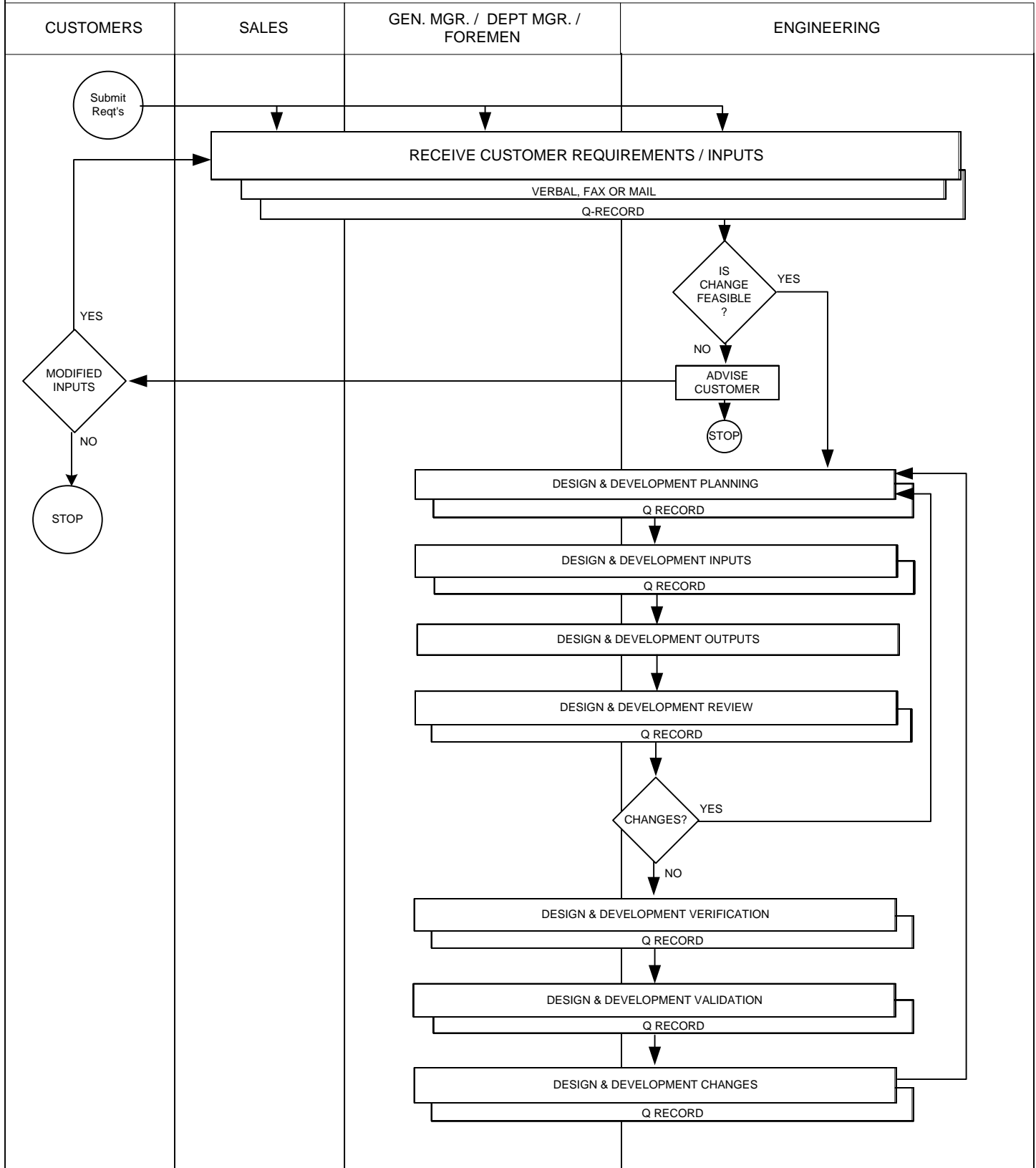
SUBJECT:

DESIGN AND DEVELOPMENT

Page:
1 of 1

Reason for Revision:

Rev.-
11-30-02



Customer Name: _____ Contact: _____
 Job Description: _____ Customer Required Date: _____
 Drawing / Part #: _____ Rev: _____ Serial No.: _____

Design Scope: (attach customer requirement sheets) _____

Design & Development Inputs: Customer Supplied: _____ By _____ Date _____ C&K Supplied: _____ By _____ Date _____

- Functional and Performance Requirements: _____

- Applicable Statutory and Regulatory Requirements: _____

- Other Information / Previous Designs: _____

Authorized By: _____ Date _____ Dept. Manager: _____ Date _____
 Sales: _____ Date _____

Design & Development Outputs:

- Drawings / Sketches: Yes No _____
- Specifications for Safe and Proper Use: Yes No _____
- Purchasing, Production & Servicing Information Provided: Yes No _____
- Product Acceptance Criteria Provided: Yes No _____

Authorized By: _____ Date _____ Dept. Manager: _____ Date _____
 Sales: _____ Date _____

Design & Development Review:

- Ability of Design & Development to Meet Requirements: Yes No _____
- Identify Problems and Propose Necessary Actions: Yes No _____

Authorized By: _____ Date _____ Dept. Manager: _____ Date _____
 Sales: _____ Date _____

Design & Development Verification:

- Review of Design Documents Prior to Release: Yes No _____

- Comparison of New Design with a Similar Proven Design: Yes No _____

- Alternative Calculations or Methods: Yes No _____

- Testing, Simulations or Trials to Check Compliance with Specific Input Requirements: Yes No _____

Authorized By: _____ Date _____ Dept. Manager: _____ Date _____
Sales: _____ Date _____

Design & Development Validation:

- Product Meets Requirements for Intended Application or Use: Yes No _____

Authorized By: _____ Date _____ Customer Approval: _____ Date _____

Action Items / Supporting Records (attach):

Customer Name: _____ Contact: _____
 Job Description: _____ Customer Required Date: _____
 Drawing / Part #: _____ Rev: _____ Serial No.: _____

Design Change Scope: (attach customer requirement sheets) _____

Identification of Design Change: Customer Supplied: _____ By _____ Date _____ C&K Supplied: _____ By _____ Date _____

● Functional and Performance Requirements: _____

● Applicable Statutory and Regulatory Requirements: _____

● Other Information / Previous Designs: _____

Authorized By: _____ Date _____ Department Manager: _____ Date _____
 Sales: _____ Date _____

Design & Development Outputs:

● Drawings / Sketches: Yes No _____

● Specifications for Safe and Proper Use: Yes No _____

● Purchasing, Production & Servicing Information Provided: Yes No _____

● Product Acceptance Criteria Provided: Yes No _____

Authorized By: _____ Date _____ Department Manager: _____ Date _____
 Sales: _____ Date _____

Design & Development Review:

● Ability of Design & Development to Meet Requirements: Yes No _____

● Identify Problems and Propose Necessary Actions: Yes No _____

Authorized By: _____ Date _____ Department Manager: _____ Date _____
 Sales: _____ Date _____

Design & Development Verification:

- Review of Design Documents Prior to Release: Yes No _____
- Comparison of New Design with a Similar Proven Design: Yes No _____
- Alternative Calculations or Methods: Yes No _____
- Testing, Simulations or Trials to Check Compliance with Specific Input Requirements: Yes No _____

Authorized By: _____ Date _____ Department Manager: _____ Date _____
Sales: _____ Date _____

Design & Development Validation:

- Product Meets Requirements for Intended Application or Use: Yes No _____

Authorized By: _____ Date _____ Customer Approval: _____ Date _____
If required

Evaluation of the Effect of the Changes on Other Parts / or Final Product:

Authorized By: _____ Date _____ Department Manager: _____ Date _____

Evaluation of the Effect of the Changes on Product Already Delivered:

Authorized By: _____ Date _____ Department Manager: _____ Date _____

Final Approval:

Authorized By: _____ Date _____ Department Manager: _____ Date _____

Customer Authorized By: _____ Date _____ Effective Date: _____ Date _____
If required

C&K Customer Name: _____ Customers Contact: _____
Job Description: _____ C&K Customer Required Date: _____
Drawing / Part #: _____ Rev: _____ Serial No.: _____

Design Scope: (attach customer requirement sheets) _____

Design & Development Inputs:

Customer Supplied: _____ **C&K Supplied:** _____ **Subcontractor Supplied:** _____
By Date By Date By Date

- Functional and Performance Requirements: _____

- Applicable Statutory and Regulatory Requirements: _____

- Other Information / Previous Designs: _____

Authorized By: _____ Dept. Manager: _____
Date Date
Subcontractor Authorized By: _____ Sales: _____
Date Date

Design & Development Outputs:

- Drawings / Sketches: Yes No _____
- Specifications for Safe and Proper Use: Yes No _____
- Purchasing, Production & Servicing Information Provided: Yes No _____
- Product Acceptance Criteria Provided: Yes No _____

Authorized By: _____ Dept. Manager: _____
Date Date
Subcontractor Authorized By: _____ Sales: _____
Date Date

Design & Development Review:

- Ability of Design & Development to Meet Requirements: Yes No _____
- Identify Problems and Propose Necessary Actions: Yes No _____

Authorized By: _____ Dept. Manager: _____
Date Date
Subcontractor Authorized By: _____ Sales: _____
Date Date

Design & Development Verification:

- Review of Design Documents Prior to Release: Yes No _____

- Comparison of New Design with a Similar Proven Design: Yes No _____

- Alternative Calculations or Methods: Yes No _____

- Testing, Simulations or Trials to Check Compliance with Specific Input Requirements: Yes No _____

Authorized By: _____ Date _____ Dept. Manager: _____ Date _____
Subcontractor Authorized By: _____ Date _____ Sales: _____ Date _____

Design & Development Validation:

- Product Meets Requirements for Intended Application or Use: Yes No _____

Authorized By: _____ Date _____ Customer Approval: _____ Date _____
Subcontractor Authorized By: _____ Date _____

Action Items / Supporting Records (attach):

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VCK-4.5
SUBJECT: DOCUMENT CONTROL		Page 1 of 4
Reason for Revision: Revise to ISO 9001:2008 requirements.		Rev. 3 09-01-09

1.0 Purpose

1.1 Chalmers & Kubeck has established and maintains documented procedures to control all documents and data that relate to this Quality Management System, including, to the extent applicable, documents of external origin such as standards and customer drawings. Documents and data can be in the form of any type of media, such as hard copy or electronic media.

1.2 Document Control shall ensure the following:

- a) documents and data are reviewed and approved for adequacy by authorized personnel prior to issue;
- (3) b) documents are reviewed and updated as necessary, and re-approved;
- (3) c) changes and current revision status of documents are identified;
- d) pertinent issues of appropriate documents are available at all locations where operations essential to the effective functioning of the quality system are performed;
- (3) e) documents remain legible and readily identifiable;
- (3) f) documents of external origin determined to be necessary for the planning and operation of the quality management system are identified and their distribution controlled;
- g) invalid and/or obsolete documents are promptly removed from all points of issue or use, or otherwise assured against unintended use;
- h) any obsolete documents retained for legal and/or knowledge preservation purposes are suitably identified with "For Information Only".
- i) that the latest applicable drawings, design calculations, specifications and instructions, required by the Code, as well as authorized changes, are used for the manufacture, assembly, examination, inspection and testing.

2.0 Scope

This procedure applies to Chalmers & Kubeck's defined essential documents such as drawings, sketches, customer drawings, specifications and standards, design calculations, instructions, Quality System Manual and Approved Subcontractors List.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.5
SUBJECT: DOCUMENT CONTROL	Page 2 of 4
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

3.0 Responsibility

3.1 The President is responsible for reviewing and approving the Quality System Manual.

3.2 The Management Representative is responsible for:

3.2.1 Reviewing, approving and revising the Quality System Manual when changes are made;

3.2.2 Distributing the changes to the Quality Management System per the distribution list;

3.2.3 Controlling the Approved Supplier List.

3.3 The Quality Control Manager is responsible for the preparation of Revisions to this Manual.

3.3.1 The Quality Control Manager or his designee, shall annually review ASME Codes Sections I, VIII and NB-23 along with all other relevant codes, Manufacturer and applicable Industry standards and Internal Procedures to ensure the Manual is up to date and/or if revisions to this Manual are required. A log of this review shall be maintained using Quality System Manual Review Log (QSMRL-1). If revisions are required, they will be submitted for approval to the ASME / National Board prior to implementation.

(2) 3.3.2 National Board Inspection Code and ASME Code changes will be reviewed within six (3) months of the Code issuance date. Required changes to the Quality System shall be made and implemented within six (6) months of the date of issue. Code Cases affecting valves shall be reviewed for possible impact and changes made and implemented within six (6) months of the date of issuance.

3.3.3 All controlled copies of this Manual shall be listed on the QSM Mater List. Revisions to this Manual shall be delivered to external holders.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VCK-4.5
SUBJECT: DOCUMENT CONTROL		Page 3 of 4
Reason for Revision: Revise to ISO 9001:2008 requirements.		Rev. 3 09-01-09

3.4 For “New” Pressure Relief Valves the Quality Manager or his designee shall obtain and verify the latest revisions of drawings, procedures and specifications from the Manufacturer for each valve model that will be distributed by Chalmers & Kubeck, Inc.

(1) 3.4.1 The Quality Control Manager is responsible for keeping all drawings, procedures and specifications up to date.

3.4.2 The Quality Control Manager or his designee shall maintain a file of all Manufacturer supplied drawings, procedures, specifications and standards in the Valve Division main office. The Quality Manager will distribute copies to the Shop Foreman as required. The Shop Foreman shall ensure necessary copies are distributed to the Technicians as needed.

3.4.3 The Quality Control Manager or his designee shall maintain a Log of all Procedures and Specifications to ensure compliance with the Manufacturer’s latest revisions.

3.4.4 The Manufacturer’s Assembly and Test Procedures shall be reviewed annually to ensure the procedures are up to date.

3.5 For “Repaired” Pressure Relief Valves the latest revisions of drawings, procedures and specifications will be obtained and verified from the Manufacturer for each valve model that will be repaired by Chalmers & Kubeck, Inc. This shall also apply to repaired valves other than pressure relief.

(1) 3.5.1 Standard procedure is to use Manufacturer’s maintenance and repair manuals when repairing valves.

3.5.2 The Quality Control Manger shall annually request copies of the latest revision of drawings, procedures and specifications from the manufacturer. The request shall be limited to valves produced during the previous year. This request shall be made via fax, mail or e-mail, a copy of the letter shall provide objective evidence of the request.

3.5.3 All Manufacturer’s drawings, specifications and standards shall be the responsibility of the Quality Control Manager. The Quality Control Manager shall verify the latest revisions are received and in use by Chalmers & Kubeck, Inc.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VCK-4.5
SUBJECT: DOCUMENT CONTROL		Page 4 of 4
Reason for Revision: Revise to ISO 9001:2008 requirements.		Rev. 3 09-01-09

3.5.4 In the event of parts needing fabrication, the Quality Control Manager or his designee shall verify the current revision of the drawing, specification or standard with the Manufacturer or request the current revision from the Manufacturer.

- 3.6** The Department Manager and Foremen are responsible for verifying the latest revision of industry standards and specifications are being used. Current revision level shall be verified through the controlling agency and, the latest revision requested when necessary. These documents shall be maintained “For Information Only”.
- 3.7** All employees are responsible for notifying the General Manager, Department Manager or Foreman for changes required to the Quality System Manual.
- 3.8** Customer documents may be maintained in the completed job file after job completion as reference material or for information only.
- 3.9** The Engineer is responsible for producing Chalmers & Kubeck, Inc. drawings, for making the necessary revisions and for updating the master document list per the Document Control Work Instruction (VDCWI-4.5).
- 3.10** All employees are responsible for the review and approval (add job #, sign and date) sketches they originate.
- 3.11** All employees are responsible for obtaining any Chalmers & Kubeck, Inc. drawings through Drafting per the Document Control Work Instructions.

4.0 References

- ASME Section I, paragraph A-302.3
ASME Section VIII Division 1, Appendix 10 - paragraph 10-5
(3) Clause 4.2.3 ISO 9001:2008 Control of Documents
Quality System Manual Review Log (QSMRL 11-30-02)

Chalmers & Kubeck, Inc.
Valve Division Quality System Manual

Procedure No.

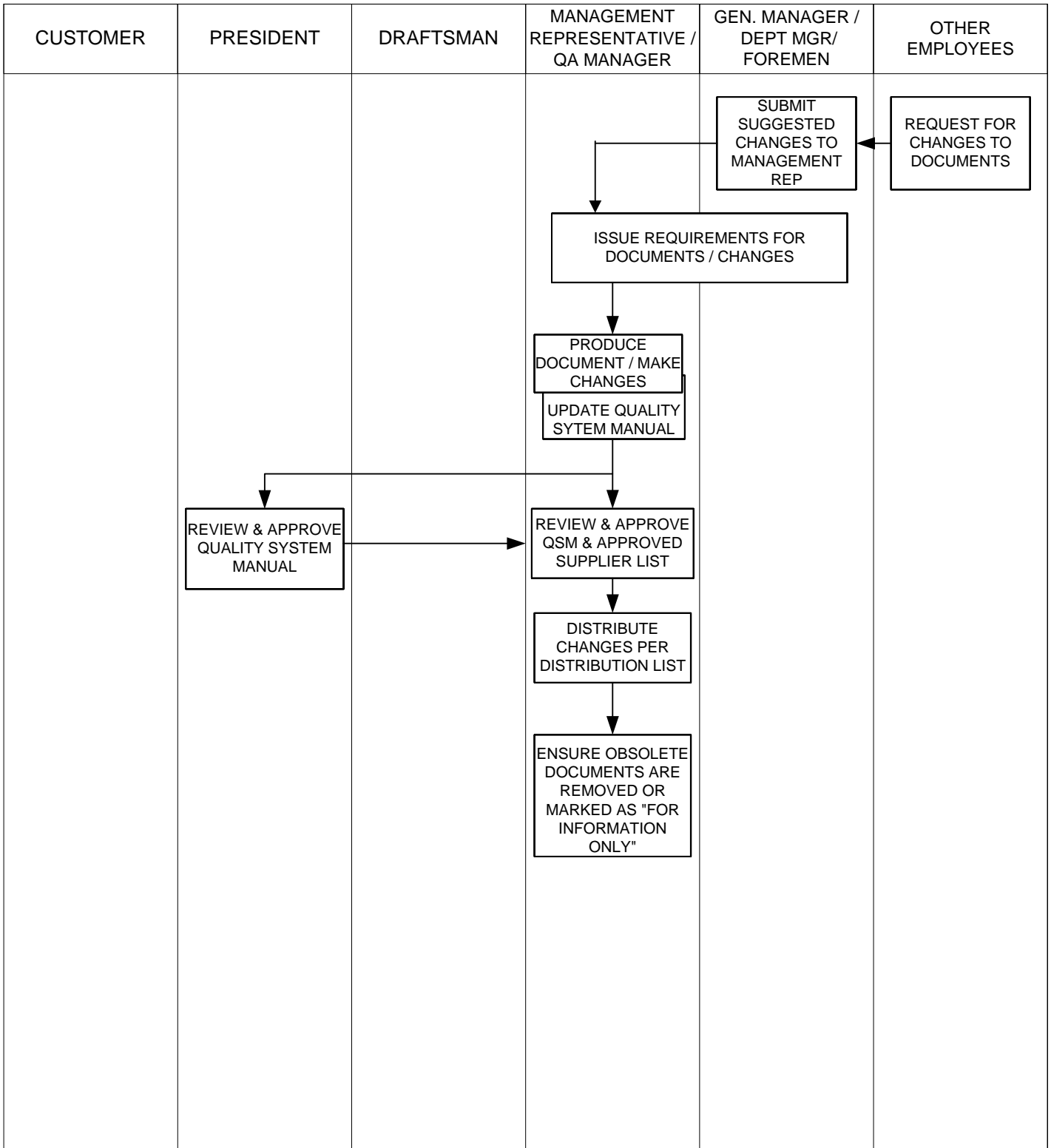
VPM-4.5a

SUBJECT:
DOCUMENT CONTROL - "CONTROLLED DOCUMENTS"

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Reason for Revision:

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Chalmers & Kubeck, Inc.
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VPM-4.5b

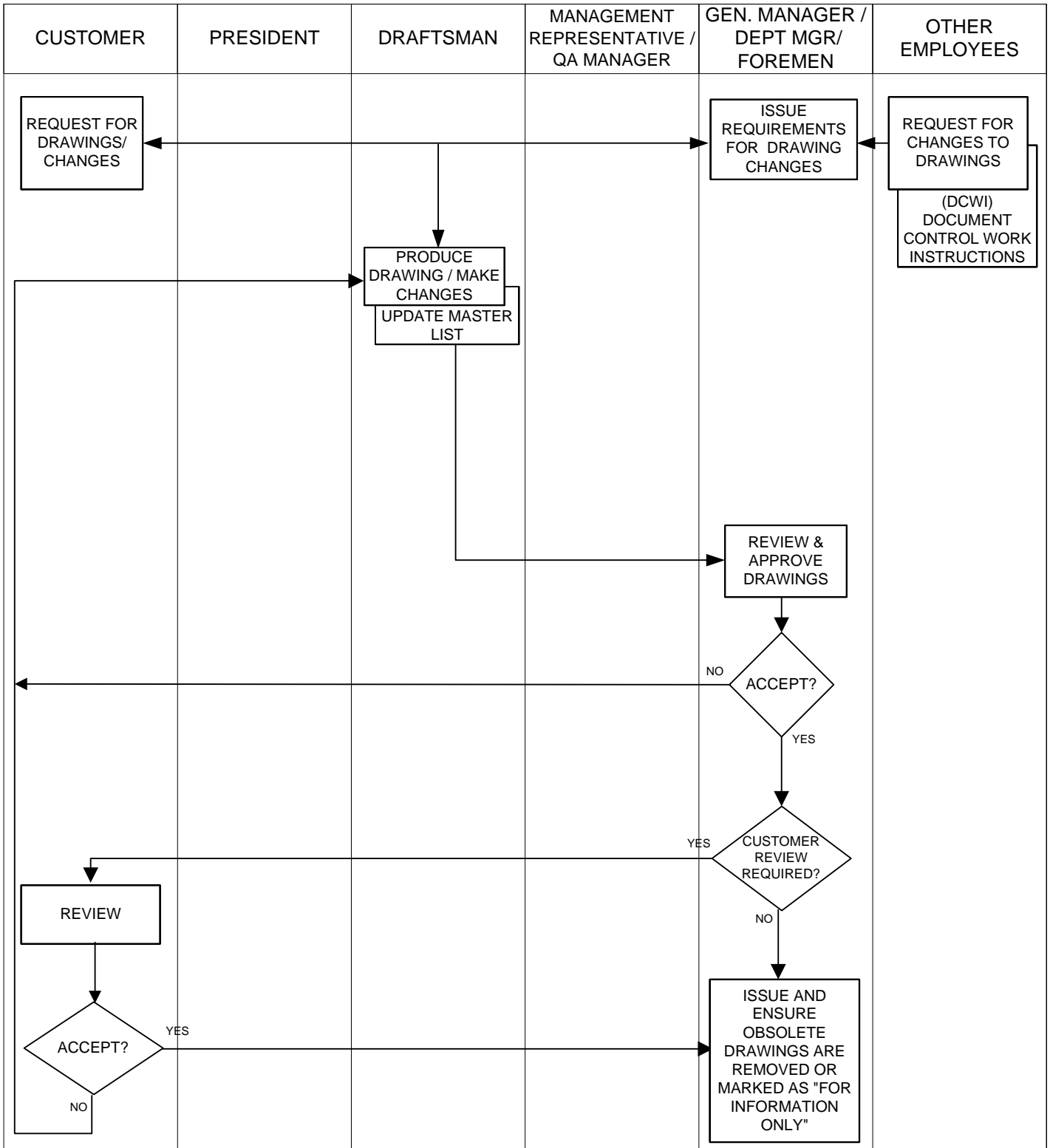
SUBJECT:

DOCUMENT CONTROL - "CONTROLLED DRAWINGS"

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<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VDCWI-4.5
SUBJECT: DOCUMENT CONTROL WORK INSTRUCTION		Page: 1 of 1
Reason for Revision:		Rev.- 11-30-02

Work Instructions for obtaining drawings through Drafting

1. Submit a request for drafting services including all necessary information to complete the first draft, this information should include a sketch with a job number or department overhead number, signature and date.
2. A copy is kept on file in the drafting room and a copy is issued to the department for manufacturing. The issued copy shall be reviewed and approved (add job # or department overhead number, signed and dated).
3. All corrections and / or changes should be marked on the drawing. Each correction or change will be initialed and dated.
4. The drawing will be filed in the job file upon completion of the job.

Chalmers & Kubeck, Inc.

Valve Division

Quality System Manual

Review Log

ASME Codes Sections I, VIII and NB-23 along with all other relevant codes, Manufacturer and applicable Industry standards and Internal Procedures has been reviewed to ensure the Manual is up to date, and/or revisions to this Manual are required. If revisions are required, they will be submitted for approval to the ASME / National Board within six months of the said addenda.

Section: _____

Reviewed By: _____

Date: _____

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.6
SUBJECT: PURCHASING / MATERIAL CONTROL	Page 1 of 4
Reason for Revision: Revise to ISO 9001:2008	Rev. 3 09-01-09

1.0 Purpose

1.1 Purchasing is to ensure that products and services purchased from suppliers conform to specified requirements. This is accomplished by issuing clear and precise requirements in purchasing documents/instructions to only approved suppliers.

1.1.1 Purchasing information shall describe the product to be purchased, and shall ensure the adequacy of the specified purchase requirements including where appropriate:

- a) requirements for approval of product, procedures, processes and equipment;
- b) requirements for qualification of personnel;
- c) quality management system requirements;
- (3) d) customer, statutory and regulatory requirements.

1.2 Chalmers & Kubeck shall evaluate and select suppliers on the basis of their ability to meet purchase order requirements including quality management system and any specific quality requirements.

1.3 Suppliers shall be selected and/or evaluated by any of the following acceptable criteria:

- (3) a) Suppliers registered to ISO 9001:2008 quality standard;
- b) Results of the Supplier Evaluation Report (SupEval);
- c) Examination of supplier's verification data (laboratory or test reports, certificate of analysis, inspection and test data);
- d) Historical performance with ongoing monitoring;
- e) Sole source supplier;
- f) Customer Approved Suppliers;
- g) Placement on the Approved Suppliers List.
- h) Manufacturers Spare Parts.

1.4 Suppliers of "Off the Shelf" items are not listed on the Approved Suppliers List.

2.0 Scope

This procedure applies to purchased products and services that directly affect the quality of the final product. The material control system shall ensure that only intended material is used in Code Construction. Suppliers of "Off the Shelf" items are not part of the Approved Suppliers List.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VCK-4.6
SUBJECT: PURCHASING / MATERIAL CONTROL		Page 2 of 4
Reason for Revision: Revise to ISO 9001:2008		Rev. 3 09-01-09

2.1 For “New” Pressure Relief Valves, only unmodified parts and springs received from the Manufacturer - Dresser Industries or his Assembler shall be used.

2.1.1 Valves purchased from Authorized Assemblers of Dresser Industries shall have the manufacturers seals affixed to ensure compliance with the original purchasing requirements.

2.2 For “Repaired” Pressure Relief Valves, all replacement parts shall be purchased from the Manufacturer or its Authorized Distributor. All materials specified shall be in accordance with Section I PG-73.2.3 and Section VIII Division 1 UG-136 (B) (3) of the ASME code.

2.3 For “Valves other than Pressure Relief” all replacement parts shall be purchased from the Manufacturer or parts distributor.

3.0 Responsibility

3.1 The Shop Foreman is responsible for requisitioning parts; the requisition is then forwarded to Purchasing for order placement.

3.1.1 The originator of a purchase order is responsible for processing the purchase order per the Purchasing Process Map (VPM-4.6).

3.2 The Department Manager, Foremen or Purchasing is responsible for the review and approval of purchasing documents to ensure the requirements are clear and precise (i.e., quantity, description, part numbers and revision levels), for placing purchase orders, and annually evaluating the suppliers performance using the Supplier Evaluation Report (SupEval).

3.3 Shipping and Receiving is responsible for receiving material, checking count and condition, verifying the material part number against the packing list, and notifying the Shop Foreman or his designee that the material has been received.

3.3.1 All Manufacturers parts which are received without part numbers shall be marked with the appropriate part number using indelible pen or by affixing a tag marked with the appropriate information.

3.4 The Shop Foreman or his designee shall verify that the received material complies with the Purchase Order requirements.

3.5 The Shop Foreman or his appointed designee shall forward the acceptable material to the valve being repaired or to the appropriate bin/shelf in the stockroom.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.6
SUBJECT: PURCHASING / MATERIAL CONTROL	Page 3 of 4
Reason for Revision: Revise to ISO 9001:2008	Rev. 3 09-01-09

- 3.6** Supplier nonconforming material shall be processed per VCK-4.13 – Control of Nonconforming Product.
- 3.7** The General Manager is responsible for ensuring that all suppliers are evaluated annually using the Supplier Evaluation Report (SupEval) and for maintaining the Approved Suppliers List (ASL) per VCK-4.16, Control of Quality Records. The General Manager is responsible for the review and approval of purchasing documents to ensure the requirements are clear and precise (i.e., quantity, description, part numbers and revision levels).
- 3.8** Where Chalmers & Kubeck, Inc or its customer intends to perform verification at the suppliers premises, Chalmers & Kubeck, Inc shall state the intended verification arrangements and method of product release in the purchasing information.
- 3.9** The Management Representative is responsible for the logging and trending of Supplier Nonconformances and to provide this information to assist Department Managers, Foreman, Estimators and Purchasing in the annual Supplier Evaluation.
- 3.10** The Technician will procure all parts to be used from the Shop Foreman or his appointed designee who will in turn procure them from stores.
- 3.11** Fabrication of Spare Parts in an emergency. (Applicable to “Repaired” Pressure Relief Valves and “Valves other than Pressure Relief”).
- 3.11.1 All material to be used in critical parts fabrication will be requisitioned by the Shop Foreman or his designee. It is Purchasing responsibility to assure that all material ordered will have all MIL-SPEC certifications and Certificates of Compliance supplied. The Shop Foreman shall be responsible for verifying that the MIL-SPEC certificates supplied conform to Section II - the material specification of the ASME Code, prior to release of the material for fabrication. Any material used in fabrication shall be in accordance with the manufacturer’s specifications.
- 3.11.2 All fabricated spare parts considered critical or non-critical will be machined to manufacturers drawing and specifications.
- 3.11.3 All fabricated spare parts shall be verified per VCK-4.10 using Dimensional Record (QC_DIM_V). Record of the verification shall be maintained for a minimum of 5 years.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.6
SUBJECT: PURCHASING / MATERIAL CONTROL	Page 4 of 4
Reason for Revision: Revise to ISO 9001:2008	Rev. 3 09-01-09

4.0 References

ASME Section I, paragraph A-302.4

ASME Section VIII Division 1, Appendix 10 paragraph 10-6

ASME Section II

(3) Clause 7.4 of ISO 9001:2008

Purchasing Process Map (PM-4.6).

Purchase Order

Purchase Order (CompGen PO)

Approved Supplier List (ASL)

Supplier Evaluation Report (SupEval)

Chalmers & Kubeck, Inc.
Valve Division Quality System Manual

Procedure No.

VPM-4.6

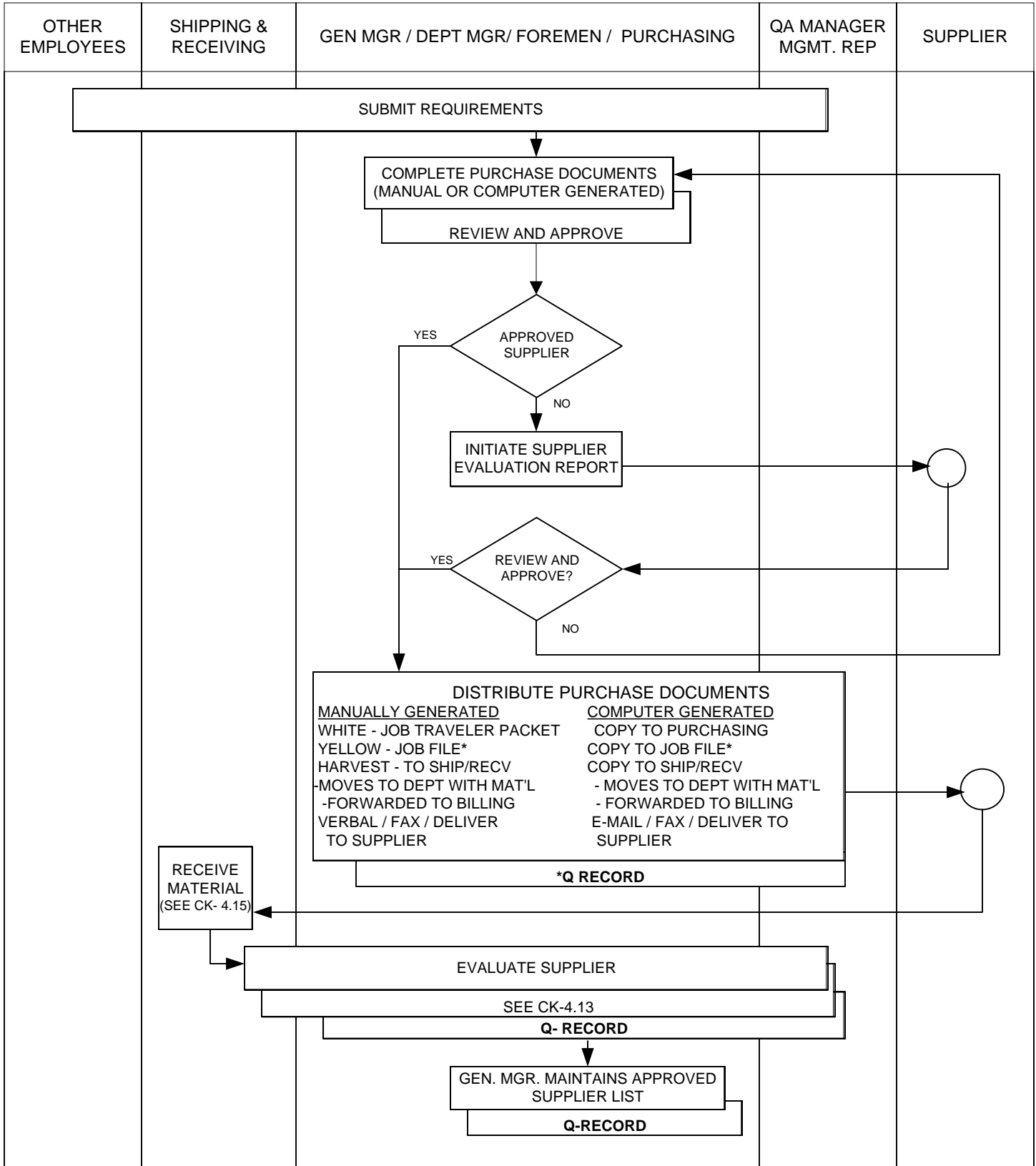
SUBJECT:

PURCHASING

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11-30-02



Chalmers & Kubeck, Inc.

150 Commerce Drive
 PO Box 2447
 Aston, PA 19014-0447
 Phone: (610) 494-4300 Fax: (610) 485-1484

Purchase Order			
Order Date	P.O. Number	Dept. Charge #	Stock

TO:

SHIP TO:

Chalmers & Kubeck, Inc.
150 Commerce Drive
Aston, PA 19014
ATTN:

ATTN:

DELIVER BY:		SHIP VIA:		F.O.B.	FRT. ALLOW	PAYMENT TERMS	
Item	Quantity	U of M	Description			Unit Price	Amount
<u>Notes:</u>						Total	
						\$0.00	

Requisitioner: _____ **Date:** _____

Purchasing Authority: _____ **Date:** _____

MSDS required with shipment

Jim Moore Sr.
1/26/10

Approved Supplier List

Approved Product or Service	Vend ID	Supplier Name	Dept	Phone
EDM	46	Accurate Mold	Machn	856-784-8484
Repair & Test Electric Motors	414	AME Atlantic Electric Motors	Valve	215-624-0800
Plating and Painting	338	AMZ	CNC	717-848-2565
Heat Treating	323	American Metal Treating Co.	Gear	216-431-4492
Casting, Bronze & Brass, Cast Iron	430	Atlas Bronze Company	Pump	215-427-0444
Phenolic, Melamine & Glass Epoxy	424	Atlas Fibre Company	CNC	800-323-1408
Gear Cutting	491	B & R Machine & Gear	Gear	800-238-0651
Grinding	461	B W Grinding Service, Inc.	Eng Pumps	713-641-0888
Babbit Bearings	493	Babbitech	Gear	215-675-3773
Pipe & Fittings	518	Bear Tubular	Machn	610-485-7010
Bearing Mat'l & Bearings Vert. Pumps	660	Boulden Co.	Eng Pumps	610-825-1515
Inspection Services & Equipment	662	Bradford Instrument & Gage (Brad-Cal)	QC	302-999-1690
NDT Test / Inspection	719	Branch Labs	Weld	908-272-5743
Tank Heads	732	Brighton Tru-Edge	Weld	800-543-1644
Sand Blasting & Painting	887	Carney's Point Metal Processing	Pump	856-351-9570
Steel Plate & Structural Shapes	947	Central Steel Service	Weld	205-664-2950
Steel Shapes	946	Certified Steel Company	Weld	609-393-7600
Valve Springs	1097	Coiling Technologies	Valve	713-849-4000
Gaskets & Seals	954	Consolidated Engine Stop Co. LLC	CNC	610-419-4701
Copper, Brass, Stainless Steel	1153	Copper & Brass Sales	Machn	610-586-1800
Ceramic Coating Material	1162	Corrosion Material	Machn	800-535-8032
Calibration & Certification of Electronics	6087	Davis Inotek	Valve	215-673-5600
Forgings	1314	Dayton Forgings	Gear	800-723-0648
Plate Burn to Sketch	1367	Delaware Valley Steel Co., Inc.	CNC	610-499-6100
Heat Treating	1369	Delphi Eng. & Contracting, Inc.	Valve	609-468-4839
Hydrolic Hoses	1370	Delri Industries	Gear	610-833-2070
Heat Treating	1450	Donovan Heat Treating Co., Inc.	CNC	215-335-2200
Plate & Structural Shapes	1487	D.S. Steel	Weld	410-837-1717
Alloy Steels	1490	Duennar Supply	Weld	917-446-4456

Approved Supplier List

Approved Product or Service	Vend ID	Supplier Name	Dept	Phone
Steel & Plate	1512	Durrett Sheppard Steel	Weld	800-888-8567
Repair of Mechanical Seals	1592	Eagle Burgmann	Eng Pumps	713-939-9515
Heat Treating	1470	Evans Heat Treating	Gear	215-938-8791
Sand Blasting & Painting	1853	F.A.D.	CNC	610-872-4254
Hardware / Special Fasteners	1900	Fastening Products	CNC	610-623-5100
Bronze Castings	1908	Federal Bronze Casting Industries	CNC	973-589-7575
Grinding	1930	Feehery Machine & Grinding	CNC	215-739-1424
Fabrication / Rolling	2000	Florig	Weld	610-825-6655
Repair of Mechanical Seals		Flowserve	Eng Pumps	856-467-4401
Gaskets & Repair of Mechanical Seals	2126	Gaddis	Eng Pumps	516-759-3100
Thread Gages	2125	Gage Assembly Company	QC	847-679-5180
Calibration -Surface Plate & Scales	2159	Garber Scales	QC	800-427-3032
Bearing Mat'l & Bearings Vert. Pumps	2255	Graphalloy	Eng Pumps	914-968-8400
Bearing Mat'l & Bearings Vert. Pumps	2270	Green Tweed &Co	Eng Pumps	281-821-2094
Deep Hole Drilling	2327	Hanner Industries, Inc.	Pump	215-785-4461
Shafts, Sleeves & Balance Pieces	3047	HHH Machine Inc.	Eng Pumps	908-276-1220
Balancing, Overspeed Testing	3054	Hickham Industries	QC	713-567-2717
Calibration -Rod Standards. Blocks	N/A	Holts, Inc.	QC	860-643-5157
Gear Cutting	3099	Horsburgh & Scott	Gear	216-431-3900
Heat Treating	3160	Industrial Metal Treating	Pump	302-656-1677
Shafting & Sleeves		Irrigation Machine & Supply	Eng Pumps	806-747-3443
Pump Parts - Aftermarket	3166	ISC-Easton PA	Eng Pumps	484-373-0410
Gaskets & Seals	1455	James E. Dooley Co.	Pump	610-328-2720
Metal Forming	1590	James Eagen & Sons	Weld	570-693-2100
Stainless Steel Plate & Cutting	382	Jaquet Mid-Atlantic	Weld	800-925-6985
Drive Couplings for Pumps	730	John Bridge & Sons	Eng Pumps	610-874-6204
Mechanical Seals for Pumps	1180	John Crane	Eng Pumps	610-356-6800
Metal Rolling / Fabrications	4245	J.L. Lutz	CNC	908-782-0300
Plates / Shapes	5700	J.T. Ryerson	Weld	215-736-8970
Water Jet Cutting	4048	Krando Metals	Machn	610-543-3799

Approved Supplier List

Approved Product or Service	Vend ID	Supplier Name	Dept	Phone
Tank Heads	N/A	L.A. Boiler Works	Weld	405-363-1317
Plating Priming Mag. Particle Inspect	4122	Lawrence Ripak Co., Inc.	CNC	631-694-1818
Valve - Spring Testing, Material Test	4160	Lehigh Testing Lab	Valve	302-328-0500
Distributor of O.E.M., I.M. & T.E.	4169	Liberty Tool	QC	610-431-4950
Industrial Fasteners	4168	Lilly Fasteners	Weld	302-368-1223
Calibration Testing	4063	LTI - Metrology	QC	800-219-9095
Gear Cutting	4220	Lufkin Gear	Gear	409-637-5840
Repair of Hi Torques	4502	Maxpro	Eng Pumps	215-706-0175
Forgings, Sheaves	4339	McKees Rock	Gear	800-223-2818
Perforated Sheet & Mesh (Metal)	4344	McNichols Co	Weld	800-237-3820
Nitriding	4640	Metlab Heat Treaters	Machn	215-233-2600
Hardness Calibration	4683	Mid Atlantic Calibration	QC	410-377-1496
Gear Cutting, Worm Gear	4968	Nuttall Gear(Delroyd)	Gear	800-432-0121
Forgings	5070	Patriot Forge, Inc.	CNC	519-621-2070
Ferrous Raw Materials	5127	Penn Iron	Eng Pumps	610-777-7656
Stainless Steel	5144	Penn Stainless	Machn	800-222-6144
Cold Rolled Steels	5149	Pennsylvania Steel	Machn	800-999-2997
Pipe Formed	5241	Philadelphia Pipe Bending	Weld	215-223-9420
Aluminum Stock	5245	Pierce Aluminum	Weld	508-541-7007
Manufacturer & Calibration of PI Tapes	5264	PI Tape	QC	760-746-9830
Pipe and Pipe Supplies	5249	Piping Supplies	Weld	609-561-9323
Repair of Chesterton mechanical seals	5365	Process Technologies	Eng Pumps	610-603-7525
Fabrication of Discharge Heads	5372	Pro Fab Corp	Eng Pumps	806-747-7272
NDE Testing Lab	5429	Q.S.L. Inspection, Inc.	Weld	610-497-0400
Babbiting	5437	Quality Babbiting	Machn	603-642-7147
Calibration	5434	Quality Calibration Services	QC	800-285-0035
Calibration & Inspection Equip Repair	5432	Qual-Tech Labs	QC	610-524-7870
Testing	5474	Ramball Testlab, Inc.	CNC	609-786-8880
Heat Treating	6775	Robert Wooler	CNC	215-542-7600
Packaging Services	5645	Roddy Products Packaging Inc.	CNC	610-623-7040

Approved Supplier List

Approved Product or Service	Vend ID	Supplier Name	Dept	Phone
Stainless Steel and Nickel Alloy Formed	5650	Rolled Alloys	Weld	800-521-0332
Engineered Bowl Assemblies	5685	Ruhrpumpen	Eng Pumps	918-627-8400
Water Jet Cutting	5707	S & W Race Cars	Gear	610-948-7303
Forgings - Steel	5878	Schultz Steel Company	CNC	323-564-3281
Forgings	5804	Scot Forge	Gear	800-435-6621
Special Hardware / Fasteners	5880	Shur-Kut Supply Corp	CNC	484-840-0980
Non-Destructive Testing	6067	Stork Material Tech - MMA Testing Labs	Weld	215-579-7500
Steel & Plate	6041	Steel Plate Products	Weld	610-935-9550
Heat Treating	6076	Superheat	Eng Pumps	708-478-0205
Custom Boxes / Crates	6082	Sustek	CNC	610-485-9600
Heat Treating & NDT	1147	Team Industrial Services	Eng Pumps	610-859-7800
Castings	6165	Texas Stainless	Machn	800-874-8538
Pipe	6190	Tioga Pipe	Machn	215-831-0700
Tank Heads	6317	Trinity Industries	Weld	409-825-6581
Steel Tubes	6332	Tubular Steel	Weld	314-851-9200
Vertical Pump Parts	6336	Turbine Supply	Eng Pumps	806-763-5901
Chrome Plating	6406	US Chrome Corp. of PA	Pump	610-272-1945
Grinding	6517	Vitols Tool & Machine Corp.	CNC	215-464-8240
Machine Shop	6612	Wagner Machine Company	Weld	610-485-3831
Impellers & Castings		Weir-Deer Park TX	Eng Pumps	832-200-6220
Casting / Foundry	6672	West Philadelphia Bronze	Machn	610-874-1454
Welding & Fabrication	5780	William Schmidt & Sons	Weld	215-874-8436

Chalmers & Kubeck, Inc.

Supplier Evaluation Report

Supplier Name: _____ **ISO 9001:2008 Registered:** **Yes** **Date:** _____

Evaluation Period: Jan 1 _____ to Dec 31 _____.

Initial Setup for Evaluation: _____

Initial Setup Requested By: _____ **Department:** _____

Product / Service Provided: _____

Vendor ID: _____ **Phone Number:** _____

Please score the Supplier in the following areas:

1. Overall, how would you score the *quality* of the products or services provided? Score: _____

- [3] Satisfied?
- [2] Neither satisfied nor dissatisfied?
- [1] Dissatisfied?

2. Overall, how would you score the *delivery* of the products or services provided? Score: _____

- [3] Satisfied?
- [2] Neither satisfied nor dissatisfied?
- [1] Dissatisfied?

3. Overall, how would you score the *pricing* of the products or services provided? Score: _____

- [3] Satisfied?
- [2] Neither satisfied nor dissatisfied?
- [1] Dissatisfied?

4. How satisfied are you with the *service* of the supplier? Score: _____

- [3] Satisfied?
- [2] Neither satisfied nor dissatisfied?
- [1] Dissatisfied?

Total Score: _____

Number of Supplier Nonconformances: _____.

Recommendation: **Approved** **Disapproved**

Comments: _____

If a Supplier is NOT Approved, a Rejection Reason must be given on the lines below.

The Evaluator must have personal knowledge of the Suppliers' performance during the rating period.

Evaluated by _____ Date

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.7
SUBJECT: CUSTOMER PROPERTY	Page: 1 of 1
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

1.0 Purpose

To ensure products supplied by the customer are identified, verified, stored and maintained properly. Any product that is lost, damaged or is otherwise unsuitable for use shall be reported to the customer.

2.0 Scope

This procedure applies to products / items supplied by the customer under terms of the contract.

- (3) Customer property can include intellectual property and personal data.

3.0 Responsibility

3.1 Department Managers and Foremen are responsible for verifying and identifying Customer Property per VCK-4.8 (Product Identification and Traceability) and completing the Valve Inspection Worksheet (CK-202), Limitorque Inspection Worksheet (CK-204), Repair and Inspection Report for Control Valves (CK-203) or Pressure Relief Valve Repair Traveler (CK101) as appropriate.

3.2 Department Manager or Foremen responsible for notifying the customer if the product is lost, damaged or unsuitable for use per VCK-4.13 (Control of Nonconforming Product) and maintaining the notification per VCK-4.16 (Control of Quality Records).

3.2.1 Customers supplying damaged or unsuitable for use material are not required to complete the Cause of Nonconformance or the Initial Corrective Actions Taken sections of the Supplier Nonconformance Report.

3.3 Department Managers and Foreman are responsible for the protection, maintenance, safeguarding and storage of Customer Supplied Product per VCK-4.15 (Preservation of Product).

4.0 References

- (3) Clause 7.5.4 of ISO 9001:2008 Customer Property
Customer Property Process Map (VPM-4.7)

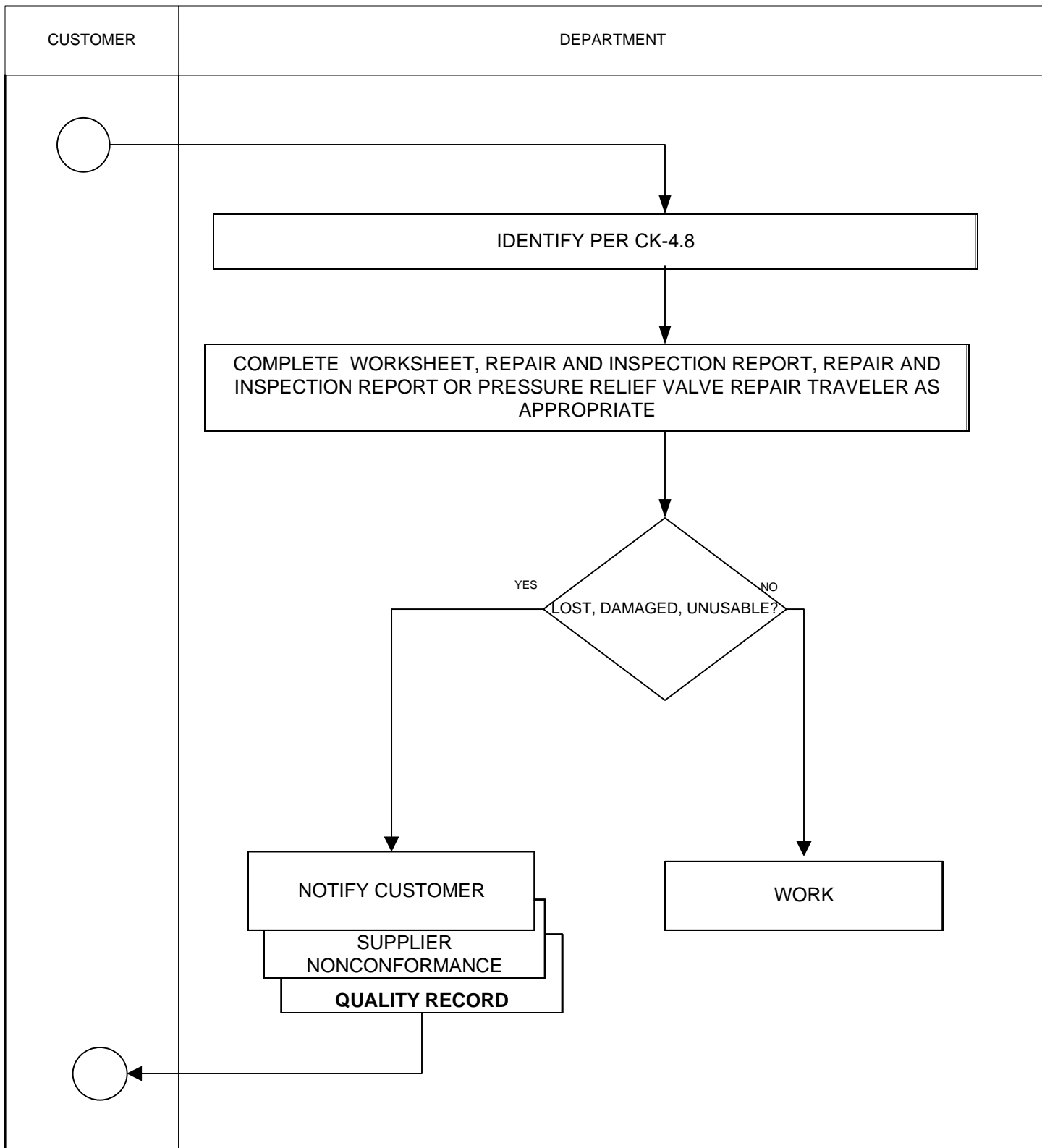
SUBJECT:

CUSTOMER PROPERTY

Page:
1 of 1

Reason for Revision:

Rev.-
11-30-02



<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.8
SUBJECT: IDENTIFICATION AND TRACEABILITY	Page: 1 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev.3 09-01-09

1.0 Purpose

To ensure materials, parts and components are properly identified, as per applicable drawings, specifications or contract, and are readily traceable when required. To ensure by means of suitable identification markings that the progress of materials can be traced to its origin.

2.0 Scope

This procedure applies to raw materials, products and assemblies during procurement, storage, repair, manufacturing, assembly and shipping, including customer supplied products.

3.0 Responsibility

- 3.1 Shipping and Receiving is responsible for identifying material with job numbers, customer name or overhead number, and/or color codes. Shipping and Receiving is responsible for delivering the material to the appropriate area per the Product Identification and Traceability Process Map (VPM-4.8).
- 3.2 The Department Manager and Foremen are responsible for ensuring parts and material are identified with job numbers, customer name or overhead number and the identification is maintained throughout production.
- 3.3 Department Managers Foreman and Purchasing are responsible for purchasing raw material when traceability is a contract requirement and maintaining the Material Certificate in the job file as a quality record per VCK-4.16 (Control of Quality Records).
- 3.4 Product Status shall be identified with respect to monitoring and measurement requirements per VCK-4.12 (Monitoring and Measurement Status of Product).
- 3.5 All employees are responsible for maintaining identification markings throughout production, this shall include raw bar stock.
- 3.6 Valve Stamping, Identification and Traceability for **new** and **repaired** Pressure Relief Valves shall be in accordance with National Board requirements and Valve Identification and Traceability procedure VP-3. Valve Stamping, Identification and Traceability for valves other than Pressure Relief shall be in accordance with Valve Identification and Traceability procedure VP-3.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.8
SUBJECT: IDENTIFICATION AND TRACEABILITY	Page: 2 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev.3 09-01-09

4.0 References

ASME Section I – PG-110

ASME Section VIII Division 1 - UG-129

- (3) Clause 7.5.3 of ISO 9001:2008 Identification and Traceability
- Product Identification and Traceability Process Map (VPM-4.8)
- Material Certificates
- Valve Identification and Traceability VP-3

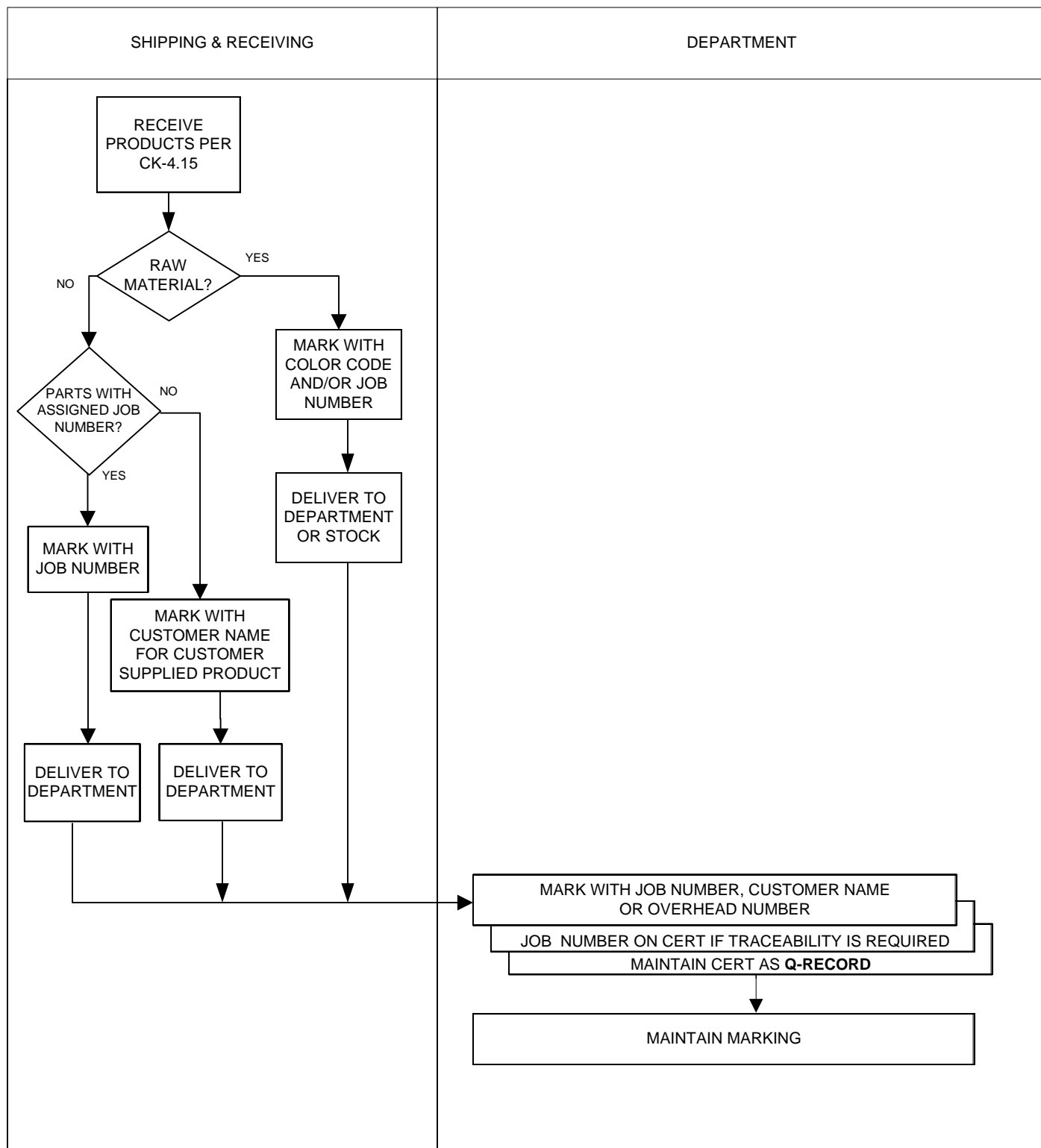
SUBJECT:

IDENTIFICATION AND TRACEABILITY

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Reason for Revision:

Rev.-
11-30-02



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SUBJECT: Control and Validation – Production and Service Provision	Page 1 of 3
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

1.0 Purpose

- To ensure production and service provisions are planned and carried out under controlled conditions;
- To ensure the validation of any process used in production or service provision where the resulting output cannot be verified by subsequent monitoring or measurement.

2.0 Scope

This procedure applies to processes performed for a customer.

3.0 Responsibility

- 3.1** The General Manager, Department Manager and Foreman are responsible for planning and carrying out production and servicing provision under controlled conditions. Controlled conditions shall include, as applicable:
- a) the availability of information that describes the characteristics of the product;
 - b) the availability of work instructions, as necessary;
 - c) the use of suitable equipment;
 - (3) d) the availability and use of monitoring and measuring equipment;
 - e) the implementation of monitoring and measurement;
 - (3) f) the implementation of product release, delivery and post-delivery activities.
- 3.2** The General Manager, Department Manager and Foreman are responsible for ensuring that the criteria for workmanship is stipulated in the clearest practical manner through the use of Work Orders per Work Order Work Instructions (VWOWI-4.3) and Field Service Reports (CK-206) for field services; completing the Pressure Relief Valve Repair Traveler (CK101), or the Valve Inspection Work Sheet for Line Valves (CK-202), or the Repair & Inspection Report for Control Valves (CK-203), or the Limitorque Inspection Worksheet (CK-204) as appropriate; and, applicable Work Instructions, drawings, sketches or other documented procedures and information.
- 3.3** The General Manager and/or Department Managers are responsible for approving equipment and processes prior to their initial use, when appropriate.
- 3.4** Department Managers are responsible for maintaining Process Qualification Record - Coatings using VPQ-4.9, for personnel who apply Coatings per VCK-4.16 - Control of Quality Records.

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- 3.5** Welding: All necessary welding required to repair ASME stamped Pressure Relief Valves will be the responsibility of the Welding Quality Control Manager. All welding , NDE and heat treatment will be done in accordance with existing Chalmers & Kubeck “R”, “U” and “PP” stamp procedures. All weld repairs shall be documented on CK-101 – in the “Comments” section. Objective evidence of the weld repairs shall be located in the job file on completed Form R-1 indicating “PRV Part Repair”.
- (2)
- (1)

- (2) **3.5.1** All items to be welded will be documented and submitted on a Valve Shop Welding Supplement. (7.0 Valve Weld Shop)

3.6 All vendors used for NDE and Heat Treatment will be reviewed by Chalmers & Kubeck, Inc. Welding Department Quality Control Manager to assure code compliance. Heat Treatment shall be documented on CK-101 – in the “Comments” section. NDE shall be documented on CK-101 in the “NDE” and “Results” section. Objective evidence of the NDE or Heat Treatment shall be located in the job file.

3.7 Technicians are responsible for performing suitable maintenance on the equipment they use.

3.8 Technicians are responsible for monitoring and controlling process parameters and product characteristics through inspection and testing.

3.9 All employees are responsible for complying with reference codes, standards, and documented procedures.

(2) **4.0 Corrosion Resistant Coatings to Springs (new or repaired safety relief valves).**

4.1 Springs to be coated shall be obtained from the valve manufacturer.

4.2 The corrosion resistant coating shall be appropriate for the intended service.

4.3 Springs shall be clean, prepped, coated and marked per valve manufacturer’s specifications.

4.4 The General Manager, Department Manager and Foremen are responsible for ensuring that the criteria for workmanship is stipulated in the clearest practical manner through the use of Work Orders per Work Order Work Instructions (VWOWI-4.3) and completing the Pressure Relief Valve Repair Traveler (CK101).

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5.0 References

- (3) Clause 7.5.1 & 7.5.2 of ISO 9001:2008
 Process Qualification Record - Coatings (VPQ-4.9)

Chalmers & Kubeck, Inc.
Valve Division
Process Qualification Record - Coatings

Employee Name: _____

Department: _____

Coatings that may be applied:

- Epoxy Products
- Painting
- Preservatives

Qualification Statements for the Application of Coatings

● Prior to the application of any coating, I have been instructed to read the coating manufacturers preparation and application directions and to follow those directions exactly.

● Prior to the application of any coating, I have been instructed to check the expiration date on coatings with a shelf life. Coatings exceeding the expiration date shall not be used. The material shall be red tagged with the Shop Nonconformance Tag and my Foreman or Department Manager notified of expired material requiring disposal.

● In the event that I do not understand the preparation and/or application directions, I will get clarification from my Foreman or Manager, or in their absence another knowledgeable employee prior to proceeding with the coating preparation and application.

I have read and understand the above requirements.

Employee Signature: _____
Date

Department Manager: _____
Date

VALVE SHOP WELDING SUPPLEMENT

Date:	
Job Number:	
Customer:	
C&K Contact:	

Status:	
Material:	

CODE:

SECTION I	
SECTION VIII	
NON-CODE	
Date of Construction	

Description:

PWHT: **YES** **NO**

NDE Required: **YES** **NO**

Type of NDE: _____

Documentation of NDE Required: **YES** **NO**

Welder C&K #:	1) _____
	2) _____
	3) _____

WPS Used: _____

NAME: _____ **Date:** _____

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1.0 Purpose

To ensure monitoring and measuring activities are carried out to verify the specified requirements for the products are met.

2.0 Scope

- This procedure applies to materials purchased for use on the final product, customer supplied products, items in the process of being manufactured, assembled, and/or repaired and the final inspection and testing of products;
- The production and inspection of new Pressure Relief valves, the repair and inspection of Pressure Relief valves and the repair and inspection of valves other than pressure relief.

3.0 Responsibility

3.1 Shipping and Receiving is responsible for receiving material, checking count and condition, and verifying agreement of Purchase Order and Packing List, identifying material and delivering material to the appropriate area per VCK-4.15 (Preservation of Product).

3.2 Production, Inspection, Assembly, Testing and Setting of “New” Pressure Relief Safety Valves.

(3) 3.2.1 The Shop Foreman verifies the information on the worksheet copy of the Sales Order (CK-105) or (CK-105 MAS) and requests necessary material from stores.

3.2.2 The worksheet and material are forwarded to a qualified Technician for assembly.

3.2.1.1 When a part replacement is required, the Shop Foreman shall ensure the part received from stores is correct. The Technician shall also verify the part against the manufacturer’s specification (Bill of Material). Springs shall be verified against the manufacturer’s Spring Chart. Non-conforming material shall be per VCK-4.13

3.2.3 All valves shall be assembled and tested by certified personnel in accordance with the manufacturer’s assembly procedures (AS) and test procedures (PT). The Shop Foreman is responsible for verifying the correct procedures are being used.

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- 3.2.4 All valves shall be tested using media which best simulates actual service conditions:
- Steam on Steam
 - Gas/Vapor/Air on Air
 - Liquid on Water
- (3) 3.2.5 Set pressure for each valve shall be specified by the customer and recorder on the Sales Order (CK-105) or (CK-105 MAS). Popping point tolerances are listed in the manufacturer's test procedures and are in accordance with ASME specifications.
- 3.2.6 Blowdown for production valves will be set in accordance with manufacturer's procedures or customer requirements. For Section I valves blowdown shall be in accordance with PG 72.1. Seven (7) percent is required for capacity certification of Section VIII valves only (UG 136 (C) (3)). Production valves are set in accordance with the manufacturer's ring setting procedure.
- 3.2.7 When the Foreman deems it necessary because of valve performance, the lift shall be checked at the required overpressure.
- 3.2.8 Leakage testing shall be conducted in accordance with the manufacturer's test procedures and are in accordance with ASME specifications.
- 3.2.9 Backpressure testing per ASME Code UG-136 (D) (3), requires manufacturers and assemblers to perform a back pressure test of at least 30 PSIG for valves which discharge to a closed system.
- 3.2.9.1 Air pressure of at least 30 PSIG will be applied to the discharge flange. Leakage may be detected by the application of a soap solution at point of possible leakage. There shall be no visible signs of leakage on back pressure while the valve is being tested.
- 3.2.10 Valve sealing shall be performed after the valve is set and all leakage tests performed; a stainless steel wired, lead button seal will be attached to the valve cap bonnet and outer adjustment pins. An impression bearing the company initials will be applied to the lead button (C/K).
- 3.2.11 Safety Valve In Process Inspection and Work Report (CK101) or Safety & Relief Valve Test Report (CK-102A) shall be filled in after completion of the required steps.

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3.2.11.1 CK101 shall be filled out by the tester and signed. The Foreman or his appointee shall verify the test and initial the report.

3.2.12 All valves on Steam, Air or Hot Water above 140° F shall have a lifting mechanism per applicable code.

3.2.13 All primary pressure parts of each valve exceeding NPS 1 inlet size or 300 PSI set pressure, where the materials used are either cast or welded, shall be tested at a pressure of at least 1.5x the design pressure of the parts.

(1) Prior to valve assembly, pressure retaining parts will be inspected for “H” # which indicates part has been tested at the factory. Any part not containing this “H” # will be rejected and processed as Supplier Nonconforming Material.

3.2.14 All Section I valves shall be tested per VP-5.

3.2.15 New Pressure Relief Safety valves which are returned by the customer shall processed as follows:

- Upon receipt valves shall be visually inspected by the QC Manager or appointed designee to ensure valves were not put in service;
- Valves shall be dismantled, parts identified and put back into inventory;
- Valves will be loosely re-assembled and sealed;
- Valves and components shall then be entered back into inventory.

3.2.16 Valves shall be identified per VCK-4.8.

3.2.17 The Certified Individual shall provide oversight to ensure that each use of the Code Symbol is in accordance with the requirements of Section I or Section VIII Division 1. Each use of the Code symbol shall be documented the Certificate of Conformance for Pressure Relief Valves (VCofC).

3.3 Inspection, Disassembly, Repair, Testing and Setting of “Repaired” Pressure Relief Safety Valves.

- Inspection is defined as only those actions required to verify the operation of a valve to be within tightness (API 527) and Code Requirements. This procedure is known as a Pre-Test as noted on the Safety Valve In Process and Work Report (CK101). This includes a Pop Test to verify set pressure and reseating action.
- Repair is defined as the disassembly, or the disassembly and replacement of valve parts.

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- All valves received will be pre-tested only at the customers request or, when the Shop Foreman deems necessary.

3.3.1 The Quality Control Manager shall be responsible for the procedures used in inspection, repair and replacement parts for valves requiring repair; these procedures shall be reviewed annually, or when procedures change due to manufacturers' design changes.

3.3.1.1 The Quality Control Manager shall maintain a complete and update file of manufacturers' repair procedures.

3.3.1.2 The Quality Control Manager is responsible for developing and implementing the Chalmers & Kubeck, Inc. In-House Training Program.

3.3.2 The Shop Foreman shall have overall responsibility to ensure that all ASME Code stamped valves are repaired in accordance with manufacturer specifications and tolerances for set pressure, blowdown and leakage. Nonconformances shall be documented per VCK-4.13.

3.3.2.1 General Safety Valve Maintenance and Repair Manual VP-6 shall be followed.

(2) 3.3.2.2 The Shop Foreman shall ensure all Technicians are adequately trained in accordance with the In-House Training Program and NB 23 Part 3 – S7.10.2. Training results shall be maintained by the Quality Control Manager.

3.3.3 Only trained and qualified Technicians shall repair ASME Code stamped Pressure Relief Valves.

3.3.3.1 Upon receipt of the valve, the Safety Valve In Process and Work Report (CK101) is attached to the valve for identification purposes. The Technician will then disassemble the valve, inspect, clean and re-inspect the valve using manufacturers' drawings and specifications to determine what repairs or replacement parts are required. Results shall be documented on CK101.

3.3.3.2 The unique identification for valves repaired by Chalmers & Kubeck, Inc is the shop order number as shown on CK101.

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3.3.3.3 The spring identification number shall be noted on CK101. The Technician will then look up the spring number in the appropriate spring catalogue and note the range. If a discrepancy is noted, it shall be documented per VCK-4.13 and a new spring will be requisitioned subsequent to the notification and approval of the valves owner.

3.3.3.4 Prior to the start of repair, the Technician shall review CK101 with the Shop Foreman:

- a) replacement parts needed shall be requisitioned per VCK-4.6.
- b) those component which require replacement and/or fabrication shall be described on each appropriate line of CK101 and scheduled by the Shop Foreman for fabrication and machining.
- (2) c) prior to assembly new pressure retaining parts will be inspected to insure hydrostatic testing has been performed. Any part that cannot be verified will be hydrostatically tested or returned to vendor. Verification will be documented on CK101.

3.3.4 At the completion of all steps on CK101, the Foreman or his designee will complete CK-102A. He will then review both for discrepancies or omissions. If acceptable, the Foreman or his designee shall mark the valve complete in the job file.

3.3.4.1 If the form is incomplete or discrepancies are found, the Foreman and the Technician will review the forms and take necessary corrective actions.

3.3.5 All referenced forms shall be kept on file for a period of at least five (5) years as part of Quality traceability.

3.3.6 Valve testing and settings shall be in accordance with ASME Code Section I and Section VIII Division 1 and the manufacturers' settings; detailed instructions on obtaining specific value settings and adjustments can be found in the manufacturers' maintenance instructions.

3.3.6.1 Valves shall be tested in the following media:

- Valves in vapor service shall be tested on air.
- Valves in liquid service will be tested on water.
- Valves in steam service will be tested on steam.

3.3.6.2 A cold differential set pressure will be applied to each valve where applicable. This information can be obtained from the valve manufacturers' nameplate data, or customer requirements.

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(2) 3.3.6.3 Gauges used in testing Code Valves (air and steam) are digital and have a full range capacity. Minimum accuracy is ¼ of 1% full scale. A second (back-up) or dial test gauge with the same accuracy will be used at all times to check the accuracy. All valves tested on water will use dial gauges with an accuracy of ½ of 1% and be traceable to NIST.

3.3.6.4 All other gages shall have a maximum accuracy of ½ of 1% and be traceable to NIST.

3.3.6.5 Set pressure for each valve shall be determined by the manufacturers' nameplate instructions or specific instructions from the customer.

- The set pressure tolerance permitted by Section I:

(1)	0-70 PSI	+/-2
	70-300 PSI	+/-3% of Set Pressure
	300-1000 PSI	+/-10 PSI
	1000-above PSI	+/-1% of Set Pressure

- The set pressure tolerance permitted by Section VIII:

(1)	Up to 70 PSI	+/-2 PSI
	Above 70 PSI	+/-3% of Set Pressure

3.3.6.6 The blowdown for Section I valves will be in accordance with Paragraph PG-72.01. Section I valves may have to be field set for popping point and blowdown tolerances at which time the VR stamp will be applied.

- The maximum blowdown for Section VIII should be no greater than 7% for capacity testing only per UG-136 (C) (3) (A).

*ASME Code requirements for popping point and blowdown tolerance is posted at the test station.

3.3.6.7 Adjustment for Blowdown for Testing: the blowdown ring setting is necessary for checking the valves on the test stand, and adjusting the spring tension, but at times must be reset for actual service conditions.

- Adjusting rings shall be properly set for the set pressure and blowdown. See VP-6 General Safety Valve Maintenance and Repair Manual for instructions.

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3.3.6.8 Tightness of a pressure relief valve in gas or vapor service is closely connected with the valve operation (i.e. unless the valve opens and closes sharply, it may leak).

- Simmer is an audible passage of gas or vapor passing across the seating surfaces just prior to the POP.

3.3.6.9 When the foreman deems it necessary because of valve performance, the lift of the valve shall be checked at the required overpressure.

- (1) 3.3.6.10 The tightness test will be done in accordance with the Manufacturers Requirements, API 527, or another specification agreed to by user.

3.3.6.11 The ASME Code Section VIII Division 1 UG-136 (D) (3) requires a back pressure test of at least 30 PSIG for valves which discharge to a closed system.

- Back pressure is measure at the valve outlet in pounds per square inch gauge pressure (PSIG).
- The back pressure test will be performed after the valve has been set, and seat tightness has been checked.

3.3.6.12 After the valve is set, and all leakage tests have been performed, a stainless steel wire with lead button seal shall be attached to the valve cap, bonnet and outer adjustment pins. An impression bearing the company initials will be applied to the lead button. (C/K)

3.3.6.13 After the completion of all tests, the Technician will complete the necessary information on CK101 and submit it to the Foreman or his designee. The form shall be reviewed for any discrepancies. If acceptable, the Foreman or his designee shall complete CK-102A and mark the valve as complete in the job file.

3.3.6.14 Valves shall be identified per VCK-4.8.

3.3.6.15 Each pressure relief valve to which the Code Symbol will be applied shall be capacity certified in accordance with ASME Section I or Section VIII as appropriate. In addition, each use of the Code Symbol shall be documented on the Certificate of Conformance (VCofC). The Certificate of Conformance shall be filled out and signed by the Certified Individual.

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3.4 Inspection, Disassembly, Repair, Testing and Setting of “Repaired” Valves Other Than Pressure Relief Safety Valves.

- Applies to valves repaired to OEM specifications and requirements as described in API 598, API 600 and ANSI B16.34.
- Inspection is defined as only those actions required to verify the operation of a valve to be within tightness (API 598) requirements.
- Repair is defined as the disassembly, or the disassembly and replacement of valve parts.
- All valves received will be pre-tested only at the customers request or, when the Shop Foreman deems necessary.

3.4.1 The Quality Control Manager shall be responsible for the procedures used in inspection, repair and replacement parts for valves requiring repair; these procedures shall be reviewed annually or when procedures change due to manufacturers’ design changes.

3.4.1.1 The Quality Control Manager shall maintain a complete and updated file of manufacturers’ repair procedures.

3.4.1.2 The Quality Control Manager is responsible for developing and implementing the Chalmers & Kubeck, Inc. In-House Training Program.

3.4.2 The Shop Foreman shall have overall responsibility to ensure that all procedures are followed. Nonconformances shall be documented per VCK-4.13 and reviewed with the Division Manager and shop personnel.

3.4.3 Only trained and qualified Technicians shall repair valves.

3.4.3.1 Upon receipt of the valve to be repaired, the appropriate Traveler or Inspection Report is attached to the valve for identification purposes. The technician will then disassemble the valve, inspect, clean and re-inspect the valve using manufacturers’ drawings and specifications to determine what repairs or replacement parts are required. Results shall be documented.

3.4.3.2 The unique identification for valves repaired by Chalmers & Kubeck, Inc is the Job Number.

3.4.3.3 In the event a valve is received which has been previously repaired by Chalmers & Kubeck, Inc., the Foreman will retrieve the valve’s past records to review its history to aid in the current repair and work scope.

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3.4.3.4 Prior to the start of repair, the technician shall review the appropriate Traveler or Inspection Report with the Shop Foreman:

- a) replacement parts needed shall be requisitioned per VCK-4.6 completed by the Shop Foreman and submitted to Purchasing.
- b) those components which require replacement and/or fabrication shall be described on each line of the appropriate Traveler or Inspection Report and scheduled by the Shop Foreman for fabrication and machining.

3.4.4 At the completion of all steps on the appropriate Traveler or Inspection Report, the Foreman will review the form for discrepancies, if acceptable; Valves shall be processed for shipment to the customer.

3.4.4.1 If the form is incomplete or discrepancies are found, the Foreman and the technician/tester will review the forms and take necessary corrective actions.

3.4.5 All referenced forms shall be kept on file for a period of at least five (5) years as part of Quality traceability.

3.4.6 Valve testing shall be in accordance with the overall guidelines for the testing of valves as described in API 598, Valve Inspection and Test.

3.4.6.1 All valves shall be tested hydrostatically unless otherwise specified.

3.4.6.2 Requirements for valve testing shall be in accordance with API 598 Section 3 as follows:

- Table 1 – Pressure Test Requirements by Valve Type.
- Table 2 – Shell Test Pressure.
- Table 3 – Other Test Pressures.
- Table 4 – Duration of Required Test Pressure.
- Table 5 – Maximum allowable leakage rates for closure tests.

3.4.6.3 Test procedures shall be conducted in accordance with API 598 Section 4.

3.4.6.4 Gages used in the testing of valves shall have an accuracy of ½ of 1% and be traceable to NIST.

3.4.7 Valves shall be identified per VCK-4.8.

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3.5 In the absence of the Department Manager or Foreman, the Technician shall have the authority to release product (by completing the Shipping Release Tag) after ensuring all final inspection and testing has been completed, the final Dimensional Record is complete and verifying that all activities specified in the Quality Plan and/or documented procedures have been accomplished. The completed Shipping Release Tag shall be forwarded to the appropriate department manager.

4.0 References

ASME Section I A300 paragraph A-302.5

ASME Section VIII Division 1 Appendix 10 Paragraph 10-7

American Petroleum Institute API 527, API 598 & API 600

National Board NB 23

ANSI B16.34

- (3) Clause 7.5.1 of ISO 9001:2008 Control of Production and Service Provision
- Dimensional Record – Valve (QC_Dim_V)
- Sales Order (CK-105)
- (3) Sales Order (CK-105 MAS)
- Safety Valve In Process Inspection and Work Report (CK101)
- Safety & Relief Valve Test Report (CK-102A)
- Certificate of Conformance for Pressure Relief Valves (VCofC)

Chalmers & Kubeck, Inc.

150 Commerce Drive
 PO Box 2447
 Allentown, PA 19014-0447
 (610) 494-7030

DATE	NUMBER	PAGE

SOLD TO

SHIP TO

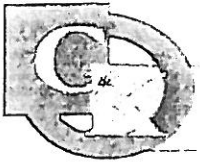
FOR INFORMATION ONLY

SHIP VIA

CUSTOMER REFERENCE NUMBER		ORDER DATE	JOB NUMBER	SHIP DATE	F.O.B.		TERMS	
ITEM	QTY ORDERED	DESCRIPTION			QTY SHIPPED	BACK ORDERED	UNIT PRICE	AMOUNT
RECEIVED BY:				SUB TOTAL	SALES TAX		FREIGHT AND HANDLING	PAY THIS AMOUNT
					% STATE	AMOUNT		

WE THANK YOU FOR YOUR ORDER WHICH WE HAVE ACCEPTED SUBJECT TO OUR TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE HEREOF WHICH ARE EXPRESSLY MADE A PART OF THE CONTRACT OF SALE

THANK YOU FOR YOUR BUSINESS



Chalmers & Kubeck
 150 Commerce Drive
 PO Box 2447
 Aston, PA 19014-0447
 (610) 494-4300

PICK LIST		
Date	Number	Page

Salesperson
 Customer Number:

Sold To:

Ship To:

Customer P.O.		Order Date	Job Number	Ship Date	F.O.B. ASTON PA		Terms NET 30	
Line	Ordered	Item Number	Unit	Shipped	Back Order	Price	Amount	
1			EACH					
2			EACH					

We thank you for your order which we have accepted subject to our terms and conditions.

Received by:

Signature:

Chalmers & Kubeck, Inc.

Setting the Industry Standard Since 1950
 150 COMMERCE DRIVE
 PITTSBURGH, PA 15104-0447
 412-494-7030

SAFETY & RELIEF VALVE TEST REPORT

Job Number:
 Job Date:
 Valve ID:

Contact _____ PO: _____

Size: _____ Type: _____ Serial No _____

Mfg: _____ Set Pressure: _____ Blowdown: _____

SERVICE: Air Vapor Liquid Steam Applicable ASME Code: VSect I UVSect VIII N/A

WORK PERFORMED Pre-Test Test & Rpt Only Test & Adjust Only Replace
 Std Repairs Additional Work Pressure Change New Sale

PRE-TEST 1st Pop: _____ Blowdown: _____ 2nd Pop: _____ Blowdown: _____

TIGHTNESS TEST Bubble: _____ Audio: _____ Visual: _____ Leaks: _____

Comments: _____

FINAL TEST Date Tested: _____ Tested by _____

Set Pressure: _____ Cold Set: _____ Blowdown: _____

Test Gauge Range: _____ Gauge Control No: _____

Test Medium: Air Water Steam

TIGHTNESS TEST Bubble: _____ Audio: _____ Visual: _____ Back Pressure Test: _____

Capacity: _____

VR Stamp Applied: _____ Spring No: _____ Range: _____

Comments: _____

PARTS INSPECTION	OK	Re'cond	Mach	Fab'ed	Replaced	PARTS INSPECTION	OK	Re'cond	Mach	Fab'ed	Replaced
Seals, Cap, Rings						Lock Nut					
Nozzle						Cap					
Disc						Lift Lever					
Disc Holder						Bonnet					
Guide						Body					
Adjust Rings						Retaining Pin					
Spring						Studs					
Washers						Nuts					
Spindle						Gaskets					
Adjust Screw						Bellows					
Outlet						Inlet					

NOTE:
 Results:
 Comments: _____

90019

JOB FILE ORIGINAL

Chalmers & Kubeck - Certificate Of Conformance For Pressure Relief Valves

1. Assembled by : _____

2. Table of Code symbol stamped items :

Job Number : _____

I.D. #	Date	Cert. #	Qty.	Type	Size (NPS)	Set Pressure	Capacity	Test Fluid	Date Code	ASME Code	CI Name	CI Signiture

3. Remarks : _____

Certificate Of Shop Compliance

By the signiture of the Certified Individual (CI) noted above, we certify that the statements made in this report are correct and that all details for design, material, construction, and workmanship of the pressure relief valves conform with the requirements of Section I or Section VIII Division 1 of the ASME Boiler and Pressure Vessel Code.

V Certificate of Authorization No. _____ Expires _____
 UV Certificate of Authorization No. _____ Expires _____
 Date _____ Signed _____ Assembler _____

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1.0 Purpose

To ensure all inspection, measuring and test equipment used to provide evidence of conformity of product to requirements are properly calibrated (by Quality Control), Accuracy Verified (by Shop personnel), controlled and maintained. Product requirements include those specified by the customer, those necessary for the production and delivery of the product, and any needed to meet regulatory requirements.

2.0 Scope

- (2) This procedure applies to all inspection, measuring and test equipment used to prove conformity of product to requirements. This applies to all inspection equipment used by shop personnel whether personally owned or owned by Chalmers & Kubeck Valve Division, excluding dial indicators.

3.0 Responsibility

- 3.1** The Valve Division Quality Control Manager is responsible for the following per **VWI-4.11a**:
- identifying all QC Department inspection, measuring and testing equipment used during recorded inspections;
 - defining calibration measurements and the accuracy requirements;
 - ensuring environmental conditions are suitable for calibration, inspections, measurements and tests;
 - defining the extent and frequency of calibration and the adjustment and/or readjustment of calibration frequency as necessary;
 - defining the calibration process including: equipment identification, location, acceptance criteria, safeguard requirements (if applicable), checking method, and recording of the calibration status;
 - ensuring equipment is calibrated to a certified piece of equipment with a valid relationship to a nationally (NIST) or internationally recognized measurement standard; where no such standard exists the basis used for calibration or verification shall be recorded on the Calibration Record (CalRec);
 - assessing the validity of previous inspections if the inspection, measuring or testing equipment is found to be out of calibration;
 - maintaining the Calibration Inventory, Records and Certificates as quality records per VCK-4.16, Control of Quality Records.
 - Final Statement of Qualification for Test System.
- 3.2** The Shop Foreman is responsible for ensuring test gauges used in the testing of valves, and in the setting and testing of Pressure Relief Valves are verified for accuracy prior to use.

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3.3 The Shop Foreman or his designee shall periodically check the test gauge calibrations using a dead weight tester which is calibrated and traceable to NIST. Findings shall be recorded in the Calibration Log Book which contains the following information:

- Date
- Gauge Control Number
- Gauge reading vs. the dead weight tester reading
- Shop Foreman or his appointed designee's signature.

3.3.1 Accuracy of the test gauges used in the testing of valves, and in the setting and testing of Pressure Relief Valves shall not exceed ½ of 1% at any point on the gage.

3.3.2 Test gauges which exceed the ½ of 1% accuracy requirement shall be red tagged with the Shop Nonconformance Tag. Test gauges may be repaired in house, sent to an outside facility for repair and recalibration or removed from service.

3.4 All employees are responsible for:

- protecting the inspection, measuring and test equipment during handling, maintenance and storage;
- notifying QC when Inspection, Measuring and Test Equipment is purchased;
- **checking equipment Prior to Use to ensure accuracy per VWI-4.11b.**
- determining the measurement to be made to demonstrate product conformance, and, to insure the accuracy of the IM&TE is capable of verifying the measurement.

3.5 General Calibration Frequency – (*includes both personal and company owned)

(2)	Back Pressure Gauges	6 months to master gauge
	Stationary Gauges	2 months
	Heise Digital Gauges	2 months
	Portable Gages	Each use @ 3 Points (25%, 50% and 75%)
	Dead Weight Tester	3 years
	Standard Inspection Equipment*	6 months
	Torque Wrenches	12 months
	Flow Meters	12 months
	Rod Standards	12 months
	Limatorque Test Equipment	12 months
(2)	Performance Test Equipment	12 months
	Hydroset Tester	12 months @ Dresser Industries
	Electronic Valve Tester	12 months @ Dresser Industries
	Hardness Tester	12 months

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4.0 Performance Test Equipment

To ensure performance test equipment used in the repair of ASME Safety or Safety Relief Valves Meet the requirements of NB 23.

- (2) 4.1 Schematics of Performance test equipment shall be kept on file, controlled by the Division Manager.

4.2 Performance Test System Parameters:

A) Air System

1. Vessel # 001 Verification Test Stand Air
 - Dimensions: 10 feet* x 24 inch outside diameter.
 - Range of test sizes: ¼ inch NPT through 8 inch nozzle
- (2) 2. Vessel # 002 Performance Test Stand Air
 - Dimensions: 10 feet* x 24 inch outside diameter.
 - Range of test sizes: ¼ inch NPT through 8 inch nozzle
 - Pressure range: 1 PSI to 1500 PSI
 - Pressure inlet control: 2 inch ball valve
3. Vessel # 002 Performance Test Stand Air
 - Dimensions: 3 feet 6 inches* x 24 inch outside diameter.
 - Range of test sizes: ¼ inch NPT through 3 inch nozzle
 - Pressure range: 1 PSI to 1500 PSI
 - Pressure inlet control: 2 inch ball valve
3. Vessel # 003 Performance Test Stand Air
 - Dimensions: 2 feet 6 inches* x 12 inch outside diameter.
 - Range of test sizes: ¼ inch NPT through 3 inch nozzle
 - Pressure range: 1 PSI to 1500 PSI
 - Pressure inlet control: ¾ inch ball valve
- (2) 4. Vessel # 004 Accumulator for Air Test Stand Vessel #002 & #003
 - Dimensions: 8 feet* x 36 inch outside diameter.
 - MAWP 904 PSI
5. Vessel # 005 Accumulator for Air Test Stand Vessel #002 & #003
 - Dimensions: 10 feet* x 18 inch outside diameter.
 - MAWP 1681 PSI

(* seam to seam)

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A) Air System (continued)

- (1) 6. Vessel #014 Accumulator Performance Test Stand
 - Dimensions: 12 inch x 6 inch long
 - Range of test size ¼ to 1 inch
 - Pressure range 0 to 3000 psi
 - Pressure inlet control ½ inch needle valve

- (1) 7. Vessel #015/#016 Test with Nitrogen Bottle Feed - Performance Test Stand
 - Range of test size ¼ to 2 ½ inch
 - Pressure range 1 to 3000 psi
 - Pressure inlet 1 inch bottle globe valve

- (2) 8. Vessel #017 Accumulator for Air Test Stand #001 Water Accumulator #011.
 - Dimensions 96 inches* x 30 inch ID.
 - MAWP 1650 PSI

(* seam to seam)

B) Steam Test System

1. Vessel # 006 Verification Test Stand
 - Dimensions: 7 feet* x 33 1/4 inch outside diameter.
 - Range of test sizes: ¼ inch NPT through 8 inch nozzle
 - Pressure range: 5 PSI to 1500 PSI
 - Pressure inlet control: 2 inch globe valve

2. Vessel # 007 Performance Test Stand
 - Dimensions: 2 feet 2 ¼ inches* x 26 ¾ inches outside diameter.
 - Range of test sizes: ¼ inch NPT through 3 inch nozzle
 - Pressure range: 5 PSI to 1500 PSI
 - Pressure inlet control: 2 inch globe valve

3. Vessel # 008 Accumulator for Steam Test Stand #006 & #007
 - Dimensions: 10 feet* x 40 inches outside diameter.
 - MAWP 1750 PSI

4. Vessel # 009 Boiler
 - Dimensions: 5 feet OAL x 2 feet outside diameter.
 - MAWP 1635 PSI

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B) Steam Test System (continued)

- (1) 5. Vessel #013 Boiler
- Dimensions: 7 feet OAL x 44 inch outside diameter.
 - MAWP 1750 PSI

(*seam to seam)

C) Water Test System

1. Vessel # 010 Verification Test Stand
 - Dimensions: 3 feet 6 inches* x 18 inches outside diameter.
 - Range of test sizes: ¼ inch NPT through 8 inch nozzle
 - Pressure range: 15 PSI to 2275 PSI
 - Pressure inlet control: ¾ inch ball valve

(*seam to seam)
2. Vessel # 011 Accumulator
 - Dimensions: 5 feet 9 inches* x 24 inches outside diameter.
 - MAWP 2375 PSI

(*seam to seam)
3. Vessel # 010A test system used for testing valves with set pressure above capabilities of verification test stand #010.
 - 2 Teledyne Hydrostatic test pumps, with test fixture attachment.
 - Maximum Pressure 4,600 PSI and 22,000 PSI.

(2) D) Field / Mobile (Portable) Test System

1. Vessel # 18 Portable Air Test Stand
 - Range of test sizes ¼ inch NPT through 8 inch nozzle.
 - Pressure range 5 psi to 1500 psi.
 - Pressure inlet control ¼ inch globe valve with regulator.
 - Accumulator dimensions 12 inch* x 4 ½ inch OD.
2. Vessel #19 Portable Water Test Stand.
 - Range of test sizes ¼ inch NPT through 8 inch nozzle.
 - Pressure range 5 psi to 1500 psi.
 - Pressure inlet control ¼ inch ball valve with regulator.
 - Accumulator dimensions 4 ft* x 9 inch OD.

(*seam to seam)

3. Performance test verification prior to use in field. When used in shop prior to use initially, then under same guidelines as 3.5 of this section.

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- (2) 4.2.1 Each performance test system shall be qualified annually. Records of the qualification shall be kept on file for 5 years after the performance test system is retired.
- (2) 4.2.2 Each new performance test system shall be qualified by comparison testing and documented prior to use per NBIC 23, Part 3 (4.5.1):
 - i. Schematic of the performance test equipment;
 - ii. Size and pressure ranges of valves to be tested;
 - iii. Dimensions of test vessels;
 - iv. Accuracy of pressure measuring equipment;
 - v. Size and design type of valves used to control flow; and
 - vi. Method of qualifying.
- (2) 4.2.3 Additions / Modifications of the performance test system shall be re-qualified using comparison testing and documented prior to use per NBIC 23 Part 3 (4.5.1). In the event any changes are made to the test system, the National Board shall be notified to determine if Performance Testing will be required.

4.0 References

- ASME Section I paragraph A-302.10
- ASME Section VIII Section 1 Appendix 10 paragraph 10-12
- (2) National Board NBIC 23 Part 3 (4.5.1)
- (3) Clause 7.6 of ISO 9001:2008 Control of Monitoring and Measuring Equipment
- Control of Monitoring and Measuring Equipment Process Map (PM-4.11)
- Calibration Record – CalRec
- Calibration Work Instruction – Instructions for Quality Control (VWI-4.11a)
- Accuracy Verification Work Instruction – Instructions for Shop Personnel (VWI-4.11b)

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CONTROL OF MONITORING AND MEASURING EQUIPMENT

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**QC INSPECTORS
PER VWI-4.11a**

**ALL EMPLOYEES
PER VWI-4.11b**

IDENTIFY INSPECTION, MEASURING & TEST EQUIPMENT USED DURING FINAL INSPECTION

DEFINE ACCURACY REQUIRED

ENSURE ENVIRONMENTAL CONDITIONS ARE SUITABLE FOR CALIBRATION

DEFINE EXTENT AND FREQUENCY OF CALIBRATION

DEFINE THE PROCESS FOR CALIBRATION PER WI-4.11a

CALIBRATE TO A KNOWN STANDARD

ACCEPT?

SAFEGUARD, IF APPROPRIATE

UPDATE CALIBRATION LOG

Q-RECORD

ASSESS VALIDITY OF PREVIOUS INSPECTIONS

RED TAG, REPAIR OR REMOVE FROM SERVICE

HANDLING, MAINTENANCE AND STORAGE

DEFINE THE PROCESS FOR ACCURACY VERIFICATION PER WI-4.11b

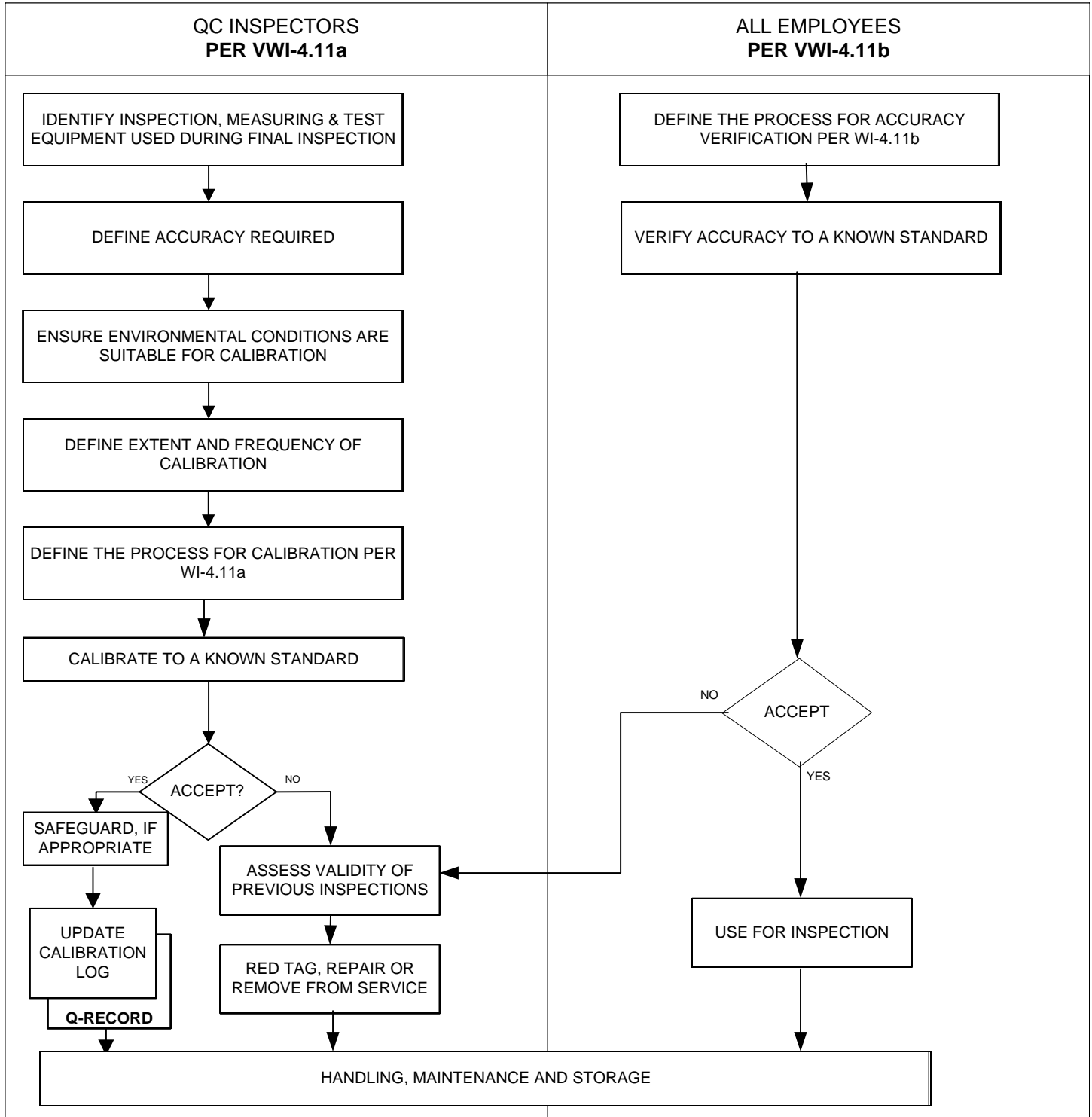
VERIFY ACCURACY TO A KNOWN STANDARD

ACCEPT

YES

NO

USE FOR INSPECTION



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Calibration Work Instruction

Instructions for Quality Control

1.0 Environmental Conditions

- 1.1 Calibration area shall be maintained at a temperature of 65 to 85 degrees Fahrenheit.
- 1.2 Cleanliness of calibration area shall be maintained at all times.
- 1.3 Calibrated rod standards shall be used for calibration purposes only.

2.0 In House Calibration Procedure

- 2.1 The gage or equipment shall be calibrated in accordance with the appropriate procedure found in this work instruction.
- 2.2 After calibration is successfully completed, the inspector records the equipment serial number, name of the equipment, location of the equipment, date calibrated, date due, results of the calibration and initials the Inspection, Measuring and Test Equipment Calibration Record. The I, M and TE Calibration Record is then returned to the file under the appropriate month based on calibration frequency.
- 2.3 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

3.0 Dial Vernier Calipers / Digital Vernier Calipers.

- 3.1 Clean and oil caliper (as required) paying strict attention to rack and measuring surfaces.
- 3.2 Visually inspect caliper for physical damage paying strict attention to measuring surfaces and teeth on rack.

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- 3.3 Accuracy of calipers to be checked at three different points distributed across the entire range using calibrated rod standards. Check inside, outside and depth measurements (3 points each).
- 3.4 Record caliper readings on the calibration record.
- 3.5 Variations from nominal in excess of .0005 inch shall be corrected and noted on the calibration record along with the corrected readings.
- 3.6 After all acceptance criteria have been met a calibration tag shall be affixed to the instrument or container.
- 3.7 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

4.0 Vernier Calipers.

- 4.1 Clean and oil caliper scale and measuring surfaces (as required).
- 4.2 Visually inspect for physical damage paying strict attention to measuring surfaces.
- 4.3 Accuracy to be checked at three different points distributed across entire range using calibrated rod standards. Check inside and outside measurements (3 points each).
- 4.4 Record caliper readings on the calibration record.
- 4.5 Variations from nominal in excess of .0005 inch shall be corrected and noted on the calibration record along with the corrected readings.
- 4.6 After all acceptance criteria have been met a calibration tag shall be affixed to the instrument or container.
- 4.7 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

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5.0 Outside Micrometer

- 5.1 Clean and oil micrometer head (as required). Clean anvils.
- 5.2 Visually inspect micrometer for physical damage, paying strict attention to the measuring face of anvils.
- 5.3 Accuracy of micrometer to be checked at three different points distributed across the entire range using calibrated rod standards.
- 5.4 Record micrometer readings on the calibration record.
- 5.5 Variations from nominal in excess of .0005 inch shall be corrected and noted on the calibration record along with the corrected readings.
- 5.6 After all acceptance criteria have been met a calibration tag shall be affixed to the instrument or container.
- 5.7 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

6.0 Inside Micrometers

- 6.1 Clean and oil micrometer head and all extensions (as required).
- 6.2 Visually inspect micrometer head and extensions for physical damage.
- 6.3 Accuracy of micrometer head to be checked at three different points distributed across entire range of set using calibrated rod standards.
- 6.4 Accuracy of extensions to be checked at intervals distributed across entire range of set using calibrated rod standards and a vernier caliper.
- 6.5 Record dimensional readings on the calibration record.
- 6.6 Variations from nominal in excess of .0005 inch shall be corrected and noted on calibration record along with the corrected readings.

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- 6.7 Once acceptance criteria have been met, a calibration tag shall be affixed to the instrument or container.
- 6.8 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

7.0 Depth Micrometers

- 7.1 Clean and oil micrometer head and interchangeable stems (as required).
- 7.2 Visually inspect for physical damage paying strict attention to measuring surfaces and condition of stems.
- 7.3 Accuracy to be checked at three different points distributed across entire range of micrometer head using calibrated rod standards.
- 7.4 Record dimensional readings on the calibration record.
- 7.5 Variations from nominal in excess of .0005 inch shall be corrected and noted on calibration record along with the corrected readings.
- 7.6 After all acceptance criteria have been met a calibration tag shall be affixed to the instrument or container.
- 7.7 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

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Accuracy Verification Work Instructions

Instructions for Shop Personnel

1.0 Scope

This work instruction applies to all inspection equipment used by shop personnel whether personally owned or owned by Chalmers & Kubeck Valve Division.

2.0 General Conditions

- 2.1 Accuracy verification shall be performed by operators **prior to shop inspection equipment use** to ensure accuracy.
- 2.2 Accuracy verification shall be performed at the same temperature as that in which the shop inspection equipment will be used.
- 2.3 Shop personnel must verify calibration status of the standards used for accuracy verification prior to use.
- 2.4 Calibrated rod standards shall be used for accuracy verification purposes only.
- 2.5 Calibration standards which are shared interdepartmentally shall have their control number noted on the inspection record for traceability purposes.
- 2.6 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

3.0 Dial Vernier Calipers / Digital Vernier Calipers.

- 3.1 Shop personnel must verify calibration status of the standards used for accuracy verification prior to use.
- 3.2 Clean and oil caliper (as required) paying strict attention to rack and measuring surfaces.

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- 3.3 Visually inspect caliper for physical damage paying strict attention to measuring surfaces and teeth on rack.
- 3.4 Accuracy of calipers to be checked at two different points distributed across the range using calibrated rod standards. Check inside, outside and depth measurements as appropriate (2 points).
- 3.5 Variations from nominal in excess of .001 inch shall be corrected.
- 3.6 After all acceptance criteria have been met, the shop inspection equipment may be used for inspection and acceptance/rejection of product.
- 3.7 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

4.0 Vernier Calipers

- 4.1 Shop personnel must verify calibration status of the standards used for accuracy verification prior to use.
- 4.2 Clean and oil caliper scale and measuring surfaces (as required).
- 4.3 Visually inspect for physical damage paying strict attention to measuring surfaces.
- 4.4 Accuracy to be checked at two different points distributed across the range using calibrated rod standards. Check inside and outside measurements as appropriate (2 points).
- 4.5 Variations from nominal in excess of .001 inch shall be corrected.
- 4.6 After all acceptance criteria have been met, the shop inspection equipment may be used for inspection and acceptance/rejection of product.
- 4.7 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

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5.0 Outside Micrometers

- 5.1 Shop personnel must verify calibration status of the standards used for accuracy verification prior to use.
- 5.2 Clean and oil micrometer head (as required). Clean anvils.
- 5.3 Visually inspect micrometer for physical damage, paying strict attention to the measuring face of anvils.
- 5.4 Accuracy of micrometer to be checked at two different points distributed across the range using calibrated rod standards.

Note: rod size used will differ depending on the range of the micrometer being verified.

- 5.5 Variations from nominal in excess of .0005 inch shall be corrected.
- 5.6 After all acceptance criteria have been met, the shop inspection equipment may be used for inspection and acceptance/rejection of product.
- 5.7 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

6.0 Inside Micrometers

- 6.1 Shop personnel must verify calibration status of the standards used for accuracy verification prior to use.
- 6.2 Clean and oil micrometer head and extension (as required).
- 6.3 Visually inspect micrometer head and extension for physical damage. Check measuring surfaces for wear.
- 6.4 Accuracy of micrometer head to be checked at two different points distributed across the range using calibrated shop rod standards.

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- 6.5 Accuracy of the extension to be checked at intervals distributed across the range of the extension using calibrated shop rods and a vernier caliper.
- 6.6 Variations from nominal in excess of .0005 inch shall be corrected.
- 6.7 After all acceptance criteria have been met, the shop inspection equipment may be used for inspection and acceptance/rejection of product.
- 6.8 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

7.0 Depth Micrometers

- 7.1 Shop personnel must verify calibration status of the standards used for accuracy verification prior to use.
- 7.2 Clean and oil micrometer head and interchangeable stem (as required).
- 7.3 Visually inspect for physical damage paying strict attention to measuring surfaces and condition of stems.
- 7.4 Accuracy to be checked at two different points distributed across the range of micrometer head using calibrated rod standards.
- 7.5 Variations from nominal in excess of .0005 inch shall be corrected.
- 7.6 After all acceptance criteria have been met, the shop inspection equipment may be used for inspection and acceptance/rejection of product.
- 7.7 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

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8.0 Rockwell Hardness Tester

- 8.1 This equipment is accuracy verified with each use.
- 8.2 Choose a test block that is within 10 Rockwell points of the hardness level and scale you will be using.
- 8.3 Be sure the indenter shoulder and its mating plunger rod end are clean.
- 8.4 Be certain the spot anvil shoulder and its mating end of the elevating screw are clean. (No rust, oil, dirt, etc.)
- 8.5 Be sure the test block you are using has NOT been used on the bottom side.
- 8.6 Place the test block on the spot anvil.
- 8.7 Bring the test block up smoothly, and without impact, into contact with the indenter.
- 8.8 Continue raising the test block until you reach the "Set" position.
- 8.9 Apply the major load to the test block, being sure nothing touches the test block other than the spot anvil and the indenter.
- 8.10 Disregard the first two readings you take, as the indenter and anvil must be "seated" under load.
- 8.11 At the 3rd test, record your reading on the scale you are using. (Ex. 63.0 HRC).
- 8.12 Take at least 3 tests, being sure the mean of these values falls within the tolerance marked on the block.
- 8.13 Once acceptance criteria have been met the shop inspection equipment may be used for inspection and acceptance/rejection of product.
- 8.14 Shop inspection equipment not meeting the acceptance criteria after correction shall be red tagged with the Shop Nonconformance tag. The equipment may be repaired in-house, sent to an outside repair facility for repair or shall be removed from service.

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SUBJECT: MONITORING AND MEASUREMENT STATUS OF PRODUCT	Page: 1 of 1
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1.0 Purpose

- (3) To ensure results of monitoring and measurement activities are documented; and that all activities to demonstrate conformity to product requirements have been performed and the results comply with requirements.

2.0 Scope

This procedure applies to products requiring inspection and testing to verify compliance with specified requirements.

3.0 Responsibility

3.1 Technicians are responsible for:

- performing the inspections and tests;
- completing the appropriate Worksheet/Inspection Report and/or Dimensional Record per VCK-4.10;
- verifying results obtained comply with requirements;
- notifying the department manager or foremen of nonconforming product per VCK-4.13;
- in the absence of the department manager or foreman, competent employees shall sign the "Release By:" per VCK-4.10.

3.2 All employees are responsible for ensuring the product is identified per VCK-4.8.

4.0 References

- (3) Clause 7.5.3 of ISO 9001:2008 Identification and Traceability

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SUBJECT: CONTROL OF NONCONFORMING PRODUCT		Page 1 of 4
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1.0 Purpose

- To ensure that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.
- To ensure valves or parts received from the manufacturer which do not comply with the Purchase Order shall be marked with a Supplier Nonconforming tag. The Shop Foreman shall also fill out a Supplier Nonconformance Report (VSupNonCon) stating rejection. The Shop Foreman shall review the discrepancy with the Quality Control Manager. The rejected item(s) are set aside in a designated controlled area.
- To ensure those conditions which do not comply with the applicable rules of the ASME Code Sections I, V, VIII Division 1, IX, the Quality System Manual or other specified documents are identified as Nonconforming.

2.0 Scope

This procedure applies both Shop and Supplier Nonconformances relative to products and conditions found not to be in compliance.

3.0 Responsibility

3.1 Supplier Nonconformances

- 3.1.1 The Quality Control Manager shall contact the factory to notify them of the discrepancy and return the material with a copy of the Supplier Nonconformance Report.
- 3.1.2 The Department Manager and/or Foremen are responsible for:
- identifying and controlling nonconforming product by use of the Supplier Nonconforming Tag;
 - notifying the supplier when nonconforming product is received;
 - disposition the nonconforming product, it may be:
 - a) reworked to meet specified requirements;
 - b) authorize its use, release or acceptance under concession and, where applicable, by the customer;
 - c) regraded for alternative applications;
 - d) rejected or scrapped;
 - report to the customer (when required by contract) the proposed use or repair of product which does not conform to the specified requirements;
 - documenting the discrepancy and disposition on the Purchase Order;
 - issuing Supplier Nonconformance Reports as necessary and forwarding a copy to the Management Representative;
 - evaluating the trend of supplier nonconformances with the Management Representative;
 - initiating and verifying the corrective and preventive action as required.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.13
SUBJECT: CONTROL OF NONCONFORMING PRODUCT	Page 2 of 4
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev.3 09-01-09

- 3.1.3 Shipping / Receiving and QC Inspectors are responsible for:
- identifying and controlling nonconforming product by use of the Supplier Nonconforming Tag;
 - notifying the appropriate Department Manager or Foreman when a nonconforming product is received from a supplier;
 - documenting the discrepancy on a copy of the Purchase Order and forwarding to the Department Manager or Foreman;
- 3.1.4 The Management Representative is responsible for:
- logging, trending and evaluating all supplier nonconformances;
 - verifying the corrective action from suppliers as required;
 - using supplier trends for corrective and preventive action analysis;
 - maintaining the log, trends and Supplier Nonconformances as quality records per VCK-4.16, Control of Quality Records and forwarding this information to Department Managers, Foremen or Estimators for use during Supplier Evaluations.
- 3.1.5 Technicians are responsible for:
- notifying the Department Manager or Foreman when they identify a possible nonconforming product in process;
 - generating Supplier Nonconformance Tags;
 - reinspecting (to original requirements) a nonconforming product once the product has been reworked.

3.2 Shop Nonconformances

- 3.2.1 The Department Manager and/or Foreman are responsible for:
- identifying and controlling nonconforming product by use of the Shop Nonconformance Tag;
 - generating Shop Nonconformance Reports as required;
 - reviewing nonconforming products and recording the nonconformance on the Shop Nonconformance Report;
 - dispositioning the nonconforming product, it may be:
 - a) reworked to meet specified requirements;
 - b) authorize its use, release or acceptance under concession and, where applicable, by the customer;
 - c) regraded for alternative applications;
 - d) rejected or scrapped;
 - report to the customer (when required by contract) the proposed use or repair of product which does not conform to the specified requirements
 - forwarding the Shop Nonconformance Reports to the Management Representative.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.13
SUBJECT: CONTROL OF NONCONFORMING PRODUCT	Page 3 of 4
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev.3 09-01-09

3.2 Shop Nonconformances (continued)

- (3)
- reinspecting (to original requirements) a nonconforming product once the product has been reworked.
 - notifying the customer when nonconforming product is detected after delivery or use has started and issuing a Shop Nonconformance Report.
 - identifying as Nonconforming those conditions which do not comply with the applicable rules of the ASME Code Sections I, V, VIII Division 1, IX the Quality System Manual or other specified documents through use of the Shop Nonconformance Report.

3.2.2 The Management Representative is responsible for:

- logging, trending and evaluating all shop nonconformances;
- issuing Shop Nonconformance Reports when necessary;
- verifying the Shop Initial Corrective Actions as required;
- using shop trends for corrective and preventive action;
- maintaining the log, trends and Shop Nonconformances as Quality Records per VCK-4.16, Control of Quality Records.
- identifying as Nonconforming those conditions which do not comply with the applicable rules of the ASME Code Sections I, V, VIII Division 1, IX the Quality System Manual or other specified documents through use of the Shop Nonconformance Report.

3.2.3 Technicians are responsible for:

- notifying the Department Manager or Foreman when they identify a possible nonconforming product in process;
- generating Shop Nonconformance tags;
- reinspecting (to original requirements) a nonconforming product once the product has been reworked.
- notifying the Department Manager or Foreman when nonconforming product is detected after delivery or use has started.
- identifying as Nonconforming those conditions which do not comply with the applicable rules of the ASME Code Sections I, V, VIII Division 1, IX the Quality System Manual or other specified documents through use of the Shop Nonconformance Report.

4.0 Delivered or In Use Nonconforming Product

- 4.1.1 When nonconforming product is detected after delivery or use has started the customer shall be immediately notified and a Shop or Supplier Nonconformance Report issued.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.13
SUBJECT: CONTROL OF NONCONFORMING PRODUCT	Page 4 of 4
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev.3 09-01-09

5.0 References

ASME Section I, paragraph A-302.6

ASME Section VIII Division 1 Appendix 10 paragraph 10-8

(3) Clause 8.3 of ISO 9001:2008 Control of Nonconforming Product

Control of Nonconforming Product Process Map (Supplier) (VPM-4.13a)

Control of Nonconforming Product (Shop) Process Map (VPM-4.13b)

Shop Nonconformance Report (VShopNonCon)

Supplier Nonconformance Form (VSupNonCon)

Chalmers & Kubeck, Inc.
Valve Division Quality System Manual

Procedure No.

VPM-4.13b

SUBJECT:

CONTROL OF NONCONFORMING PRODUCT (SHOP)

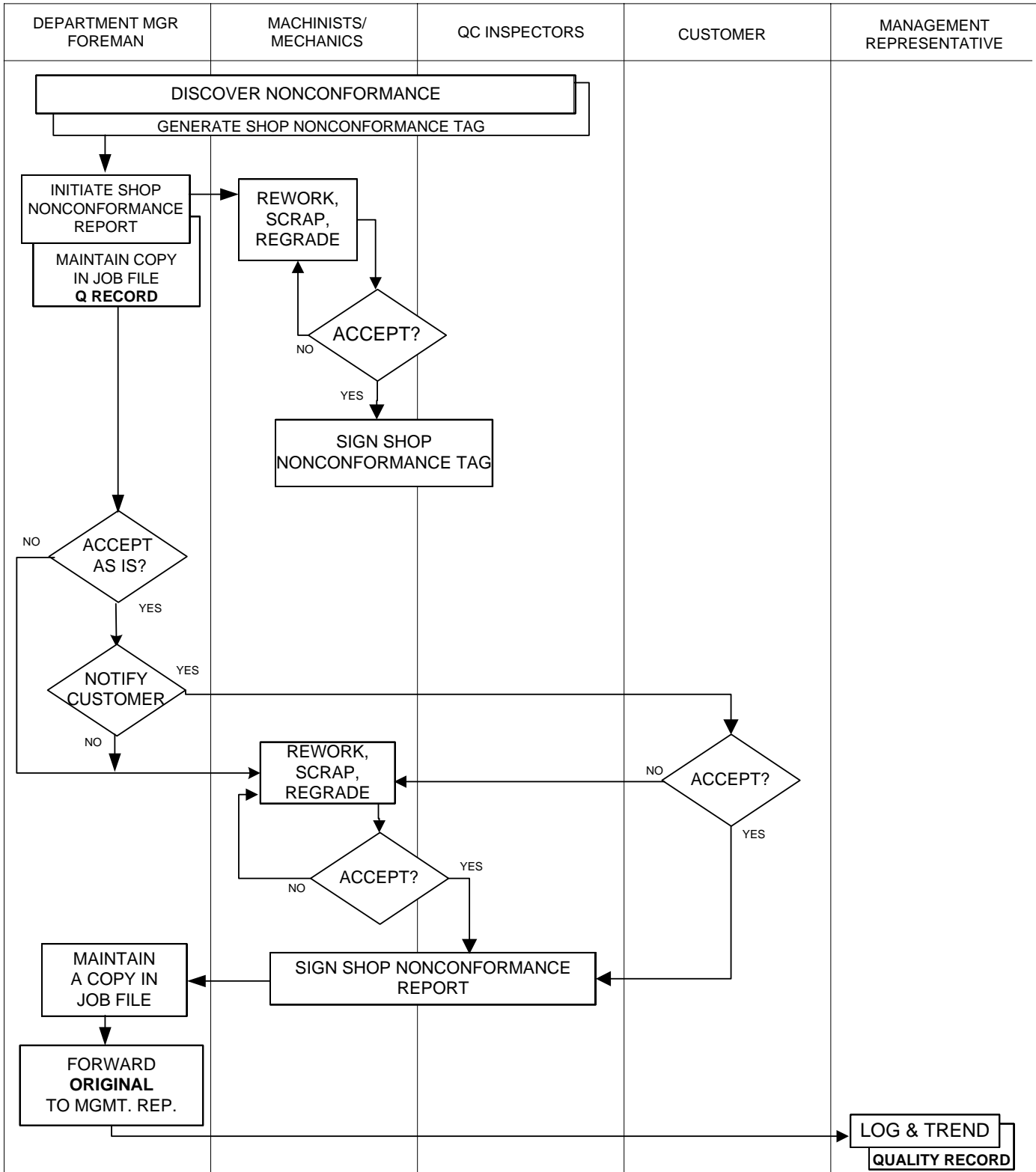
Page:

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Reason for Revision:

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11-30-02



Chalmers & Kubeck, Inc. Department: <u>Valve Division</u>	Supplier Nonconformance Report	Job #: _____
---	---	--------------

Supplier Name: _____	Ordered By: _____
Part / Drawing #: _____	Rev.: _____
Promise Date: _____	Delivery Date: _____
Qty Ordered: _____	Qty Defective: _____
Job Title: _____	
Customer PO # / Item # (if customer supplied material): _____	

Description of Nonconformance: _____ _____ _____
Cause of Nonconformance: _____ _____ _____
Initial Corrective Actions Taken: _____ _____ _____
Reported by: _____ Date: _____ Reviewed by: _____ Date: _____

Disposition:	Use As Is: <input type="checkbox"/>	Scrap Do Not Replace: <input type="checkbox"/>
(check one)	Repair: <input type="checkbox"/>	Return to Supplier: <input type="checkbox"/>
	Replace: <input type="checkbox"/>	
Comments: _____ _____		
Disposition Approved By: _____ Date: _____		

Impact:	Made Job Late By: (days) _____ Extra Labor: (hours) _____ Other: _____
Reported by: _____ Date: _____	

Chalmers & Kubeck, Inc. Department: <u>Valve Division</u>	Shop Nonconformance Report	Job #: _____ Internal Use: _____
---	-----------------------------------	-------------------------------------

Customer Name: _____	Quantity: _____
Description: _____	_____
Part / Drawing #: _____	Rev.: _____

Description of Nonconformance: _____	

Reported By: _____	Date: _____

Cause of Nonconformance:	
Operator Error: (check one) <input type="checkbox"/>	_____
Equipment Error: <input type="checkbox"/>	_____
Incorrect Instructions: <input type="checkbox"/>	_____
Incorrect Drawing: <input type="checkbox"/>	_____
Operator: _____	Date: _____
Initial Corrective Actions Taken: _____	

Reported by: _____	Date: _____
Reviewed by: _____	Date: _____

Disposition: (check one) Use As Is: <input type="checkbox"/> Repair: <input type="checkbox"/> Replace: <input type="checkbox"/>	Scrap Do Not Replace: <input type="checkbox"/> Return to Supplier: <input type="checkbox"/>
Comments: _____	

Disposition Approved By: _____	Date: _____

Cost of Repairs:	Labor: _____
	Material: _____
	Outside Services: _____

	Total Cost: _____
Reported by: _____	Date: _____

8/96

SUPPLIER NonConforming

Job Num: _____

Reason: _____

Prepared By: _____ Date: _____

FOR INFORMATION
ONLY

8/01

SHOP NonConforming

Job Num: _____

Reason: _____

Prepared By: _____ Date: _____

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.14
SUBJECT: CORRECTIVE AND PREVENTIVE ACTION	Page: 1 of 3
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev.3 09-01-09

1.0 Purpose

To ensure causes of significant problems affecting quality are:

- determined to take Corrective Action to eliminate the cause of the nonconformance in order to prevent their recurrence.
- determined to take Preventive Action to eliminate the cause of the potential nonconformance in order to prevent their occurrence.

2.0 Scope

This procedure applies to the gathering of information, analysis of data, determination, implementation and verification of corrective and preventive actions taken to eliminate the causes of significant present and potential nonconformance's impacting products supplied by Chalmers & Kubeck, Inc.

(3) 3.0 Corrective Action

3.1 Action shall be taken to eliminate the cause of nonconformities in order to prevent recurrence. Corrective Actions taken shall be appropriate to the effects of the nonconformities encountered. Corrective Action shall include:

- reviewing nonconformities (including Customer Complaints);
- determining the causes of nonconformities;
- evaluating the need for action to ensure that nonconformities do not recur;
- determining and implementing action needed;
- records of the results of action taken;
- reviewing the effectiveness of the corrective action taken.

(3) 4.0 Preventive Action

4.1 Actions shall be taken to eliminate the causes of potential nonconformities in order to prevent their occurrence. Preventive Actions shall be appropriate to the effects of the potential problems. Preventive Action shall include:

- determining potential nonconformities and their causes;
- evaluating the need for action to prevent occurrence of nonconformities;
- determining and implementing action needed;
- records of the results of action taken;
- reviewing the effectiveness of the preventive action taken.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.14
SUBJECT: CORRECTIVE AND PREVENTIVE ACTION	Page: 2 of 3
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev.3 09-01-09

5.0 Responsibility

- 5.1** The Management Representative is responsible for:
- monitoring customer perceptions relating to customer requirements on an annual basis using the Customer Satisfaction Survey (CustSatSurvey);
 - maintaining Customer Complaints as a Quality record per VCK-4.16;
 - compiling data through collection of Shop Nonconformance Reports, Supplier Nonconformance Reports, Customer Complaints, Customer Satisfaction Surveys and results from Internal Quality Audits;
 - creating and submitting a report to Executive Management;
- (3) ● maintaining Corrective Action / Preventive Action Requests (CAR/PAR) as a Quality record per VCK-4.16.
- verifying the implementation and effectiveness of completed corrective or preventive actions during the Executive Management Review.
- 5.2** Executive Management is responsible for:
- reviewing the report from the Management Representative to determine the most prominent problems;
- (3) ● submitting a Corrective Action Request / Preventive Action Request (CAR/PAR) to the Department Manager;
- reviewing plans for corrective and preventive action;
 - determining the appropriate plans to initiate;
 - assisting in the implementation of approved plans;
- 5.3** The Department Manager is responsible for:
- (3) ● developing corrective and preventive action plans when Executive Management issues a Corrective Action Request / Preventive Action Request (CAR/PAR) to their department;
- reviewing with Executive Management the suggested corrective or preventive action plan;
 - implementing the approved corrective or preventive action plan;
 - forwarding customer complaints to the General Manager and Management Representative using the Customer Complaint Report (CustComp) for corrective and preventive action analysis.
 - initiating a Customer Complaint Report (CustComp) for all nonconforming material returned by the customer.
- 5.4** Salesmen are responsible for forwarding customer complaints to the General Manager and Management Representative using Customer Complaint Report (CustComp) for corrective and preventive action analysis.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.14
SUBJECT: CORRECTIVE AND PREVENTIVE ACTION	Page: 3 of 3
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev.3 09-01-09

5.5 All employees are responsible for notifying General Manager / Department Managers of customer complaints.

6.0 References

- (3) Clause 8.5.2 & 8.5.3 of ISO 9001:2008 Corrective Action & Preventive Action Corrective and Preventive Action Process Map (VPM-4.14)
- (3) Corrective Action / Preventive Action Request (CAR / PAR)
Customer Complaint Report (CustComp)
Customer Satisfaction Survey (CustSatSurvey)

Chalmers & Kubeck, Inc.
Valve Division Quality System Manual

Procedure No.

VPM-4.14

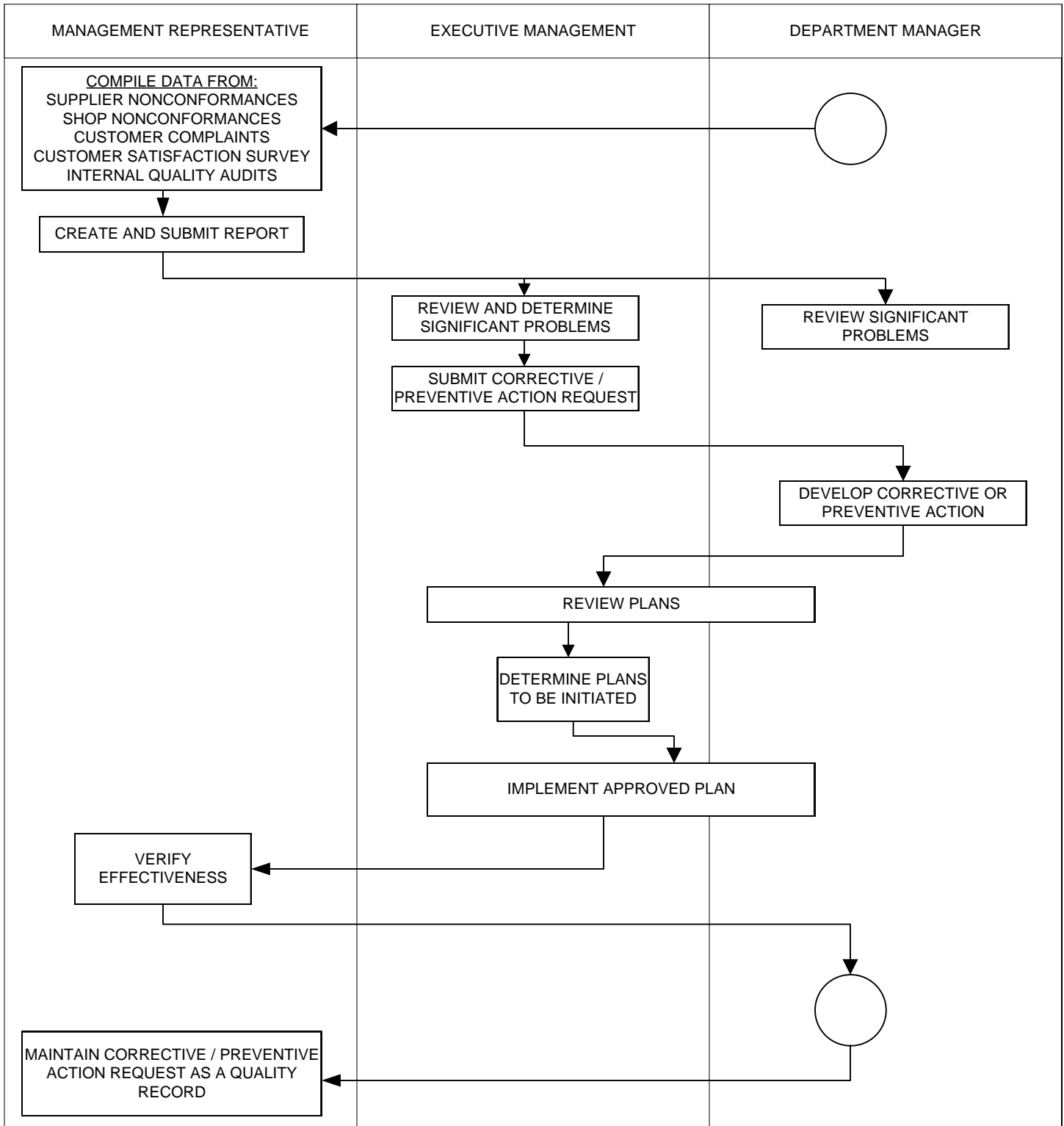
SUBJECT:

CORRECTIVE AND PREVENTIVE ACTION

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1 of 1

Reason for Revision: Revise to ISO 9001:2008 requirements.

Rev.3
09-01-09



CHALMERS & KUBECK, INC

CORRECTIVE / PREVENTIVE ACTION REQUEST

Department: _____

Reference Documents: _____

Statement of Requirement:	
 Deficiency:	
Originated By: _____	Reply Due Date: _____
Date	

Cause of Nonconformance:	
Corrective Action Taken:	
Preventive Action Taken:	
Department Manager: _____	Date: _____

Verification of Implementation and Effectiveness of Corrective & Preventive Actions Taken:	
Reviewed By: _____	Date: _____
Executive Management Review: _____	Date: _____

Chalmers & Kubeck, Inc. Department: _____	Customer Complaint Report	Job #: _____ Internal Use: <input type="checkbox"/>
---	----------------------------------	--

Customer Name: _____	PO # _____
Customer Contact: _____	Quantity: _____
Job Description: _____	Rev.: _____
Part / Drawing #: _____	

Description of Complaint: _____

Reported By: _____ Date: _____

Cause of Complaint:
Delivery: <input type="checkbox"/> _____ Quality: <input type="checkbox"/> _____ Invoice Error: <input type="checkbox"/> _____ Other: <input type="checkbox"/> _____
Initial Corrective Actions Taken:

Reported by: _____ Date: _____
Reviewed by: _____ Date: _____

Disposition:	Return for Repair / Rework: <input type="checkbox"/>	Use As Is / No Action Req'd: <input type="checkbox"/>
	Replace by C&K: <input type="checkbox"/>	Other: (explain in comments) <input type="checkbox"/>
	Scrap by Customer: <input type="checkbox"/>	
Comments: _____		

Disposition Approved By: _____ Date: _____		

Cost to Repair / Replace:	Labor: _____
	Material: _____
	Outside Services: _____
	Total Cost: _____
Reported by: _____ Date: _____	

Chalmers & Kubeck, Inc.

Setting the Industry Standard Since 1950

Phone: (610) 494-4300 Fax: (610) 485-1484

Machining & Manufacturing - Valves & Valve Repair - Weld & Weld Repair

Pumps & Pump Repair - Gears & Gear Box Repair - Field Services

Metallizing

Customer Satisfaction Survey

This information is requested as part of our commitment to improve Quality. Please return by e-mail or fax.

Company Name: _____

Date: _____

Completed By: _____

Please score the Departments within Chalmers & Kubeck that you contract with (score all that apply)

- | | | | |
|-------------------------|-------------------------------|-------------------------|------------------------|
| A - CNC | E - Machining & Maintenance | I - Valve Field Service | M - Pump Field Service |
| B - Gears | F - Maintenance Field Service | J - Weld | |
| C - Gear Field Services | G - Sales | K - Weld Field Service | |
| D - Metal Spray | H - Valves | L - Pump Shop | |

1 . Overall, how would you score the **Quality** of the products or services provided?

- | | | |
|---------------------------------------|---------|---------|
| [3] Satisfied | A _____ | H _____ |
| [2] Neither Satisfied or Dissatisfied | B _____ | I _____ |
| [1] Dissatisfied | C _____ | J _____ |
| | D _____ | K _____ |
| | E _____ | L _____ |
| | F _____ | M _____ |
| | G _____ | |

2 . Overall, how would you score the **Delivery** of the products or services provided?

- | | | |
|---------------------------------------|---------|---------|
| [3] Satisfied | A _____ | H _____ |
| [2] Neither Satisfied or Dissatisfied | B _____ | I _____ |
| [1] Dissatisfied | C _____ | J _____ |
| | D _____ | K _____ |
| | E _____ | L _____ |
| | F _____ | M _____ |
| | G _____ | |

3 . Overall, how would you score the **Customer Service** you received?

- | | | |
|---------------------------------------|---------|---------|
| [3] Satisfied | A _____ | H _____ |
| [2] Neither Satisfied or Dissatisfied | B _____ | I _____ |
| [1] Dissatisfied | C _____ | J _____ |
| | D _____ | K _____ |
| | E _____ | L _____ |
| | F _____ | M _____ |
| | G _____ | |

4. How satisfied are you with the **Overall Performance** of the departments you deal with?

- | | | |
|---------------------------------------|---------|---------|
| [3] Satisfied | A _____ | H _____ |
| [2] Neither Satisfied or Dissatisfied | B _____ | I _____ |
| [1] Dissatisfied | C _____ | J _____ |
| | D _____ | K _____ |
| | E _____ | L _____ |
| | F _____ | M _____ |
| | G _____ | |

Please attach any Comments / Suggestions on a separate page.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.15
SUBJECT: PRESERVATION OF PRODUCT	Page 1 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

1.0 Purpose

- (3) To ensure the conformity of product is preserved during internal processing and delivery to the intended destination in order to maintain conformity to requirements. As applicable, preservation shall include identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.

2.0 Scope

- (3) This procedure applies to materials, parts and components where improper handling, storage, packaging, protection and delivery may affect the specified quality requirements, including customer supplied products.

3.0 Responsibility

- 3.1** Shipping and Receiving is responsible for receiving material, checking count and condition, verifying agreement of Purchase Order and Packing List, identifying material and delivering material to the appropriate area per the Handling Process Map (VPM-4.15a). Shipping and Receiving is also responsible for verifying the Shipping Release Tag after reviewing specific Shipping/Packaging instructions, and then packaging and delivery of products per the Delivery Process Map (VPM-4.15b).
- (3) **3.2** Department Manager and/ or Foremen are responsible for maintaining identification, proper handling, storage and protection of material and parts delivered to their area.
- 3.2.1** Preservation and storage of parts and raw material is based on preventing damage or deterioration of product while in the respective department area.
- 3.3** All employees are responsible for maintaining identification and properly handling parts and raw material as they progress throughout their respective departments.
- 3.4** The Shop Foreman shall be responsible for the Valve Division Shipping Process; the process shall be as follows:
- a) All valves will be painted per customers specification or industry standard;
 - b) Shipping Release Tag will be attached to every valve being shipped. On the backside of tag the Customers name, location of plant and contact will be printed.
 - c) Valves being shipped via skid will also have the customer name, location of plant and contact printed on the skid, be visible and indicate place of delivery.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.15
SUBJECT: <p style="text-align: center;">PRESERVATION OF PRODUCT</p>	Page 2 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

- d) If valve is being shipped by box or some other means the customer name, location of plant and contact will be printed on the outside, be visible and indicate place of delivery.
- e) The shipper is responsible for filling out the Shipping Release Tag to ensure each valve being shipped has the properly marked delivery location.

4.0 References

- (3) Clause 7.5.5 of ISO 9001:2008 Preservation of Product
 Handling Process Map (VPM-4.15a)
 Delivery Process Map (VPM-4.15b)

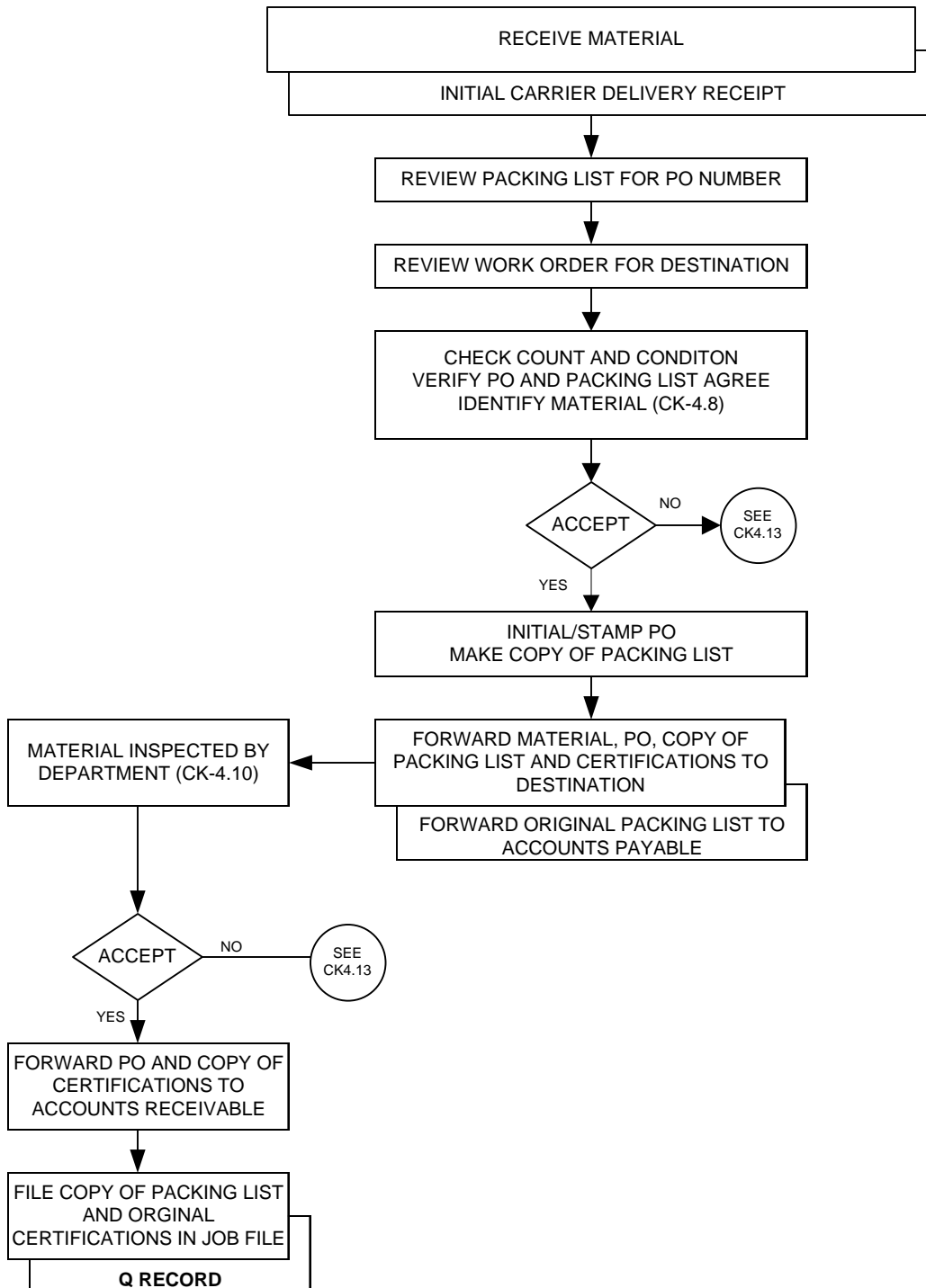
SUBJECT: **HANDLING**
PRESERVATION OF PRODUCT

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1 of 1

Reason for Revision:

Rev.-
11-30-02

VALVE DIVISION SHIPPING & RECEIVING



SUBJECT: **DELIVERY**

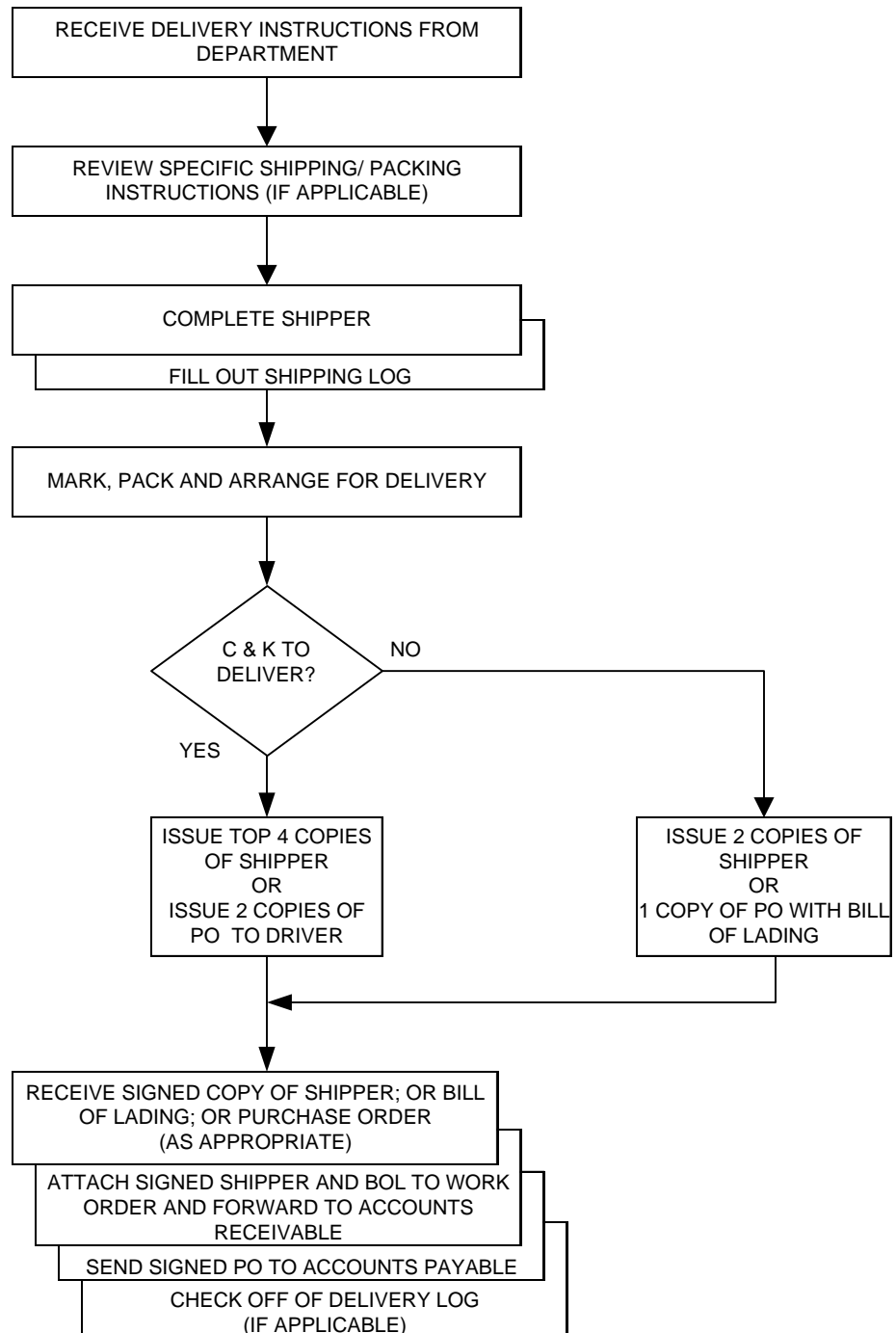
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PRESERVATION OF PRODUCT

Reason for Revision:

Rev.-
11-30-02

VALVE DIVISION SHIPPING AND RECEIVING



Chalmers & Kubeck, Inc. Valve Division Quality System Manual		Process No. VCK-4.16
SUBJECT: CONTROL OF QUALITY RECORDS		Page 1 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.		Rev. 3 09-01-09

1.0 Purpose

- 1.1 To ensure identification, collection, indexing, access, filing, storage, maintenance and disposition of Quality Records.
- 1.2 Quality records shall be maintained to demonstrate conformance to specified requirements and the effective operation of the Quality Management System. Pertinent quality records from the subcontractor shall be an element of these data.
- 1.3 All quality records shall be legible and shall be stored and retained in such a way that they are readily retrievable in facilities that provide a suitable environment to prevent damage or deterioration and to prevent loss.
- 1.4 Where agreed on contractually, quality records shall be made available for evaluation by the customer or the customer's representative for an agreed period.
- 1.5 Quality records which have met the minimum retention time or customer required retention time, may be disposed of using appropriate methods.

2.0 Scope

This procedure applies to all quality records identified throughout the Quality System Manual.

3.0 Quality Records Matrix

	Quality Record	Responsibility	Location	Retention
4.1	Management Review Checklist	General Manager	Mgmt Review File	3 years
4.3	Blanket - Quote Confirmation Orders - Work Order or P.O. Field Service Report	General Manager Department Manager Department Manager	Accounts Receivable Job File Job File	3 years 3 years 5 years
4.4	Design & Development Record Design & Development Change Record	Engineering	Design & Develop File Job File Drawing File	7 years 3 years 7 years
4.6	Approved Subcontractor List Purchase Orders Supplier Evaluation Reports	General Manager Department Manager Management Rep.	Electronic File Job Files QA Files	Until Superseded 3 years 3 years
4.7	Supplier Nonconformance Report	Management Rep. Department Manager	Supplier NC File Job File	3 years 3 years
4.8	Material Certificates	Department Manager	Job File	3 years

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VCK-4.16
SUBJECT: CONTROL OF QUALITY RECORDS		Page 2 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.		Rev. 3 09-01-09

3.0 Quality Records Matrix (continued)

4.9	Special Coatings Qualification Records	Department Manager	Dept Employee File	3 Years
4.10	Dimensional Records Shipping Release Tag Safety Valve In-Process Inspection And Work Report Valve Inspection Worksheet Repair & Inspection Report for Control Valves Limitorque Inspection Worksheet Certificate of Conformance for Pressure Relief Valves	Department Manager	Job File	5 years
4.11	Calibration Log, Calibration Records and / or Certifications	QC Inspector	File	3 years
4.13	Shop- Nonconformance Reports Supplier Nonconformance Reports	Management Representative	Shop NC File Supplier NC File	3 years 3 years
4.14	Corrective Action Requests Customer Complaint Reports Customer Satisfaction Surveys	Management Representative	Corrective Action File	3 years
4.17	Internal Audits Reports Audit Deficiency Reports	Management Representative	Audit File	Until Mgmt Review then Attached to Mgmt Review Checklist
4.18	Training Records / Qualification Records	Department Manager	Depart Employee File	Until Termination

4.0 References

- (3) Clause 4.2.4 of ISO 9001:2008 Control of Records

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.17
SUBJECT: INTERNAL QUALITY AUDITS	Page: 1 of 1
Reason for Revision: Revise to ISO 9001:2008 requirements.	Rev. 3 09-01-09

1.0 Purpose

To ensure internal quality audits are planned and performed to verify:

- (3)
- whether quality activities and related results conform to ISO 9001:2008 requirements;
 - whether quality activities and related results conform to the Quality Management System requirements;
 - whether the Quality Management System is effectively implemented and maintained.

2.0 Scope

This procedure applies to internal audits of the Quality Management System and related procedures, process maps and work instructions.

3.0 Responsibility

3.1 The Management Representative is responsible for:

- developing the Internal Quality Audit Schedule (VIQAS);
 - conducting the internal quality audits (at least twice per calendar year);
 - completing an Internal Audit Report (VIAR) and maintaining per VCK-4.16, Control of Quality Records;
 - reporting findings to Executive Management;
 - issuing Audit Deficiency Reports (VADR) to the responsible department;
- (3)
- verifying and recording the implementation and effectiveness of the correction and corrective actions taken;
 - issuing Internal Audit Reports for input during Management Reviews;
 - issuing Internal Audit Deficiency Reports for corrective and preventive action analysis.

- (3) **3.2** Department Managers are responsible for ensuring timely correction and corrective actions to eliminate detected nonconformities and their causes.

3.3 Internal Quality Audits are carried out by personnel independent of the activity being audited.

4.0 References

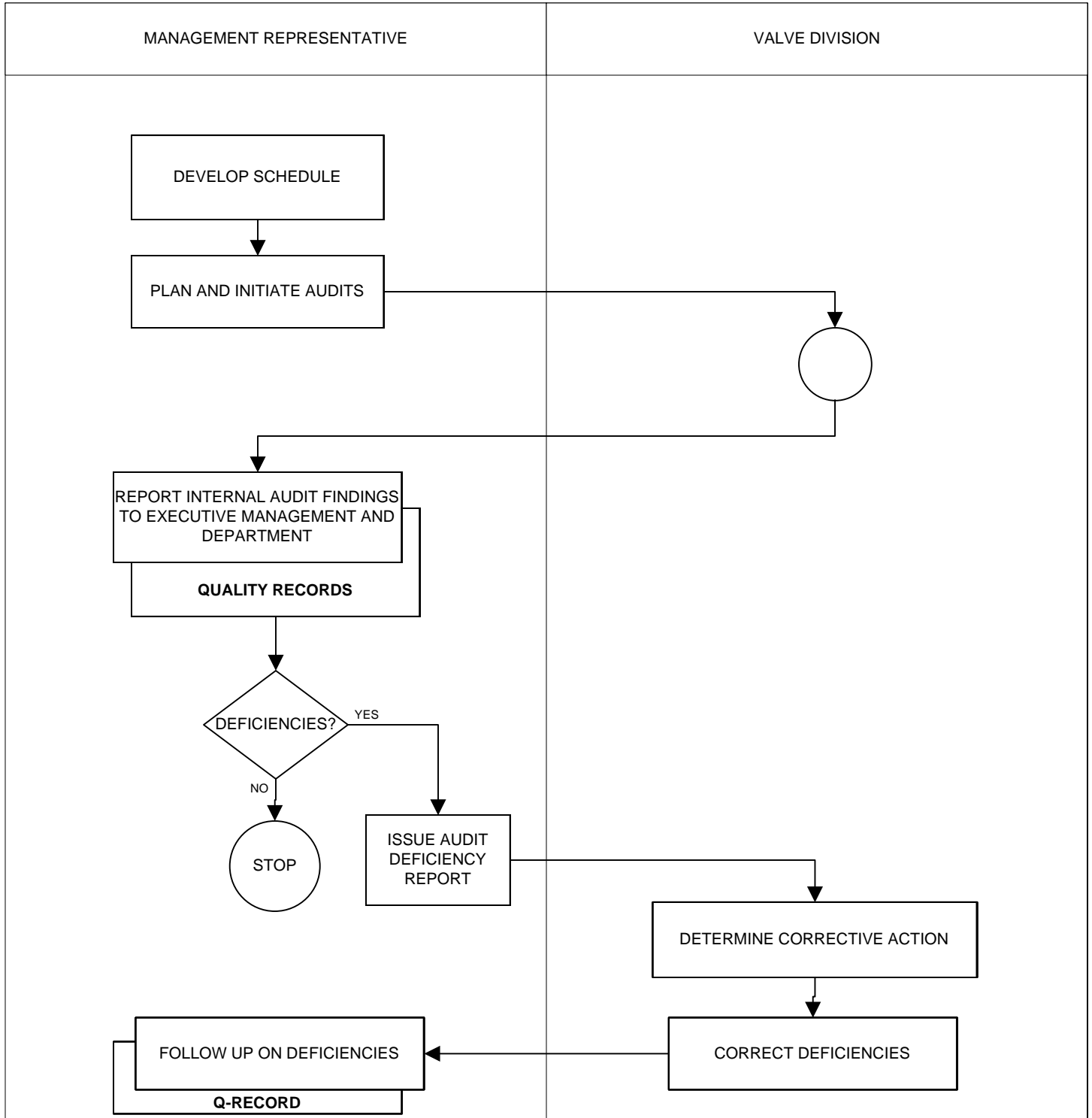
- (3)
- Clause 8.2.2 of ISO 9001:2008 Internal Audit
 - Internal Quality Audit Process Map (VPM-4.17)
 - Internal Quality Audit Schedule (VIQAS)
 - Internal Audit Report (VIAR)
 - Audit Deficiency Report (VADR)

SUBJECT: **INTERNAL QUALITY AUDITS**

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Reason for Revision:

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Chalmers & Kubeck, Inc.

Internal Quality Audit Schedule

Element		First Half	Second Half	
Management Responsibility	4.1	◇	◇	
Quality Management System	4.2	◇	◇	
Contract Review	4.3	◇	◇	
Design and Development	4.4	◇	◇	
Document Control	4.5	◇	◇	
Purchasing	4.6		◇	
Customer Property	4.7	◇		
Identification & Traceability	4.8	◇		
Control & Validation	4.9	◇	◇	
Monitoring & Measurement	4.10		◇	
Control of Monitoring & Measuring Devices	4.11	◇		
Monitoring & Measurement Status of Product	4.12		◇	
Control of Nonconforming Material	4.13	◇	◇	
Corrective & Preventive Action	4.14	◇	◇	
Preservation of Product	4.15	◇		
Control of Quality Records	4.16	◇	◇	
Internal Quality Audits	4.17	◇	◇	
Competence, Awareness & Training	4.18	◇	◇	
		↓	↓	
		Management Review	Management Review	

CHALMERS & KUBECK, INC

AUDIT DEFICIENCY REPORT

Department: _____

Contacts: _____

Reference Documents: _____

Statement of Requirement:

Deficiency:

Recommended Corrective Action:

Auditor: _____

Date: _____

Reply Due Date: _____
(Reply to Management Representative)

Corrective Action Taken:

Corrective Action to Prevent Recurrence:

Department Manager: _____

Date: _____

Quality Improvement Verification:

Management Representative: _____

Date: _____

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VCK-4.18
SUBJECT: COMPETENCE, TRAINING and AWARENESS		Page: 1 of 2
Reason for Revision: Revise to ISO 9001:2008 requirements.		Rev.3 09-01-09

1.0 Purpose

- To ensure proper training of personnel performing work on the repair of ASME Section I and Section VIII Safety and Safety Relief Valves.
- To ensure personnel performing work affecting product quality are competent on the basis of appropriate education, training, skills and experience.

2.0 Scope

This procedure applies to all employees performing activities which may affect quality.

3.0 Responsibility

3.1 The Department Manager is responsible for:

- (3) ● determining the necessary competence for personnel performing work affecting conformity to product requirements through Position Descriptions (VPD-);
- ensuring training of personnel in accordance with the Pressure Relief Valve Training Program (VP-7) as appropriate;
- ensuring that personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of quality objectives;
- (3) ● where applicable, identifying and providing training or other actions to achieve necessary competence;
- developing training plans and scheduling training (if applicable);
- ensuring training per the in house training program;
- evaluating the effectiveness of the actions taken and annually auditing the knowledge and mechanical skills for the position held;
- (3) ● maintaining appropriate records of education, training, skills and experience as a Quality Record using the Employee Training and Qualification Record (VETQR-), the Employee Training Record (VETR-1), the Employee Classification Record (CK-108), the Certificate of Achievement (CK-109) and the Technician Audit Report (CK-110) per VCK-4.16 - Control of Quality Records.

3.2 All training shall be in accordance with ASME Sections I, VIII and NB 23.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VCK-4.18
SUBJECT: COMPETENCE, TRAINING and AWARENESS	Page: 2 of 2
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- 3.3** Employees are responsible for:
- identifying training needs;
 - reviewing training plans;
 - attending training.

4.0 References

- (1) National Board NB 23 RE 3020
- (3) Clause 6.2.2 of ISO 9001:2008 Competence, Training and Awareness
Competence, Training and Awareness Process Map (VPM-4.18)
Employee Training and Qualification Record (VETQR-1)
Employee Training and Qualification Record QC (VETQR-3)
Employee Training Record (VETR-1)
Employee Classification Record (CK-108)
Certificate of Achievement (CK-109)
Technician Audit Report (CK-110)
Personnel Files
Position Descriptions (Section 6)

Chalmers & Kubeck, Inc.
Valve Division

Employee Training / Qualification Record

Employee: _____

The above employee has demonstrated the necessary skills and/or has received training to be considered competent in the following areas:

General:

- | | | |
|--|-------------|------------------------|
| <input type="checkbox"/> ISO 9001:2008 Training | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> First Aid Training (card) | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Rigging | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Standard Inspection Equipment | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Coatings – Special Process | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Fork Lift (card) | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Blue Print Reading | Date: _____ | Manager/Foreman: _____ |

Equipment / Knowledge:

- | | | |
|---|-------------|------------------------|
| <input type="checkbox"/> Assembly/Disassembly | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Saws | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Drill Press | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Manual Lathe | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Manual HBM | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Manual VBM | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Shaft Straightener | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Hardness Tester | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Pressure Relief Valve Training Program | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Valve Packing | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Line Valve Repair | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Durco Valve Repair | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> EVT I & II Training | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Dresser Factory Training | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Limitorque Factory Training | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Masoneilan Factory Training | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Clark Reliance Factory Training | Date: _____ | Manager/Foreman: _____ |

Chalmers & Kubeck, Inc.

Valve Division

Employee Training / Qualification Record

QC Department

Employee: _____

The above employee has demonstrated the necessary skills and/or has received training to be considered competent in the following areas:

General:

- | | | |
|--|------------|-----------------------|
| <input type="checkbox"/> ISO 9001:2008 Training | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> First Aid Training (card) | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> Rigging | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> Standard Inspection Equipment | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> Coatings – Special Process | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> Fork Lift (card) | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> Blue Print Reading | Date:_____ | Manager/Foreman:_____ |

Equipment / Knowledge:

- | | | |
|--|------------|-----------------------|
| <input type="checkbox"/> Standard Measuring Equipment | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> Surface Roughness Measurement | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> Calibration VWI-4.11a | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> Basic Auditing | Date:_____ | Manager/Foreman:_____ |
| <input type="checkbox"/> Hardness Tester | Date:_____ | Manager/Foreman:_____ |

Chalmers & Kubeck, Inc.
Valve Division

Employee Training Record

Employee: _____ **Department:** _____

Type of Training: _____

Trainer Evaluation of Effectiveness:

Trainee Feedback/Comments:

Trainer: _____ **Date:** _____

Department Manager: _____

Date

Chalmers & Kubeck, Inc.

Valve Division

100 Commerce Drive, Aston, PA 19014
(610) 494-7030

Employee Classification Record

Employee: _____ **Employee Number::** _____

Job Title: _____ Trainee – Up to one year minimum experience.
_____ Technician – Over one year experience, mechanical aptitude, including testing.
_____ Senior Technician – One year experience as a technician, factory trained and annually audited.

Experience: _____ Years. **Certified Green Tag Expert:** _____

Factory Training:

Dresser Low Pressure:	_____	Dresser High Pressure:	_____
Dresser EVT Program:	_____	Crosby:	_____
Farris:	_____	Lonergan:	_____
Kunkle:	_____	Military:	_____
National Board:	_____	*Other:	_____

Explain:

Video Presentations:

Introduction to Pressure Relief Valves	_____
Measuring Pressure Relief Valve Performance	_____
Pressure Relief Valve Standards	_____
Introduction to Consolidated (Dresser) Plus Three Program (EVT)	_____
Pressure Relief Valve Piping Systems, Design and Installation	_____
Consolidated Valve Promo	_____
Silent Sentinels	_____
Pressure Relief Valve Repair Criteria	_____

Code Knowledge:	<u>Excellent</u>	<u>Good</u>	<u>Fair</u>	<u>N/A</u>
Section I	_____	_____	_____	_____
Section VIII	_____	_____	_____	_____
Section IX	_____	_____	_____	_____
NBIC-23	_____	_____	_____	_____
Quality System Manual	_____	_____	_____	_____

Shop Foreman: _____ **Date:** _____

Division Manager: _____ **Date:** _____

Chalmers & Kubeck, Inc.

Valve Division

100 Commerce Drive, Aston, PA 19014
(610) 494-7030

Certificate of Achievement

This is to certify that _____

has demonstrated adequate mechanical and technical competence to repair ASME Code stamped Pressure Relief Valves in accordance with the applicable Sections of Chalmers & Kubeck, Inc. Quality System Manual.

Furthermore, be classified as a _____ .

This certificate is valid for a maximum one year per period pending any subsequent reviews.

Shop Foreman: _____

Date: _____

Division Manager: _____

Date: _____

Chalmers & Kubeck, Inc.

Valve Division

100 Commerce Drive, Aston, PA 19014
(610) 494-7030

Technician Audit Report

Employee: _____ Employee Number:: _____ Date: _____

Classification: Trainee _____ Location: In Shop _____
Technician _____ In Field _____
Senior Technician _____ -Field Location: _____

Valve Identification: MFG: _____ Type: _____ Serial No.: _____
Applicable Code Section: V: _____ UV: _____
Set Pressure: _____ Blowdown: _____ Capacity: _____

Manual Implementation:	<u>Acceptable</u>	<u>Unacceptable</u>	<u>Comments</u>
Section 5 – Repair & Inspection Program	_____	_____	_____
Section 6 – Welding & NDE	_____	_____	_____
Section 7 – Valve Testing & Setting	_____	_____	_____
Section 8 – Valve Stamping	_____	_____	_____
Section 9 – VR Stamp Control	_____	_____	_____

Comments: _____

Competence:

Technical Competence: Acceptable: _____ Unacceptable: _____
Mechanical Competence: Acceptable: _____ Unacceptable: _____
Workmanship: Acceptable: _____ Unacceptable: _____
Work Habits: Acceptable: _____ Unacceptable: _____

Testing Methods: (A – Acceptable; U – Unacceptable)

Shop: _____ Air Field: _____ Air Full Function
_____ Steam _____ Steam Full Function
_____ Liquid _____ Liquid Full Function
_____ Electronic Valve Tester
_____ Hydroset

Stamping & Sealing: _____ Acceptable _____ Unacceptable

Auditor: _____ Date: _____

Technician: _____ Date: _____

<i>Chalmers & Kubeck, Inc.</i> Quality System Manual	Process No. VCK-5.0
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Corrective Action

Measures taken to rectify conditions adverse to quality and, where necessary, to preclude repetition.

Inspection

Examination to verify whether an item or activity conforms to specified requirements.

Internal Quality Audits

An audit or assessment of the Quality System performed to verify the effectiveness or implementation.

Nonconformances

A product, documentation or procedure that does not comply with specified requirements.

Process Maps

Activities within a process that are illustrated in the form of block diagrams to define the sequence of events, responsibility and interfacing departments that take place from beginning to end.

Procedures

Guidelines developed to assign accountability and responsibility for the line functions in support of the Quality Management System.

Quality Records

A completed document that furnishes evidence of the quality of an item or activity affecting quality.

Supplier

A supplier makes a product to a specification for Chalmers & Kubeck, either to a drawing, Sketch or to special instructions. This definition excludes "Off the Shelf" and/or "Cut to Length" items.

Quality System Manual

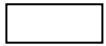
Manual outlining the organization, responsibilities, procedures, processes and resources for implementing a quality management system.

Off the Shelf

Materials, parts or components purchased to industry, commercial or military standards or specifications. Off the shelf shall include material, parts or components purchased to supplier part numbers.

<i>Chalmers & Kubeck, Inc.</i> Quality System Manual	Process No. VCK-5.0
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Process Map Symbols and Definitions



Activity



Start / Stop of process; interface



Decision



Flow Line

Revision Date:
09-01-09

Approved By:

Chalmers & Kubeck Inc.

Position Description

Position Title: President

Where Assigned: Company Management

Regular Duties:

1. Review Department Production and Overhead.
2. Review Company Expenses.
3. Review Company Equipment Usage and Determine Equipment Requirements.
4. Review Revenues.
5. Direct the Company Quality Management System in accordance with ISO 9001:2008 Requirements.
6. Attend Management Review Meetings.

Responsibilities:

1. Maintain Customer Satisfaction.
2. Establish Company Goals and Objectives.

Qualifications:

1. Company Owner.

Revision Date:

11-30-02

Approved By:

Chalmers & Kubeck Inc.

Position Description

**Position Title: Vice President Administration,
Sales & Marketing**

Where Assigned: Company Management

Regular Duties:

1. Set Company Marketing Direction.
2. Manage Salesman.
 - Review Sales Revenue Against Forecast.
 - Review Sales Expenses.
3. Review Department Production and Overhead.
4. Review Department Expenses.
5. Visit Selected Customers.
6. Review Company Equipment Usage and Determine Equipment Requirements.
7. Manage Human Resources.
8. Conduct Employee Performance Reviews.
9. Attend Management Review Meetings.

Responsibilities:

1. Maintain Customer Satisfaction.
2. Establish Company Goals and Objectives.
3. Establish Sales Department Goals & Objectives.

Qualifications:

1. Company Owner.

Chalmers & Kubeck Inc.

Position Description

Revision Date:

09-01-09

Approved By:

Position Title: General Manager

Where Assigned: President

Regular Duties:

1. Manage All Aspects of the Main Office.
2. Manage Office Personnel.
 - Maintain Personnel Files on All Main Office Personnel.
 - Conduct Employee Performance Reviews.
 - Determine Personnel Training Needs.
3. Track Orders Received by Department.
4. Manage Inside Sales Activities.
5. Manage Company Billing except Valve Department.
6. Review Department Production and Overhead.
7. Negotiate Annual Customer Contracts.
8. Insure Conformance to the Quality System Manual in accordance with ISO 9001:2008.
9. Report on Quality System for Management Review.
10. Purchase Materials, Tools & Supplies.
11. Coordinate Activities Among Departments.
12. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System.
4. Maintain Good Customer Relations.
5. Establish Company Goals and Objectives.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed Above at Chalmers & Kubeck.

Chalmers & Kubeck Inc.

Position Description

Revision Date:

09-01-09

Approved By:

Position Title: Director Information Services

Where Assigned: Vice President Administration, Sales and Marketing

Regular Duties:

1. Keep the HP Computer Operational.
2. Support HP Software Applications.
3. Keep the Bar Code System Operational.
4. Maintain Bar Code Software.
5. Keep PC Hardware Operational.
6. Maintain Existing PC Applications.
7. Keep Computer Networks Operational.
 - HP Network
 - Bar Code Network
 - Lantastic PC Network
8. Maintain Service Contracts.
 - Computer Hardware
 - Bar Code Software
 - Copiers
 - Computer Power Backup
9. Establish Computer Hardware and Software Support to Provide Assistance as Needed.
10. Maintain the Westinghouse and Machine Shop Order Tracking System.
11. Develop and Order Company Forms.
12. Maintain the Company Sales Systems.
13. Maintain Accounts Receivable Customer Data Base.
14. Approve Credit Terms for New Customers.
15. Maintain Purchasing Directory.
16. Design and Program New PC Applications.
17. Conform to the Quality System Manual in accordance with ISO 9001:2008.
18. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System.
4. Maintain Good Customer Relations.
5. Establish Company Goals and Objectives.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed above at Chalmers & Kubeck.

Chalmers & Kubeck Inc.

Position Description

Revision Date:

09-01-09

Approved By:

Position Title: Receptionist

Where Assigned: Valve Department Manager

Regular Duties:

1. Operate the Corporate Phone Console.
2. Receive Visitors.
3. Process Quotations.
 - Enter Quotations and Verify.
 - Print and Mail Quotations.
4. File Quotations and Purchase Orders.
5. Type Correspondence.
6. Produce Bar Coded Job Cards and Labels.
7. Distribute Faxed Documents.
8. Order Copier Supplies.
9. Conform to the Quality System Manual in accordance with ISO 9001:2008.
10. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System.
4. Maintain Good Customer Relations.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed above at Chalmers & Kubeck.

Revision Date:

09-01-09

Approved By:

Chalmers & Kubeck Inc.

Position Description

Position Title: Electrician

Where Assigned: General Manager

Regular Duties:

1. Maintain Power Supplies to Plants.
2. Maintain Power to Plant Machinery.
3. Install Power for New Machinery.
4. Maintain Electrical Operation of Machinery.
5. Purchase Electrical Components and Related Equipment.
6. Conform to the Quality System Manual in accordance with ISO 9001:2008.
7. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System for all Jobs and Activities.
4. Maintain Good Customer Relations.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed above at Chalmers & Kubeck.

Chalmers & Kubeck Inc.

Position Description

Revision Date:
09-01-09

Approved By:

**Position Title: Valve Department Manager/
Quality Control Manager**
Where Assigned: Valve Department

Regular Duties:

1. Manage all Aspects of Department Operations.
 - Production, Overhead & Expenses
2. Manage Department Personnel.
 - Maintain Personnel Files on All Department Personnel
 - Conduct Employee Performance Reviews
 - Determine Personnel Training Needs
3. Provide Customer Service.
4. Prepare and Sign Quotations.
5. Conduct Purchase Order Reviews.
6. Communicate with Salesman on Jobs for Their Customers.
7. Purchase Materials, Tools and Supplies.
8. Select Work to be Subcontracted.
9. Inspect Jobs for Quality.
 - Identify & Verify Critical Criteria
10. Manage the Department Preventive Maintenance Program.
11. Insure Conformance to the Quality System Manual in accordance with ISO 9001:2008.
12. Insure Job Traveler Remains with Job.
13. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System for all Jobs and Activities.
4. Maintain Good Customer Relations.
5. Establish Department Goals and Objectives.
6. Maintain All Valve Related National Board and ASME Certifications and Communications.
7. Maintain Cost Effective Inventory Level for New Valves & Repair Parts
8. Remain Knowledgeable of current Valve Industry Standards.
9. Maintain Good Relationships with Companies for Whom C&K is an Authorized Sales, Service and Repair Center.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed Above at Chalmers & Kubeck.

Chalmers & Kubeck Inc.

Position Description

Revision Date:

09-01-09

Approved By:

Position Title: Department Working Foreman

Where Assigned: Valve Department

Regular Duties:

1. Perform Assigned Departmental Operational Tasks
2. Supervise Department Personnel.
 - Assist with Personnel File Maintenance
 - Assist with Employee Reviews
 - Schedule Personnel Training Needs
3. Provide Customer Service.
4. Prepare Quotations.
5. Conduct Purchase Order Reviews.
6. Communicate with Salesman on Jobs for Their Customers.
7. Purchase Materials, Tools and Supplies.
8. Subcontract Work.
9. Schedule Personnel and Jobs.
10. Inspect Jobs for Quality.
 - Identify & Verify Critical Criteria
11. Prepare Department Billing.
12. Maintain Department Preventive Maintenance Records.
13. Insure Conformance to the Quality System Manual in accordance with ISO 9001:2008.
14. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System for all Jobs and Activities.
4. Maintain Good Customer Relations.
5. Remain Knowledgeable of Current Valve Industry Standards.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed Above at Chalmers & Kubeck.

Revision Date:

09-01-09

Approved By:

Chalmers & Kubeck Inc.

Position Description

Position Title: Machinist

**Where Assigned: CNC, Machining & Maintenance, Gear, Valve & Weld
Departments**

Regular Duties:

1. Read Drawings.
2. Layout Jobs.
3. Setup Machines.
4. Operate Machines.
5. Use Inspection Instruments.
6. Disassemble & Assemble Equipment & Assemblies.
7. Inspect Jobs for Quality.
 - Record and Initial Measurements
 - Identify Measurement Tools by Department
 - Verify Accuracy of Inspection Equipment Prior to Use
8. Perform Material Handling.
9. Perform Suitable Equipment Maintenance.
10. Conform to the Quality System Manual in accordance with ISO 9001:2008.
11. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System for all Jobs and Activities.
4. Maintain Good Customer Relations.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed above at Chalmers & Kubeck.

Chalmers & Kubeck Inc.

Position Description

Revision Date:

09-01-09

Approved By:

Position Title: Mechanic

Where Assigned: CNC, Machining & Maintenance, Gear, Valve & Weld Departments

Regular Duties:

1. Read Drawings.
2. Layout Jobs.
3. Work with Hand Tools.
4. Use Inspection Instruments.
5. Disassemble & Assemble Equipment & Assemblies.
6. Inspect Jobs for Quality.
 - Record and Initial Measurements
 - Identify Measurement Tools by Department
 - Verify Accuracy of Inspection Equipment Prior to Use
7. Perform Material Handling.
8. Perform Suitable Equipment Maintenance.
9. Conform to the Quality System Manual in accordance with ISO 9001:2008.
10. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System for all Jobs and Activities.
4. Maintain Good Customer Relations.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed above at Chalmers & Kubeck.

Revision Date:

09-01-09

Approved By:

Chalmers & Kubeck Inc.

Position Description

Position Title: Shipping, Receiving and Trucking

Where Assigned: General Manager

Regular Duties:

1. Schedule Pickups and Deliveries.
2. Maintain Shipping Records.
3. Receive Incoming Jobs & Deliver to the Appropriate Department.
4. Receive Incoming Parts & Material and Compare Purchase Order to Packing List.
5. Deliver Parts & Material to Appropriate Department.
6. Perform Material Handling.
7. Drive Company Trucks.
8. Maintain Company Vehicles.
9. Maintain Building and Grounds.
10. Conform to the Quality System Manual in accordance with ISO 9001:2008.
11. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System for all Jobs and Activities.
4. Maintain Good Customer Relations.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed above at Chalmers & Kubeck.

Revision Date:

09-01-09

Approved By:

Chalmers & Kubeck Inc.

Position Description

Position Title: Truck Driver

Where Assigned: Shipping & Receiving

Regular Duties:

1. Schedule Pickups and Deliveries.
2. Receive Incoming Jobs & Deliver to the Appropriate Department.
3. Deliver Parts & Material to Appropriate Department.
4. Perform Material Handling.
5. Drive Company Trucks.
6. Maintain Company Vehicles.
7. Maintain Building and Grounds.
8. Conform to the Quality System Manual in accordance with ISO 9001:2008.
9. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System for all Jobs and Activities.
4. Maintain Good Customer Relations.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed above at Chalmers & Kubeck.

Chalmers & Kubeck Inc.

Position Description

Revision Date:

09-01-09

Approved By:

Position Title: New Valve Salesman

Where Assigned: Valve Department

Regular Duties:

1. Communicate with Shop Department Manager & Foremen on Jobs for Your Customers.
2. Maintain Excellent Customer Relations.
3. Provide Customer Service.
4. Secure New Customers.
5. Conform to the Quality System Manual in accordance with ISO 9001:2008.
6. Other Duties as Assigned.

Responsibilities:

1. Perform Work in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System.
4. Achieve Department Goals & Objectives.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed above at Chalmers & Kubeck.

Revision Date:

11-30-02

Approved By:

Chalmers & Kubeck Inc.

Position Description

Position Title: Controller

Where Assigned: President

Regular Duties:

1. Corporate Officer – Secretary.
2. Supervise Accounts Payable, Accounts Receivable and Payroll.
3. Prepare Monthly and Annual Financial Reports.
4. Prepare Local, State and Federal Tax Returns.
5. Prepare Management Payroll.
6. Verify Internal Accounting Controls.
7. Perform Banking, Cash Flow and Investing.
8. Coordinate Legal Issues with Outside Council.
9. Administer Pension and 401K Retirement Plans.
10. Administer Company Insurance Policies.
11. Other Duties as Assigned.

Responsibilities:

1. Perform Work in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System.
4. Achieve Department Goals and Objectives.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed above at Chalmers & Kubeck.

Chalmers & Kubeck Inc.

Position Description

Revision Date:

11-30-02

Approved By:

Position Title: Human Resources

Where Assigned: Vice President Administration, Sales & Marketing

Regular Duties:

1. Setup and Maintain Employee Personnel Files.
2. Enroll Employees in Various Insurance Plans.
 - Resolve Insurance Problems
3. Schedule Employee Physical Exams & Drug Testing.
4. Schedule Doctor Appointments for Work Related Injuries, Workman's Compensation.
5. Process Court Ordered Payroll Deductions.
6. Other Duties as Assigned.

Responsibilities:

1. Perform Work in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System.
4. Achieve Department Goals and Objectives.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed Above at Chalmers & Kubeck.

Revision Date:
09-01-09

Approved By:

Chalmers & Kubeck Inc.

Position Description

**Position Title: Quality Assurance Manager
Management Representative**

Where Assigned: General Manager

Regular Duties:

1. Manage all Aspects of Department Operations.
 - Inspection and Testing Activities
2. Maintain Company Quality System in accordance with the Quality System Manual and ISO 9001:2008.
 - Insuring the Quality System is Established, Implemented and Maintained
 - Logging, Trending, Analyzing and Maintaining Quality Information (Quality Information Services).
3. Maintaining and Updating the Quality System Manual.
4. Insure Conformance to the Quality System Manual in accordance with ISO 9001:2008.
5. Report on the Performance of the Quality System to Executive Management.
 - Maintain Records of Review
6. Auditing the Quality System in accordance with the Quality System Manual and ISO 9001:2008.
7. Provide Training to New Employees in the Quality System Manual and ISO 9001:2008.
 - Retrain Employees as necessary
8. Purchase Inspection, Measuring and Test Equipment When Requested.
9. Maintain Calibration and Accuracy Verification Systems for Inspection, Measuring and Test Equipment.
10. Manage Department Personnel.
 - Maintain Personnel Files on Department Personnel
 - Conduct Employee Performance Reviews
 - Determine Personnel Training Needs
11. Provide Customer Service.
12. Inspect Jobs for Quality
 - Identify and Verify Critical Criteria
13. Other Duties as Assigned.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Maintain Good Customer Relations.
4. Use the Bar Coded Time Recording System for all Jobs and Activities.
5. Establish Department Goals and Objectives.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed Above at Chalmers and Kubeck.

Chalmers & Kubeck Inc.

Position Description

Revision Date:

09-01-09

Approved By:

Position Title: Shop Foreman

Where Assigned: Valve Department

Regular Duties:

1. Perform Assigned Departmental Operational Tasks
2. Supervise Working Foreman / Department Personnel.
 - Assist with Personnel File Maintenance
 - Assist with Employee Reviews
 - Schedule Personnel Training Needs
3. Provide Customer Service.
4. Prepare Quotations.
5. Conduct Purchase Order Reviews.
6. Communicate with Salesman on Jobs for Their Customers.
7. Purchase Materials, Tools and Supplies.
8. Subcontract Work.
9. Schedule Personnel and Jobs.
10. Inspect Jobs for Quality.
 - Identify & Verify Critical Criteria
11. Prepare Department Billing.
12. Maintain Department Preventive Maintenance Records.
13. Insure Conformance to the Quality System Manual in accordance with ISO 9001:2008.
14. Perform Department Invoicing
15. Other Duties as Assigned

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System for all Jobs and Activities.
4. Maintain Good Customer Relations.
5. Remain Knowledgeable of Current Valve Industry Standards.

Qualifications:

1. Demonstrated Abilities to Perform Duties Listed Above at Chalmers & Kubeck.

Chalmers & Kubeck Inc.

Position Description

Revision Date:

11-01-03

Approved By:

Position Title: Certified Individual (CI)

Where Assigned: Quality Control Manager

Regular Duties:

1. Verify that each item or lot to which the Code symbol is applied meets all applicable requirements of ASME Section I and Section VIII, and that the requirements have been completed.
2. Verify that each item or lot has a current capacity certification for the "UV" and "V" symbols.
3. Sign the appropriate Certificate of Conformance for Section I or Section VIII.
4. Retain Certificates of Conformance for a minimum of 5 years.

Responsibilities:

1. Perform Work Assigned in a Professional and Timely Manner.
2. Perform High Quality Work.
3. Use the Bar Coded Time Recording System for all Jobs and Activities.
4. Maintain Good Customer Relations.

Qualifications:

1. Must be an employee of Chalmers & Kubeck, Inc. Aston Facility.
2. Must be qualified and certified by Chalmers & Kubeck, Inc.
3. Demonstrate knowledge of the Code requirements for ASME Section I and Section VIII. To include Code Stamp use.
4. Demonstrate knowledge of Chalmers & Kubeck, Inc. Quality System.
5. Training: the CI must have achieved at least two of the three categories listed below:
 - a) Completion of National Board course on Pressure Relief Valve Repair which addresses in depth ASME Code Sections I and VIII.
 - b) Documented in house training by which the individual has demonstrated their ability to objectively implement the correct use of the Code Symbol being applied.
 - c) Has at least one year experience in the implementation and demonstration of the quality control manual regarding ASME Section I and Section VIII pressure relief valves.

*Objective evidence of above training shall be maintained.

SAFETY VALVE INPROCESS INSPECTION AND WORK REPORT

CHALMERS AND KUBECK INC.
VALVE DIVISION

CUSTOMER TEXACO
P.O. NO. 1-9543-C

DATE RECEIVED 11-1-03
JOB NO. 03-11473

FORM CK 101

VALVE DESCRIPTION: SIZE 2X3 MANUFACTURER CONSOLIDATED SET PRESSURE 120 PSIG
B.D. _____ LIFT _____ SEAT DIA. _____
MODEL OR TYPE: 1906JC SERIAL NO. TE42631 CAPACITY 3824 GPM SCFM SAT
APPLICABLE ASME CODE: SECTION I SECTION VIII UV N.A. PSV NO. 21 RSV 568

PART DESCRIPTION	OK	MACHINE	WELD	FABRICATE	REPLACE	SEE COMMENTS
CAP	✓					
LEVER/FORK	✓					
ADJUST SCREW	✓					
LOCKNUT	✓					
BONNET	✓					
BODY	✓					
BOLTING MATERIAL	✓					
SPRING	✓					
WASHERS	✓					
SPINDLE	✓					
GUIDE	✓					
DISC HOLDER	✓					
DISC	✓					
NOZZLE	✓					
GUIDE RING	N/A					
NOZZLE RING	✓					
RETAINING PINS	✓					
GASKETS					✓	
PISTONS	N/A					

INSPECTION SIGN OFF: JOE OUSHA

EXISTING JOB # NAV COMMENTS: ASME STAMP UUV SPRING NO. 01A209CR
01-0021 VR # NONE COMPANY NAV RANGE 120-129
VR APPLIED YES NO VALVE CONVERSION INFORMATION
CAPACITY 3824 MODEL 1906JC NEW MODEL # N/A
BELLOW YES NO PROCEDURE USED
NR SETTING -4
GR SETTING N/A
ADJ SETTING 1.750
DISASSEMBLED BY: T. SMITH ASSEMBLED BY: _____

PRETEST: SET 120 PSIG BLOWDOWN 8 PSIG SET 120 PSIG BLOWDOWN 8 PSIG
TIGHTNESS TEST: BUBBLE _____ PSIG AUDIO 112 PSIG VISUAL _____ PSIG
TESTED BY: JIM MOORE DATE 11/1/03 GAUGE NO. H103 GAUGE RANGE 0-2000
FINAL TEST: SET 120 PSIG COLD SET _____ PSIG BLOWDOWN 8 PSIG
TIGHTNESS TEST: BUBBLE 110 PSIG AUDIO _____ PSIG VISUAL _____ PSIG BACK PRESSURE 30 PSIG
TESTED BY: R. PATTERSON DATE 11/1/03 GAUGE NO. H103 GAUGE RANGE 0-2000
MOVED BY: JIM MOORE VR STAMP APPLIED YES NO TEST MEDIUM AIR

NR SETTING	COMMENTS
<u>-4</u>	
<u>N/A</u>	

SHIPPED BY: TOM SMITH

Chalmers & Kubeck, Inc.

Valve Division

Quality System Manual

Review Log

ASME Codes Sections I, VIII and Code Addenda NB-23 along with all other relevant codes, Manufacturer and applicable Industry standards and Internal Procedures has been reviewed to ensure the Manual is up to date, and/or revisions to this Manual are required. If revisions are required, they will be submitted for approval to the National Board within sixty days of the said addenda.

Section: ASME VIII

Reviewed By: Joe C. Shen

Date: 3/5/03

SAMPLE

Chalmers & Kubeck, Inc.

150 Commerce Drive
 Box 2447
 ton, PA 19014-0447
 (610) 494-4300

PURCHASE ORDER			
ORDER DATE	P.O. NUMBER	DEPT. CHARGE #	STOCK
5-21-03	03-0471F	VALUE	

TO:

C + K STOCK

SHIP TO:

CONNECTIVE
 B.L. ENGLAND

FOR INFORMATION ONLY

DELIVER BY (DATE)		SHIP VIA		F.O.B.		FREIGHT ALLOWED		PAYMENT TERMS	
5-22-03		UPS Red.							
ITEM	QTY. ORDERED	U of M	DESCRIPTION	TAXABLE	UNIT PRICE	AMOUNT			
1	1		DISC PART NO. 0249105 SIZE 3x4 MODEL 1905K SER. NO. TJ62012		\$100.00	\$100.00			

REQUISITIONER	BOB PATTERSON	DATE	5-22-03	TOTAL 100.00
PURCHASING AUTHORITY	<i>Je Oth</i>	DATE	5-22-03	

SUPPLIER ORIGINAL

49523

PURCHASE ORDER (10/95)

**Chalmers &
Kubeck, Inc.**

50 Commerce Drive
PO Box 2447
Aston, PA 19014-0447
Phone: (610) 494-4300 Fax: (610) 485-1484

Purchase Order			
Order Date	P.O. Number	Dept. Charge #	Stock
5/21/03	03-0471F	VALVE	N/A

TO:
C&K STOCK

SHIP TO:
CONNECTIVE
B.L.ENGLAND STATION

FOR INFORMATION
ONLY

ATTN: BOB PATTERSON

DELIVER BY:		SHIP VIA:	F.O.B.	FRT. ALLOW	PAYMENT TERMS	
5/22/2003		UPS RED	N/A	N/A	Standard	
Item	Quantity	U of M	Description		Unit Price	Amount
1	1		DISC		\$100.00	\$100.00
2			PART NO. 0249105			
3						
4			SIZE 3 X 4			
5			MODEL 1905K			
6			SER. NO. TJ67012			
7						
8						
Notes:					Total	
					\$100.00	

Requisitioner: BOB PATTERSON

Date: 5/22/03

Purchasing Authority: JOE O'SHEA

Date: 5/22/03

mSDS required with shipment

Chalmers & Kubeck, Inc.

150 Commerce Drive
 Box 2447
 Aston, PA 19014-0447
 (610) 494-7030

PICK LIST		
DATE	NUMBER	PAGE
05/22/03	54638	1

SOLD TO 1750 11
 E. I. DUPONT DE NEMOURS & C
 EDGEWOOD PLANT - A/P
 P.O. BOX 69
 OLD HICKORY, TN 37138-00

SHIP TO
 E. I. DUPONT DE NEMOURS & C
 104 HAY ROAD
 EDGEWOOD, DE 19809
 ATTN FRED WORRELL

SHIP VIA **E UPS STD.** DATE REQUIRED: **5/28/03**

CUSTOMER REFERENCE NUMBER		ORDER DATE	PO NUMBER	SHIP DATE	F.O.B.	TERMS	
LEK155772		5/ 9/03	03-54638		ASTON, PA	NET 30	
ITEM	QTY ORDERED	DESCRIPTION		QTY SHIPPED	BACK ORDERED	UNIT PRICE	AMOUNT
1	1	SIZE 1/4 MNPT MFG KUNKLE RELIEF VALVE MODEL 541-A01 SET 150 PSIG AIR SERVICE SECTION VIII CAPACITY 180 SCFM		1	0	90.00	90.00
FOR INFORMATION ONLY							
SHIP VIA UPS GROUND SERVICE.							
ED BY:				SUB TOTAL		SALES TAX	
						FREIGHT AND HANDLING	
				%		PAY THIS AMOUNT	
				STATE		AMOUNT	
				90.00		.00	
				0.00		0.00	
				0.00		90.00	
WE THANK YOU FOR YOUR ORDER WHICH WE HAVE ACCEPTED SUBJECT TO OUR TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE HEREOF WHICH ARE EXPRESSLY MADE A PART OF THE CONTRACT OF SALE						THANK YOU FOR YOUR BUSINESS	



Chalmers & Kubeck
 150 Commerce Drive
 PO Box 2447
 Aston, PA 19014-0447
 (610) 494-4300

PICK LIST		FILE COPY
Date	Number	Page
08/21/2009	0981130	1

Salesperson: TEK
 Customer Number: 0001002

Sold To:
 A & M INDUSTRIAL SUPPLY
 RAHWAY, NJ - A/P
 1414 CAMPBELL STREET
 RAHWAY, NJ 07065
 Customer Fax No:
 Ship VIA: E

Ship To:
 A & M INDUSTRIAL SUPPLY
 1414 CAMPBELL STREET
 RAHWAY, NJ 07065

Confirm To:
 Scheduled Ship Date: 08/28/2009

Customer P.O. P1135201		Order Date 08/21/2009	Job Number 0981130	Ship Date 08/28/2009	F.O.B. ASTON PA	Terms NET 30		
Line	Ordered	Item Number	Unit	Shipped	Back Order	Price	Amount	
1	1	19110M .75 3/4 MNPT X1 FNPT CONSOLIDATED CONSOLIDATED 19000 SERIES 19110MCF-2-CC-MS-33-MT-FT-LA SET 450 PSIG CDS 455 PSIG LIQUID SERVICE OPERATING TEMPERATURE 400 DEG F SECTION VIII CAPACITY 62 GPM Bin #: A1-D	EACH	1	0	625.00	625.00	
2		PLEASE SHIP VALVE TO CUSTOMER AS A COMPLETE ASSEMBLY VIA UPS GROUND COLLECT ON ACCOUNT R445R3						

SAMPLE

We thank you for your order which we have accepted subject to our terms and conditions.

Net Order:	625.00
Less Discount:	0.00
Freight:	0.00
Sales Tax:	0.00
Order Total:	625.00

Received by:
 Signature: _____

Chalmers & Kubeck, Inc.

Setting the Industry Standard Since 1950
150 COMMERCE DRIVE
W. PA 19014-0447
610-7030

SAFETY & RELIEF VALVE TEST REPORT

67 HERCK & CO., INC.
WEST POINT - INUGICE PROCESSING
Contact CAROL KILE PO: X897452

Job Number: 03-18191
Job Date: 3/27/03
Valve ID: SV-2685

Size: 3/4 Type: 1905-00WC-1-CC-MS-33-RF-SS Serial No: TL91377
Mfg: CONSOLIDATED
Set Pressure: 25 Blowdown: 3

SERVICE	Air	Vapor	Liquid	% Steam	Applicable ASME Code	VSect I	% UVSect VIII	N/A
WORK PERFORMED:	Pre-Test			Test & Rpt Only	Test & Adjust Only	Replace		
	% Std Repairs			% Additional Work	Pressure Change	New Sale		

PRE-TEST: 1st Pop: Blowdown: 2nd Pop: Blowdown:
TIGHTNESS TEST: Bubble: Audio: Visual: Leaks:

Comments:

FINAL TEST: Date Tested: 3/29/03 Tested by: CAPOZZOLI

FOR INFORMATION ONLY

Set Pressure: 25 Cold Set: N/A Blowdown: 3

1st Gauge Range: 0-900 Gauge Control No: H101

Test Medium Air Water % Steam

TIGHTNESS TEST: Bubble: Audio: Visual: 20 Back Pressure Test: 30
Capacity SCFH 4019 Lbs/Hr GPH

VR Stamp Applied: Y Spring No: OR253CR Range: 22-26

Comments:

PARTS INSPECTION	OK	Re'cond	Mach	Fab'ed	Replaced	PARTS INSPECTION	OK	Re'cond	Mach	Fab'ed	Replaced
Seals, Cap, Rings					X	Lock Nut	X				
Nozzle			X			Cap	X				
Disc			X			Lift Lever		X			
Disc Holder	X					Bonnet	X				
Guide	X					Body	X				
Adjust Rings	X					Retaining Pin	X				
Spring	X					Studs	X				
Washers	X					Nuts	X				
Spindle	X					Gaskets					X
Adjust Screw	X					Bellows	NA				
Outlet	X					Inlet	X				

RE:

Results:

Comments: MACHINE & LAPPED WORN NOZZLE & DISC SEAT
RECOND. & TESTED

80885

JOB FILE ORIGINAL

CHALMERS & KUBECK, INC Valve Division	Supplier Nonconformance Report	Job Number: / PO Number:
---	---------------------------------------	-----------------------------

Supplier Name: <u>DRESSER</u>	Ordered by: <u>DAVE SULLIVAN JR</u>
Drawing #/Part#: <u>4377670</u>	Revision: _____
Promise Date: <u>4-30-03</u>	Delivery Date: <u>4-27-03</u>
Quantity Ordered: <u>3</u>	Quantity Defective: <u>1</u>
Job Title: <u>STOCK</u>	
Customer PO # / Item # (if customer supplied material): _____	

Description of Nonconformance: _____

DAMAGE TO BELLOWS FLANGE

Root Cause of Nonconformance: _____

IMPROPER SHIPPING METHOD

Initial Corrective Actions Taken: _____

CALL DRESSER + OBTAIN RAN #

Reported by: BOB FLAMMER Date: 4-27-03

Disposition: Use as Is Repair Replace Scrap-Do Not Replace Return to Supplier

DRESSER WILL SEND NEW BELLOWS

Disposition Approved by: Joe Oth Date: 4-27-03

Impact of Nonconformance: Made Job Late by _____ Days
 Extra Labor _____ Hours
 Other: _____

NO IMPACT

CHALMERS & KUBECK, INC Valve Division	Shop Nonconformance Report	Job Number: _____ Internal Use: <input type="checkbox"/>
--	-------------------------------	---

Customer Name: C + K NORTH FOR INFORMATION ONLY Quantity: 7
 Job Description: MACHINE 10 INCH FLANGE
 Part/Drawing #: N/A FOR INFORMATION ONLY Rev.: _____

Description of Nonconformance: _____
MACHINE FINISH ON 10" FLANGE
INCORRECT. WAS MACHINED TO 125 RMS
SHOULD HAVE BEEN 250 RMS
 Reported By: BOB SZLACK Date: 5-21-03

Cause of Nonconformance: Op Error Equip Error Incorrect Instructions Incorrect Drawing
 Explain: _____
MACHINIST WAS INSTRUCTED BY FIELD SUPERVISOR
TO SUPPLY 125 RMS FINISH. PO STATES 250 RMS.
 Operator: CHARLIE DISALVO Shift: 2nd
 Initial Corrective Actions Taken: _____
RE MACHINE FLANGE TO PROPER 250 RMS
FINISH.
 Reported by: JIM MOORE JR Date: 5-22-03

Disposition: Use as Is Repair Replace Scrap-Do Not Replace Return to Supplier
 Disposition Approved by: Joe Oker Date: 5-23-03

Cost of Repairs: Labor: 2 man/hours Material: _____ Outside Services: _____
 Total Cost: \$ 110.00
 Reported By: Joe Oker Date: 5-24-03

FOR INFORMATION ONLY

FORM NO. 100-1 (REV. 10-1-63)

8796

SUPPLIER

NonConforming

Job Num: OB-542197

Reason: Damage To Bellows

FLANGE R/F 73 726 70 (BRASS)

Prepared By: Joe Oke Date: 5-2-03

FOR INFORMATION ONLY

8796

SHOP

NonConforming

Job Num: _____

Reason: _____

Prepared By: _____ Date: _____

Chalmers & Kubeck, Inc.
Valve Division

FOR INFORMATION
ONLY

Employee Training / Qualification Record

Employee: ED FISCHER

The above employee has demonstrated the necessary skills and/or has received training to be considered competent in the following areas:

FOR INFORMATION
ONLY

General:

- | | | |
|--|----------------------|------------------------------------|
| <input type="checkbox"/> ISO 9001:2000 Training | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> First Aid Training (card) | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Rigging | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Standard Inspection Equipment | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Coatings – Special Process | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Fork Lift (card) | Date: <u>2/14/03</u> | Manager/Foreman: <u>Joe O'Hara</u> |
| <input type="checkbox"/> Blue Print Reading | Date: _____ | Manager/Foreman: _____ |

Equipment / Knowledge:

- | | | |
|---|----------------------|------------------------------------|
| <input type="checkbox"/> Assembly/Disassembly | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Saws | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Drill Press | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Manual Lathe | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Manual HBM | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Manual VBM | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Shaft Straightener | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Hardness Tester | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Pressure Relief Valve Training Program | Date: <u>1-21-90</u> | Manager/Foreman: <u>Joe O'Hara</u> |
| <input type="checkbox"/> Valve Packing | Date: <u>2-1-03</u> | Manager/Foreman: <u>Joe O'Hara</u> |
| <input type="checkbox"/> Line Valve Repair | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Durco Valve Repair | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> EVT I & II Training | Date: <u>1-1-03</u> | Manager/Foreman: <u>Joe O'Hara</u> |
| <input type="checkbox"/> Dresser Factory Training | Date: <u>1-24-98</u> | Manager/Foreman: <u>Joe O'Hara</u> |

Chalmers & Kubeck, Inc.
Valve Division

Employee Training / Qualification Record
QC Department

FOR INFORMATION
ONLY

Employee: DAVE SULLIVAN SR

The above employee has demonstrated the necessary skills and/or has received training to be considered competent in the following areas:

FOR INFORMATION
ONLY

General:

- | | | |
|--|---------------------|--------------------------------|
| <input type="checkbox"/> ISO 9001:2000 Training | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> First Aid Training (card) | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Rigging | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Standard Inspection Equipment | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Coatings – Special Process | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Fork Lift (card) | Date: <u>1-4-99</u> | Manager/Foreman: <u>De Oke</u> |
| <input type="checkbox"/> Blue Print Reading | Date: _____ | Manager/Foreman: _____ |

Equipment / Knowledge:

- | | | |
|--|----------------------|--------------------------------|
| <input type="checkbox"/> Standard Measuring Equipment | Date: <u>1-21-98</u> | Manager/Foreman: <u>De Oke</u> |
| <input type="checkbox"/> Surface Roughness Measurement | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Calibration VWI-4.11a | Date: <u>1-27-03</u> | Manager/Foreman: <u>De Oke</u> |
| <input type="checkbox"/> Basic Auditing | Date: _____ | Manager/Foreman: _____ |
| <input type="checkbox"/> Hardness Tester | Date: _____ | Manager/Foreman: _____ |

Chalmers & Kubeck, Inc.
Valve Division

FOR INFORMATION
ONLY

Employee Training Record

Employee: Tom Smith

Department: VALVE

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ONLY

Type of Training: VALVE PACKING

Trainer Evaluation of Effectiveness:

TRAINING SHOULD BE REVIEWED TWICE A
YEAR.

Trainee Feedback/Comments:

NEED PRACTICAL APPLICATION

Trainer: Joe Wonnell

Date: 4-21-03

Department Manager: Joe O'Hea

4-25-03

Date

Chalmers & Kubeck, Inc.

Valve Division

150 Commerce Drive, Aston, PA 19014
(610) 494-7030

FOR INFORMATION ONLY

Employee Classification Record

Employee: BOB PATTERSON Employee Number: 377

Job Title: Trainee – Up to one year minimum experience.
 Technician – Over one year experience, mechanical aptitude, including testing.
 Senior Technician – One year experience as a technician, factory trained and annually audited.

Experience: 21 Years. Certified Green Tag Expert: yes

Factory Training:

Dresser Low Pressure:	<input checked="" type="checkbox"/>	Dresser High Pressure:	<input checked="" type="checkbox"/>
Dresser EVT Program:	<input checked="" type="checkbox"/>	Crosby:	<input type="checkbox"/>
Farris:	<input type="checkbox"/>	Lonergan:	<input type="checkbox"/>
Kunkle:	<input type="checkbox"/>	Military:	<input type="checkbox"/>
National Board:	<input checked="" type="checkbox"/>	*Other:	<input type="checkbox"/>

Explain:

FOR INFORMATION ONLY

Video Presentations:

Introduction to Pressure Relief Valves	<input checked="" type="checkbox"/>
Measuring Pressure Relief Valve Performance	<input checked="" type="checkbox"/>
Pressure Relief Valve Standards	<input checked="" type="checkbox"/>
Introduction to Consolidated (Dresser) Plus Three Program (EVT)	<input checked="" type="checkbox"/>
Pressure Relief Valve Piping Systems, Design and Installation	<input checked="" type="checkbox"/>
Consolidated Valve Promo	<input type="checkbox"/>
Silent Sentinels	<input type="checkbox"/>
Pressure Relief Valve Repair Criteria	<input type="checkbox"/>

Code Knowledge:	<u>Excellent</u>	<u>Good</u>	<u>Fair</u>	<u>N/A</u>
Section I	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section VIII	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section IX	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NBIC-23	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality System Manual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Shop Foreman: *J. Moore*

Date: 5-27-03

Division Manager: *Joe Oshen*

Date: 5-27-03

Chalmers & Kubeck, Inc.

Valve Division

150 Commerce Drive, Aston, PA 19014
(610) 494-7030

FOR INFORMATION
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Certificate of Achievement

This is to certify that BRYAN PITTS

has demonstrated adequate mechanical and technical competence to repair ASME Code stamped Pressure Relief Valves in accordance with the applicable Sections of Chalmers & Kubeck, Inc. Quality System Manual.

Furthermore, be classified as a SR. TECHNICIAN

This certificate is valid for a maximum one year per period pending any subsequent reviews.

Shop Foreman:

J. M. [Signature]

Date: 4-27-03

Division Manager:

J. [Signature]

Date: 4-27-03

Chalmers & Kubeck, Inc.
Valve Division
 150 Commerce Drive, Aston, PA 19014
 (610) 494-7030

FOR INFORMATION
ONLY

Technician Audit Report

Employee: ART Constantine Employee Number: _____ Date: 4/27/03

Classification: Trainee _____ Location: In Shop _____
 Technician _____ In Field
 Senior Technician -Field Location: CONNECTIVE DEEPWATER

Valve Identification: MFG: CONSOLIDATED Type: 1706 Q Serial No.: QQ7276
 Applicable Code Section: V: UV: _____
 Set Pressure: 1000 Blowdown: 40 Capacity: 521982 LBS/IN

Manual Implementation:	<u>Acceptable</u>	<u>Unacceptable</u>	<u>Comments</u>
Section 5 – Repair & Inspection Program	<input checked="" type="checkbox"/>		
Section 6 – Welding & NDE	<input checked="" type="checkbox"/>		
Section 7 – Valve Testing & Setting	<input checked="" type="checkbox"/>		
Section 8 – Valve Stamping	<input checked="" type="checkbox"/>		
Section 9 – VR Stamp Control	<input checked="" type="checkbox"/>		

Comments:

Competence:

Technical Competence: Acceptable: Unacceptable: _____
 Mechanical Competence: Acceptable: Unacceptable: _____
 Workmanship: Acceptable: Unacceptable: _____
 Work Habits: Acceptable: Unacceptable: _____

Testing Methods: (A – Acceptable; U – Unacceptable)

Shop: _____ Air Field: _____ Air Full Function
 _____ Steam _____ Steam Full Function
 _____ Liquid _____ Liquid Full Function
 Electronic Valve Tester
 _____ Hydroset

Stamping & Sealing: Acceptable _____ Unacceptable

Auditor: Joe O'Hea Date: 4/6/03

Technician: Art Constantine Date: 4/6/03

CHALMERS AND KUBECK
INDUSTRIAL VALVE DIVISION
150 COMMERCE DR.
ASTON, PA. 19014
610-494-7030

FOR INFORMATION
ONLY

Green Tag Center For: DRESSER INDUSTRIES
Industrial Valve and Controls Division

CUSTOMER INFORMATION

Customer: RELIANT TITUS STATION Job Order #: 03-0419F
Unit/Plant: #3 / TITUS
Address: _____
BIRDBORO, PA
Date: 04-24-2003 Time: 09:25:49

VALVE IDENTIFICATION

Valve Type: 1811P-22 Valve Code: TP
Manufacturer: Dresser Size/Orifice: 4" / P
Serial Number: BX04079 Cust. Tag/Loc.: COLD REHEAT B / RS-R
V-012
Name Plate Set Pressure: 505 p.s.i.g. Back Pressure: 0 p.s.i.g.
ASME Code Section: I Tolerance: 495 to 515 (± 10 p.s.i.)

VALVE TEST RECORD

Initial Inlet Pressure: 410 p.s.i.g. Factor: 1922
As Found Set Pressure: 546 p.s.i.g. Tolerance: +8.1 %

TEST #	INLET PRESSURE	FACTOR	SET PRESSURE	TOLERANCE
1	0	0	0	%-100.0 %
2	0	0	0	%-100.0 %
3	0	0	0	%-100.0 %

AVERAGE SET PRESSURE: 0 p.s.i.g. TOLERANCE: %-100.0 %

Comment: No Net Adjustments Made
Valve is stuck-needs repair.

Test Technician: Jay Galvin
Customer Approval: Don Smith

VR STAMP

YES

NO

VALVE SHOP WELDING SUPPLEMENT

Date:	3-10-04
Job Number:	04-1792
Customer:	PREMCO
C&K Contact:	R. PATTERSON

Status:	ROUTINE
Material:	CARBON STEEL

CODE: SAMPLE

SECTION I	
SECTION VIII	✓
NON-CODE	
Date of Construction	1972

Description: WELD FLANGE, CORRODED AREA

PWHT: YES NO
NDE REQUIRED: YES NO

Type of NDE: FOR INFORMATION ONLY
Documentation of NDE Required: YES NO

Welder C&K #: 1) JIM ALBRAND #2
2) _____
3) _____

WPS Used: CK P1-P1

Name: JOE O'SHEA Date: 3-10-04



SAFETY & RELIEF VALVE TEST REPORT

Setting the Industry Standard Since 1950
150 Commerce Drive Aston, PA 19014-0447
610-494-7030

Owner WYETH

Job Number 08-20120

Plant Collegeville, PA

Job Date 2008/10/17

Contact MARC PHILLIPS

PO No. 4501455303/06

PSV No. NPH1-3

Valve Size 1.25 x 1.5 = IN^2

Type 1543G-XMYI

Serial No 03534193

Mfg Consolidated

Set Pressure 20 PSIG

Blow Down 2 PSIG

Service Saturated Steam

Applicable ASME Code Sec VIII

WORK PERFORMED Pretest/ Std Repair

Received By Rob Willauer

Date Received 2008/10/17

As Found Condition Failed Leak Test

PRE-TEST 1st Pop 20

Blowdown 2

2nd Pop 20

Blowdown 2

TIGHTNESS TEST Visual @ 12 PSIG

Comments Failed

FINAL TEST

Date Tested 2008/10/22

Tested By Tom Smith

Set Pressure 20 PSIG

Cold Diff Set Press 20

Blow Down 2

Test Gauge Range 0-1000

Gauge No. H101

Test Media Steam

Test Method Bench

TIGHTNESS TEST Visual @ 15 PSIG

Back Pressure Test No @

ASME Capacity 857 LB/HR

VR Stamp Applied Yes

Spring Number P404CR

Spring Range 18-21

NDE Test Method NO NDE PERFORMED

NDE Passed No

NDE Failed No

Comment

LAP NOZZLE & DISC - PRETEST - RECOND - TEST

Received By: _____

Date: _____

Part Name	Part Number	Condition(s) Received	Work Performed	Recommendation
Washers		Good		
Spring		Good		
Spindle		Good		
Seals, Cap, Rings		Missing	Replaced	
Retaining Pin		Good		
Nozzle Ring		Good		
Nozzle		Leaks	Lapped	
Locknut		Good		
Lever/Fork		Good		
Guide Ring		Good		
Guide		Good		
Gaskets		Good		
Disc Holder		Good		
Disc		Leaks	Lapped	
Cap		Good		
Bonnet		Good		
Bolting Material		Good		
Body		Good		
Adjust Screw		Good		



SAFETY & RELIEF VALVE TRAVELER

Setting the Industry Standard Since 1950
150 Commerce Drive Aston, PA 19014-0447
610-494-7030

Owner VALERO

Plant PAULSBORO N.J.

PO No. 4501546871

Date Received 2008/11/10

NEW SALE

Work Requested

PRETEST & GO

Press. Change

Special Clean

Job Number 08-77245

PRETEST & REPAIR

Valve Replace

Conversion

PSV No. 55PSV-3620

VALVE DESCRIPTION Size 1.5 x 2.0 = IN² Mfg Consolidated Set Pressure 250 PSIG

B.D. 17.5 PSIG Lift .182 IN Bore Dia. .674

Model / Type 1906-30FC-1-CC-MS-31-RF-GS-HP Serial No SA16463 Capacity 1622 SCFM

Applicable ASME Code Sec I (V) Sec VIII (UV) Sec IV NA (Sec VIII) GPM SCFM SAT

As Found	Crnt Process Cond	Previous Repair Tag Information					
Bellow Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Test On AIR	VR	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Model #	NEW INSTALLATION	
NR Setting -6	Service HC VAP	VR #	NEW		Set Press	-	
GR Setting N/A	Temp 60 F	ASME	V (UV) NA		Capacity	-	
ADJ Setting N/A	CDS -	Chk-In By	AS		Date	-	
		Seals Intact	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Existing Job #		

PRE-TEST Set 250 PSIG Blowdown 21 PSIG Set 251 PSIG Blowdown 21 PSIG

TIGHTNESS TEST Bubble 225 PSIG Audio PSIG Visual PSIG

Tested By ODR Date 11/10/08 Gauge No. H-103 Gauge Range 0-2000

Part Description	OK	Machine	Weld	Fabricate	Replaced	Recond	Comments
Cap	✓						
Lever / Fork	✓						
Adjusting Screw	✓						
Locknut	✓						
Gasket	✓						
Body	✓						
Bolting Material	✓						
Spring	✓						
Washers	✓						
Spindle	✓						
Guide	✓						
Disc Holder	✓						
Disc	✓						
Nozzle	✓						
Guide Ring	✓						
Nozzle Ring	✓						
Retaining Pins	✓						
Gaskets	✓						
Bellows	✓				✓		
Bore Diameter	✓						

SAMPLE

Inspection Sign Off T. O. Smith

Disassembly T. SMITH Assembly T. O. SMITH Spring Number 0-28-CA
Received By D. SULLIVAN Spring Range 231-250

Final Test Set 250 PSIG Cold Set PSIG Blowdown 17 PSIG

TIGHTNESS TEST Bubble 225 PSIG Audio PSIG Visual PSIG Back Press 30 PSIG

Tested By T. SMITH Date 11/10/08 Gauge No. H-103 Test Gauge Range 0-2000

Approved By R. PATTERSON VR Stamp Applied Yes No

Test Media AIR

Comment

NR Setting -6 GR Setting Shipped By T. SMITH

Chalmers & Kubeck, Inc.

ISO 9002 Registered

WORK ORDER

C&K - Initiated by: <i>[Signature]</i>	Date: <u>12/2/08</u>
<input type="checkbox"/> Quote	Sales Estimate: _____
<input type="checkbox"/> Disassemble & Quote	
<input type="checkbox"/> Time & Material	
<input checked="" type="checkbox"/> Breakdown	
Cust. Requesting Quote: _____	

Customer: SUNOCO

Purch Order: PH67456

Cust Contact: RICH MARTIN

Phone: 215-339 0080

Fax: _____

Due Date: ASAP

Job Number: 08-12345 Chg. # _____

Job Date: 12/01/08

Rush? Yes No

Quoted by: O'SHEA Total Price: _____

Quote #: _____

Job Title: METAL SPRAY SPRING Date Faxed: _____

Qty	Work Scope:	Dwg:	Rev:	Opns	Hrs
1	SPRING FOR CONSOLIDATED SAFETY VALVE (FACTORY STOCK) # 0604CR				
2	METAL SPRAY ALUMINUM FOR STEAM SERVICE (CLORIDES)				
3	WORKSCOPE				
	A) DEGREASE SPRING TO REMOVE ANY OILS OR CONTAMINATES				
	B) SANDBLAST, WITH 36 GRIT ALUM. OXIDE ,INSPECT FOR DEFECTS.				
	C) SPRAY ALUMINUM ON SPRING APPROX .005 TO .010 THICK				
	D) SEAL WITH METCO "SA" SEALER				
	E) RE-TAG SPRING #0604CRCS				
SAMPLE					

Dept. CNC Mfg Machining & Maintenance

Assigned: Gear Weld Field Valve

Material Needed No Yes

Outside Services No Yes

Contract Reviewed By: *[Signature]* Date: 12/2/08

Customer ID: _____

Change Reviewed By: _____ Date: _____

CompGen WO 6/11/02

Office Control Copy (White) Job File (Blue) Purchase Order File (Green)

Scheduling (Yellow) Job Traveler (Pink)

CHALMERS & KUBECK, Inc.
 (610) 494-7030 Fax (610) 497-9777

VALVE INSPECTION WORKSHEET

Job Num: 09-1298
 Date: 10-1-04 Page: 1

Company Name: <u>XYZ</u>		Cust PO: <u>42000017</u>		Mfg & Model #: <u>CRANE #124</u>	
Size: <u>12</u>	Rating: <u>15</u>	Connection: <u>RF</u>	Serial #: <u>672-4</u>	Body Material: <u>WCB</u>	
Operator Type: <u>HANDWHEEL</u>		Valve Type: <input checked="" type="radio"/> Gate <input type="radio"/> Globe <input type="radio"/> Check <input type="radio"/> Special <input type="radio"/> Plug <input type="radio"/> Butterfly <input type="radio"/> Ball <input type="radio"/> Slide		Gasket Type: <u>SPIRAL WOUND</u>	
Gasket Material: <u>316/GPH</u>	Stud Size: <u>1" 8</u>	Stud Quantity: <u>12</u>	Nut Size: <u>1" 8</u>		

Valve Condition: Clean Seized Clogged Corroded *
 Dirty Contaminated Damaged *

* Explanation:

Work Required: Pretest Std Repair Additional Work * Modify * Test Report

* Explanation:

SAMPLE WORK PERFORMED

VALVE PART	OK	MACHINED	GROUND	LAPPED	WELDED	POLISHED	REPLACED	FAB
Gasket Surfaces	✓							
End Connections	✓							
Spot/Back Face	✓							
Body	✓							
Seats		✓						
Bonnet	✓							
Back Seat	✓							
Lantern Rug	✓							
Wedge	✓							
Plug	✓							
Stem	✓							
Bolts Packing	✓							
Yoke Bushing	✓							
Backseat		✓						
Bolting Material	✓							
Grease Fittings	✓							
Yoke Bearings	✓							
Handwheel Nut	✓							

Inspected By: SMITH

Pretest

Hydrostatic Seat Test: 2 Min 320 PSIG
 Hydrostatic Shell Test: 2 Min 450 PSIG
 LP Air Seat Test: 1 Min 90 PSIG
 LP Air Shell Test: 1 Min 90 PSIG

Pass

Fail

By: SMITH Date: 10-1-04

Final Test

Hydrostatic Seat Test: — Min — PSIG Yes No
 Hydrostatic Shell Test: — Min — PSIG Yes No
 LP Air Seat Test: 2 Min 90 PSIG Yes No
 LP Air Shell Test: 2 Min 90 PSIG Yes No

By: SMITH Date: 10-2-04

Witness: PATTERSON Date: 10-2-04

CHALMERS & KUBECK, Inc.

(610) 494-7030 Fax (610) 497-9777

VALVE INSPECTION WORKSHEET

Job Num: 09-1298

Date: 10-1-09 Page: 2

CRITICAL CLEARANCES

	ORG	FINISH	INSP BY
Stem Dia.	1.00	1.00	C.D.
Pack Box	2.00	2.00	C.D.
Gland ID	1.030	1.030	C.D.
OD	1.990	1.990	C.D.
Lantern ID	N/A	N/A	
OD	N/A	N/A	
Back Seat ID	1.030	1.030	C.D.

MATERIAL'S

Disc	H.F.
Seats	H.F.
Stem	410
Body	WCB
Packing	SLADE
Gasket	
Type	S. WOUND
Material	316/GRAPH.

SAMPLE

NON-DESTRUCTIVE TEST

RESULTS

Dye Penetrant	<input checked="" type="checkbox"/>	GATE	NO INDICATIONS
Mag Particle	<input type="checkbox"/>		
Radiograph	<input type="checkbox"/>		
Other			

Stencil By	SMITH
Dismantled By	CHRISTIE
Assembled By	SMITH
Stroke By	SMITH
Ship By	GRAVES

COMMENTS

QUALITY CONTROL - Final Visual Inspection

Accepted by R. PATTERSON

Date 10-2-09

CHALMERS & KUBECK, Inc.

(215) 494-7030 Fax (215)497-9777

VALVE INSPECTION WORKSHEET

Job Num: 09-1299

Date: 10-1-09 Page: 1 of 4

Company Name: <u>ABC</u>		Cust PO: <u>47-967</u>		Mfg & Model #: <u>FISHER 667</u>	
Size: <u>6</u>	Rating: <u>150</u>	Connection: <u>RF</u>	Serial #: <u>6761-62</u>	Body Material: <u>WCB</u>	
Operator Type: <u>SPRING LOADED</u>		Valve Type: <input type="radio"/> Gate <input type="radio"/> Globe <input type="radio"/> Check <input type="radio"/> Special <input type="radio"/> Plug <input type="radio"/> Butterfly <input checked="" type="radio"/> Control <input type="radio"/> Regulator		Gasket Type:	
Gasket Material: <u>STEEL</u>	Stud Size: <u>1"</u>	Stud Quantity: <u>12</u>	Nut Size: <u>1"</u>		

Valve Condition: Clean Dirty Seized Contaminated Clogged Corroded * Damaged *

* Explanation:

Work Required: Pretest Std Repair Additional Work * Modify * Test Report

* Explanation:

SAMPLE

CONTROL VALVE ACTUATOR / POSITIONAL DATA

As Received Condition

As Shipped Condition

Actuator Set Set 3 PSIG To 15 PSIG
 Positioner Set Set - PSIG To - PSIG N/A
 Regulator Set Set - PSIG To - PSIG N/A
 Signal - M.AMP N/A

Actuator Set Set 3 PSIG To 15 PSIG
 Positioner Set Set - PSIG To - PSIG N/A
 Regulator Set Set - PSIG To - PSIG N/A
 Signal - M.AMP N/A

By: R. SLICK Date: 10-1-09

By: R. SLICK Date: 10-1

TEST DATA

Pretest

Final Test

Hydrostatic Seat Test: Min PSIG
 Hydrostatic Shell Test: 1 Min 480 PSIG
 LP Air Seat Test: Min PSIG
 LP Air Shell Test: Min PSIG

Hydrostatic Seat Test: - Min N/A PSIG Yes No
 Hydrostatic Shell Test: 2 Min 480 PSIG Yes No
 LP Air Seat Test: 1 Min 50 PSIG Yes No
 LP Air Shell Test: - Min - PSIG Yes No

By: R. SLICK Date: 10-1

By: R. SLICK Date: 11-3
Witness: R. PATTERSON Date: 11-3

CHALMERS & KUBECK, Inc.

(215) 494-7030 Fax (215)497-9777

VALVE INSPECTION WORKSHEET

Job Num:

09-1299

Date:

10-1-09 Page: 2 of 4

Company Name:

ABC

Cust PO:

47-967

Mfg & Model #:

FISHER 667

PHOTOGRAPHS

Before

After

~~NOT REQUIRED~~
Other
10-1-09

~~NOT REQUIRED~~
Other
11-4-09

SEE FILE

SEE FILE

SAMPLE

COMMENTS

CONDITIONED SHIPPED

Gasket Material:

STEEL

Packing Type:

TEFLON

Bolting:

1" 8 B7

Paint:

SILVER

Coat / Plate:

N/A

Name Plate:

ATTACHED

Flange Cover:

N/A

Stem Projection:

1 1/2"

Handwheel:

N/A

Rustproofing:

N/A

QUALITY CONTROL - Final Visual Inspection

Accepted by:

R. PATTERSON

Date:

10-2-09

CHALMERS & KUBECK, Inc.

(215) 494-7030 Fax (215)497-9777

VALVE INSPECTION WORKSHEET

Job Num: 09-1299

Date: 10-1-09 Page: 3 of 4

Company Name:

ABC

Cust PO:

47-967

Mfg & Model #:

FISHER 667

CRITICAL DIMENTIONS

VALVE PART	RECEIVED		SHIPPED		INSPECTED by	DATE
End to End	14		14		J. O.S.	10-4-09
Flange Thickness	A 1 1/2	B 1 1/2	A 1 1/2	B 1 1/2		
Port Diameter	A 12"	B 12"	A 12	B 12		
Spot Back Face	A OK	B OK	A	B		
Gasket Surfaces			A	B		
Fig Thk - Body	.750		SAME			
Fig Thk - Bonnet	.750		SAME			
Wall Thk - Body	.750		SAME			
Wall Thk - Bonnet	.750		SAME			
Bhn Body	16		SAME			
Bhn Bonnet	18		SAME			
Bhn Wedge/Plug	50		SAME			
Bhn Stem	50		SAME			

SAMPLE

WORK PERFORMED

VALVE PART	MACHINED	GROUND	LAPPED	WELDED	POLISHED	REPLACED	RECNDTND	REBUILT
Gasket Surfaces	✓							
End Connections								
Spot/Back Face								
Body								
Bonnet								
Seats/Overlay	1 1/2							
Wafer	2 1/2							
Wedge	5 1/2							
Plug	1 1/2							
Stem (page 4)	1 1/2							
Yoke/Eye Bolts	1 1/2							
Yoke Bushing	1 1/2							
Backseat	N/A							
Actuator, Air								
Diaphragm								
O-Rings								
Bolt Material								
Indication								
Lock Block Asmby								
Positioner	NA							
Gauges								
Tubing								
Fittings								
Bellows								
Regulator								
Actuator, Gear								
Actuator, Motor								

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure		Process No. VP-1
SUBJECT: PARTS CONVERSION BY ASSEMBLERS		Page: 1 of 2
Reason for Revision:		Rev 1 08-30-05

1.0 Purpose

To ensure that any conversion performed to an ASME Section VIII and Section I Relief Valve is in accordance with OEM specifications; and to describe in detail the procedure for permitted part modifications.

2.0 Scope

Part modification is permitted for the following:

- Spring washer diameter machining for proper fit;
- Disc holder from High pressure to Low pressure design;
- Disc holder and Nozzle machining for “O” seat conversion;
- Nozzle and Disc machining to re-establish proper dimensions.

3.0 Instructions for Part Modifications

- 3.1 Part modification instructions are the responsibility of the manufacturer to ensure that all of the latest revised instructions are forwarded to Chalmers & Kubeck, Inc.
- 3.2 It is the Quality Control Manager’s responsibility to ensure that all instructions, drawing and specifications are maintained in accordance with VCK-4.5 Document Control. The Quality Control Manager shall review each conversion.
- 3.3 Parts modification shall be accomplished in accordance with Dresser Industries Specification QTI-104.

4.0 Personnel

- 4.1 Only qualified personnel shall perform part modification.
- 4.2 The Shop Foreman shall be responsible for selection of qualified personnel when performing modifications and, to implement and document the manufacturers repair procedures required to perform conversions.
- 4.3 Inspection of modified parts shall be in accordance with VCK-4.10 Monitoring and Measurement.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure	Process No. VP-1
SUBJECT: PARTS CONVERSION BY ASSEMBLERS	Page: 2 of 2
Reason for Revision:	Rev 1 08-30-05

5.0 Part Identification

5.1 Parts which have been modified will be documented on Safety & Relief Valve Test Report (CK-102A) Parts Description section, in the Machine column across from the appropriate modified part.

6.0 Documentation

- 6.1 Personnel qualification records shall be kept on file by the Quality Control Manager in the employee personnel file.
- (1) 6.2 Report of annual audits shall be kept on file by the Quality Control Manager.

7.0 References

ASME Section I and Section VIII
Document Control (VCK-4.5)
Dresser Industries Specification QTI-104
Monitoring and Measurement (VCK-4.10)
Safety & Relief Valve Test Report (CK-102A)

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure	Process No. VP-2
SUBJECT: Lift Restriction for Dresser 1700-S and 2700 Relief Valves	Page: 1 of 2
Reason for Revision:	Rev.- 11/30/02

1.0 Purpose

To describe in detail the procedure for restricting lift.

2.0 Scope

Lift restriction shall apply to the following Pressure Relief Valves:

- Consolidated Type 1700-S;
- Consolidated Type 2700.

3.0 Calculations

- 3.1 Restricted capacity calculations shall be performed by qualified sales personnel.
- 3.2 All calculations shall be checked by the Quality Control Manager or his designee, before the order is processed.
- 3.3 The Quality Control Manager will be responsible for the control of all instructions and procedures pertaining to this document.

4.0 Assembly

- 4.1 Inspection and acceptance of lift measurements shall be the responsibility of the Quality Control Manager.
- 4.2 All valves shall be assembled and tested by qualified personnel in accordance with the manufacturers procedures.
- 4.3 The Shop Foreman is responsible to ensure all assembly and test procedures are followed and that qualified personnel are performing these functions.

5.0 Valve Stamping

- 5.1 In addition to the instructions described in VCK-4.8 Identification and Traceability, an additional tag will be placed next to the manufacturer's tag with the required restricted capacity and required restricted lift.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure	Process No. VP-2
SUBJECT: Lift Restriction for Dresser 1700-S and 2700 Relief Valves	Page: 2 of 2
Reason for Revision:	Rev.- 11/30/02

6.0 Documentation

- 6.1 Personnel qualifications, training and annual reviews shall be kept on file by the Quality Control Manager.
- 6.2 Safety & Relief Valve Test Report (CK-102A) will indicate that the valve has been restricted. Both the restricted lift and the restricted capacity will be documented under Final Test – Comments section of the report. Copies of these test reports shall be kept in a separate file.

7.0 References

Identification and Traceability (VCK-4.8)
Safety & Relief Valve Test Report (CK-102A)

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual		Process No. VP-3
SUBJECT: VALVE IDENTIFICATION AND TRACEABILITY		Page: 1 of 5
Reason for Revision: Update to new NB-23 requirements.		Rev.2 12-02-08

1.0 Purpose

To ensure new and repaired valves are identified and traceability maintained in accordance with National Board and customer requirements.

2.0 Scope

This procedure shall apply to new and repaired Pressure Relief Valves, and repaired valves other than pressure relief.

3.0 Responsibility/ Procedure

3.1 Valve Stamping and Identification for **repaired** Pressure Relief Valves shall be in accordance with National Board requirements as follows:

3.1.1 The Foremen or Technician shall verify the stenciled information on the valve manufacturer's nameplate for information regarding size, set pressure, capacity, type or model, serial number and the "V" or "UV" stamp along with National Board marking to indicate which section of the Code applies to the particular valve.

3.1.2 On test completion and acceptance of the valve, the technician shall attach the Chalmers & Kubeck, Inc stainless steel tag with the following information:

- a) Repaired by: Chalmers & Kubeck, Inc.;
- (2) b) VR symbol and stamp #;
- c) Job number: (unique assigned number);
- d) Set pressure:
- e) Date of test:
- f) Capacity: (only if set pressure is changed or conversion performed);
- g) Model Number:
- (1) h) When an adjustment is made to correct for service conditions of superimposed back pressure between popping pressure between steam and air, the information on the valve repair nameplate shall include the:

- 1. Cold Differential Test Pressure (CDTP), and
- 2. Superimposed Back Pressure (BP) (only when applicable).

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VP-3
SUBJECT: VALVE IDENTIFICATION AND TRACEABILITY	Page: 2 of 5
Reason for Revision: Update to new NB-23 requirements	Rev.2 12-02-08

- (2) 3.1.2.1 Where a valve has been tested and adjusted as permitted by Part 3, 5.9 but not otherwise repaired, a “TEST ONLY” nameplate shall be applied which contains the following information:
- a) Name of responsible organization
 - b) Date of test
 - c) Set Pressure
 - d) An identification such as “TEST ONLY”.

Tag will be attached beside, above or below the manufacturers’ nameplate.

304 SS .032” THK. 3/32” DRIVE SCREWS

REPAIRED BY: CHALMERS & KUBECK, INC.	
DATE:	_____
JOB NO.	_____
CUST. ID.	_____
SET PR.	_____ B.D. _____
CAPACITY	_____
MODEL/TYPE	_____
ASTON, PA 19014	

3.1.3 When the set pressure is changed the new set pressure will be stenciled on the outlet flange of the valve and on the Chalmers & Kubeck, Inc. tag. The set pressure capacity on the manufacturer’s nameplate will be lined out, but not made illegible. The Chalmers & Kubeck, Inc. nameplate shall take precedence over the manufacturer’s nameplate after the valve has been repaired.

3.1.4 The Chalmers & Kubeck, Inc. nameplate and the “VR” stamp shall be under the control of the Shop Foreman. The Chalmers & Kubeck, Inc nameplate shall not be attached, nor the “VR” stamp applied to the valve unless it meets all of the requirements of Monitoring and Measurement (VCK-4.10) and the nameplate date checked.

3.1.5 The Chalmers & Kubeck, Inc. nameplate will be removed and destroyed each time the valve returns for repairs; a new tag shall be attached at the completion of each overhaul.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VP-3
SUBJECT: VALVE IDENTIFICATION AND TRACEABILITY	Page: 3 of 5
Reason for Revision: Update to new NB-23 requirements.	Rev.2 12-02-08

3.1.6 In the event the manufacturer nameplate is missing or illegible, a duplicate nameplate may be affixed provided the valve can be proven to have been made to ASME standards and have had National Board marking on the original nameplate. In all cases positive serial number Traceability shall be required.

3.1.6.1 The duplicate nameplate must have the original manufacturer's nameplate data applied along with Section I or Section VIII as applicable. In addition, the "VR" stamped complete Nameplate shall be installed to establish responsibility.

- (2) 3.1.6.2 In the event a code case is used the code case number shall be noted on the repair document and when required by said code case, Stamped on the repair nameplate.

3.2 Valve Stamping and Identification for **new** Pressure Relief Valves shall be in accordance with National Board requirements as follows:

3.2.1 The Forman appointed designee is responsible for stamping and marking the valve in accordance with the Sales Order CK-105. Only valves assembled which require ASME Code symbol stampings shall have applicable Code and National Board Symbols affixed.

3.2.1.1 The Sales Order CK-105 shall be kept on file permanently to ensure future traceability.

3.2.2 The Foreman is responsible for safe keeping of the Code Symbol stamps in accordance with Code Stamp Control VP-4.

3.2.3 All valves received from Dresser Industries shall have the manufacturers' nameplate affixed to the valve. Each valve purchased by Chalmers & Kubeck, Inc from Dresser Industries shall have a serial number assigned to that particular valve by Dresser Industries which traces the purchase back to Chalmers & Kubeck, Inc.

3.2.4 The valve shall have the capacity requirement listed on the nameplate. This information shall be obtained from the Sales Order CK-105.

3.2.5 Nameplate data for Section I and Section VIII Code stamp valves will be completed in accordance with Exhibits found in Section 7 of this Manual.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VP-3
SUBJECT: VALVE IDENTIFICATION AND TRACEABILITY	Page: 4 of 5
Reason for Revision: Update to new NB-23 requirements.	Rev.2 12-02-08

3.3 Valve Stamping and Identification for **repaired valves other than** Pressure Relief shall be in accordance with the following:

3.3.1 The mechanic shall verify the manufacturers' nameplate for size, class, model or type, serial number when applicable, body and trim etc. as available.

3.3.2 On completion of the repair the mechanic shall attach a stainless steel tag with the following information:

- a) date of repair
- b) size
- c) class/series
- d) body
- e) disc
- f) seats and stem material

3.3.2.1 This tag shall be riveted as close to the manufacturer plate as possible, or in a place where it is not likely to be damaged or mistakenly removed.

304 SS .032" THK 3/32" DRIVE SCREW

RECONDITIONED BY	
CHALMERS & KUBECK, INC.	
JOB NO. _____	DATE _____
SIZE _____	DISC _____
SERIES _____	SEATS _____
BODY _____	STEM _____
ASTON, PA 19014	

3.3.3 The Chalmers & Kubeck, Inc. nameplate will not be affixed to a valve unless it meets all of the requirements as described in VCK-4.10 and the nameplate checked.

3.3.4 The Chalmers & Kubeck, Inc. nameplate will be removed and destroyed each time the valve returns from repairs and a new tag will be attached at the completion of each overhaul.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Manual	Process No. VP-3
SUBJECT: VALVE IDENTIFICATION AND TRACEABILITY	Page: 5 of 5
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4.0 References

- ASME Section I – PG-110
- ASME Section VIII Division 1 - UG-129
- Monitoring and Measurement (VCK-4.10)
- Sales Order (CK-105)
- Code Stamp Control (VP-4)
- (2) NB-23 Part 3 1.2dl

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure		Process No. VP-4
SUBJECT: CODE STAMP CONTROL		Page: 1 of 1
Reason for Revision:		Rev.- 11/30/02

1.0 Purpose

To ensure Code Stamps – “V”, “UV”, “VR” and “NB” are procured, handled and stored in accordance with the ASME / National Board requirements.

2.0 Scope

This procedure applies to National Board issued stamps.

3.0 Responsibility / Procedure

3.1 The “V”, “UV”, “VR” and “NB” stamps, hereafter referred to as Code Symbol Stamps, shall be under the control of the Shop Foreman. It shall be the responsibility of the Shop Foreman to ensure that this procedure is followed. All Code Stamps are property of the ASME / National Board as applicable.

3.2 Use Control – the Code Symbol Stamps will be locked in the Valve Main Office with limited access to the key. The Code Stamps shall only be used by authorized Personnel.

3.3 Stamp Replacement – in the event the Code Symbol Stamp is damaged or wears out, it will be replaced through requisition to the ASME / National Board.

3.4 In the event a Code Symbol Stamp is lost, it shall be the responsibility of the Valve Division Manager to report the loss to the ASME / National Board.

3.5 Additional Code Symbol Stamps issued to Chalmers & Kubeck, Inc. will be controlled by the Valve Division Manager. The additional Code Symbol Stamps will only be used in the event the original stamp becomes unusable through damage, wear or loss.

4.0 Valve Identification and Traceability

Shall be in accordance with Valve Identification and Traceability VP-3.

5.0 References

National Board Inspection Code NB-23

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure		Process No. VP-5
SUBJECT: TESTING OF "NEW" SECTION I VALVES		Page: 1 of 3
Reason for Revision:		Rev.1 12-02-08

1.0 Purpose

To ensure New Pressure Relief valves are tested in accordance with ASME Section I requirements.

2.0 Scope

All Section I valves that will be tested at Chalmers & Kubeck, Inc. will be tested on steam using Test Stands 006 and 007. Size and Volume as described in the Quality System Manual Product Work Scope.

3.0 Testing Requirements

- 3.1** Existing test stand measuring instruments and test procedures as described in VCK-4.10 of this manual will be used for all valves that do not exceed requirements of the test system.
- (2) **3.2** Valves that exceed the pressures of the Steam Test System will be tested to an alternative method on steam:
- A) Hot set the valves on the unit;
 - B) Use lift assisted device with ring set to OEM specifications.
 - C) Set valve at Chalmers & Kubeck, Inc. with rings set to OEM specifications.
- 3.3** At assembly valve lift will be mechanically verified to meet or exceed the required lift and documented on CK101. All blowdown rings will be set to OEM specifications.
- 3.4** All gauges used will be in accordance with VCK-4.11. If required to use owner gages, calibration evidence will be required and documented on Safety & Relief Valve Test Report (CK-102A), of which the customer will receive a copy with a copy forwarded to the job file.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure		Process No. VP-5
SUBJECT:	TESTING OF “NEW” SECTION I VALVES	
Reason for Revision:	Page: 2 of 3 Rev.1 12-02-08	

3.5 When a customer chooses to **hot set** the valve on site the following shall occur:

- The valve shall be assembled and tested per VCK-4.10 to demonstrate set pressure and blowdown;
- Blowdown rings shall be set to OEM specifications;
- Tags shall be completed and installed but without NB and Code Stamp;
- Valve will be tested on site;
- After testing is completed and valve meets Section I requirements, only then will Code Stamp and NB Stamp be applied in the field to the existing tag by the Field Supervisor. This shall be documented on the Safety & Relief Valve Test Report CK-102A of which the customer will receive a copy with a copy forwarded to the job file.

3.6 When testing a valve using a **lift assisted** device the following shall occur:

- The valve shall be assembled per VCK-4.10;
- Rings will be set to OEM specifications;
- Valve set pressure will be defined using lift assisted devices, Hydroset or EVT machines. Test results shall be documented on Hydroset Test Report (CK-107) or EVT Test Report (CK-115);
- All lift assisted devices used in testing shall be calibrated per VCK-4.11 to meet the set pressure tolerance of PG-72.2;
- After testing is completed and valve meets Section I requirements, only then will Code Stamp and NB Stamp be applied to the existing tag by the Foreman or his designee. This shall be documented on the Safety & Relief Valve Test Report CK-102A of which the customer will receive a copy with a copy forwarded to the job file.

3.7 When valves are set at Chalmers & Kubeck, Inc. with **ring set** to OEM specifications the following shall occur:

- All valves shall be assembled in accordance with VCK-4.10;
- Rings will be set to manufacturers’ specifications;
- Valve will be tested in accordance with VCK-4.10;
- Blowdown achieved on this test will be documented on CK-102A;
- Valve will have code stamp and NB stamp on tag at time of shipment.

3.8 The Certified Individual (CI) shall review CK-102A and verify the requirements of Section I have been completed. Section 6.0, PD-35 of this manual outlines the duties of the Certified Individual.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure		Process No. VP-5
SUBJECT:	TESTING OF "NEW" SECTION I VALVES	Page: 3 of 3
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4.0 References

ASME Section I
National Board Inspection Code NB-23
Monitoring and Measurement (VCK-4.10)
Pressure Relief Valve Repair Traveler (CK101)
Control of Monitoring and Measuring Devices (VCK-4.11)
Safety Relief Valve Test Report (CK-102A)
Hydroset Test Report (CK-107)
EVT Test Report (CK-115)

Section I – Testing Which Exceeds Capabilities of Chalmers & Kubeck, Inc. Test System

Due to a change in Section I, you will now have to choose from one of the following options to meet your Section I requirements.

PLEASE CHECK OFF ONE OF THE THREE CHOICES, SIGN, DATE & RETURN, SO THAT WE MAY PROCESS YOUR ORDER:

- 1) Full Function Test Valve on Chalmers & Kubeck Test System with Rings Set to Manufacturer's Engineering Specifications. Ship Valve with Code Stamp and Test Documentation.

- 2) Full Function Test Valve on Customer's Unit. Valve will be shipped to you without Code Stamps on the Tag and without Test Documentation. Only after full Function Testing on your Unit and all Code Requirements have been met, will Stamping and Test Documentation be issued.

- 3) Valve Set with Lift Assisted Device and Rings Set to OEM Specifications at Chalmers & Kubeck, Inc.

Chalmers & Kubeck, Inc. will not be liable for any extra cost associated with Selection "2". Additional charges for the initial cost of the valve will be required for quantity (2) Technicians to set valve in place, install Code Stamps and provide Test Documentation. This will be charged on a ***T & M Basis*** at the applicable hourly rate.

Customer: _____
Name: _____
Date: _____
Valve Size: _____
Model: _____
Serial #: _____
Set Pressure: _____
Capacity: _____

Customer Approval: _____
Signature: _____
Date: _____
Job #: _____
Customer PO # _____

FOR INFORMATION
ONLY

CHALMERS AND KUBECK
INDUSTRIAL VALVE DIVISION
150 COMMERCE DR.
ASTON, PA. 19014
610-494-7030

Green Tag Center For: DRESSER INDUSTRIES
Industrial Valve and Controls Division

CUSTOMER INFORMATION

Customer: RELIANT TITUS STATION Job Order #: 03-0419F
Unit/Plant: #3 / TITUS
Address: _____
BIRDBORO, PA
Date: 04-24-2003 Time: 09:25:49

VALVE IDENTIFICATION

Valve Type: 1811P-22 Valve Code: TP
Manufacturer: Dresser Size/Orifice: 4" / P
Serial Number: BX04079 Cust. Tag/Loc.: COLD REHEAT B / RS-R
V-012
Name Plate Set Pressure: 505 p.s.i.g. Back Pressure: 0 p.s.i.g.
ASME Code Section: I Tolerance: 495 to 515 (± 10 p.s.i.)

VALVE TEST RECORD

Initial Inlet Pressure: 410 p.s.i.g. Factor: 1922
As Found Set Pressure: 546 p.s.i.g. Tolerance: +8.1 %

TEST #	INLET PRESSURE	FACTOR	SET PRESSURE	TOLERANCE
1	0	0	0	%-100.0 %
2	0	0	0	%-100.0 %
3	0	0	0	%-100.0 %

AVERAGE SET PRESSURE: 0 p.s.i.g. TOLERANCE: %-100.0 %

Comment: No Net Adjustments Made
Valve is stuck-needs repair.

Test Technician: _____

Customer Approval: _____

VR STAMP

YES

NO

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure	Process No. VP-6
SUBJECT: GENERAL SAFETY VALVE MAINTENANCE AND REPAIR MANUAL	Page 1 of 8
Reason for Revision:	Rev.2 12-02-08

1.0 Purpose

These procedures provide sequential steps to be used at the shop level for normal routine overhauls. They are to be used in conjunction with the Company Standards whenever necessary, as detailed elsewhere in this document.

2.0 Scope

This section provides an overview of the entire process for normal routine repairs to ASME pressure relief valves. If more than normal routine repairs are to be performed, the valve manufacturer or his applicable service manual drawings or instructions for maintenance and repair to the particular valve shall be consulted.

3.0 Responsibility

All work in the shop is assigned by the Valve Department Foreman. It is their responsibility to make certain that any employee assigned a specific work task is qualified, and has demonstrated a sufficient level of competence to carry it out. They have the direct responsibility to insure that new employees or apprentices', who are the recipient of on-the-job training, receive adequate supervision and instructions from other qualified personnel.

4.0 Procedures

4.1 Upon receipt, valves are assigned a job control number and the routine forms and files are initiated by the supervisor. An equipment identification and status sheet is filled in and attached to the valve as detailed in the Repair and Inspection Section of the Quality Control Manual.

4.2 Prior to disassembly, the initial work scope is defined by the Foreman in accordance with prior instructions received from customer.

4.2.1 Valves will be pre-tested if called for in the initial work scope.

4.3 Prior to disassemble, valves are match marked on all cast parts to facilitate proper reassembly.

4.3.1 During disassembly, the utmost care is to be taken in order not to damage or deform parts to be re-used.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure	Process No. VP-6
SUBJECT: GENERAL SAFETY VALVE MAINTENANCE AND REPAIR MANUAL	Page 2 of 8
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- 4.4 Valve is dismantled and all parts are kept together. If more than one valve is being dismantled, be careful not to inter-mix parts.
- 4.4.1 Note and record the positions of the nozzle ring (lower) and guide ring (upper) and the direction they are turned.
- 4.4.2 Note and record the position of the Compression Screw with respect to distance above upper surface of top of valve.
- 4.4.3 Do not remove nozzle from body unless:
- 4.4.3.1 Replacement of either part is required.
- 4.4.3.2 Extensive repairs to either part necessitate further disassembly (machining).
- 4.4.3.3 They are noticeably loose and readily able to come apart.
- 4.4.3.4 Specific instructions are received to do so.
- 4.4.4 Hold all parts to be replaced for final disposition by the customer.
- 4.5** Thoroughly clean all remaining parts with a process compatible with the valves material. Remove all loose scale and cleaning material to facilitate further handling and inspections.
- 4.6** Perform a close visual inspection of all parts with particular attention to all working parts and those parts which effect valve capacity. Any suspect area shall undergo further non-destructive testing or quality inspection as necessary to determine whether to re-use or replace the part. The acceptance or rejection criteria for marginal parts shall be determined on an individual valve basis in accordance with reliable, safe, and proper valve operation, and OEM critical dimensional requirement. Any parts with obvious non-correctable flaws shall be rejected.
- 4.6.1 The spring shall always be properly identified for the particular valve size and checked using the manufacturer's spring chart, to ascertain that it is being used within the proper pressure range and service conditions (i.e. temperature, corrosion, etc.) for which it is designed.
- 4.6.2 If further inspections indicate that more replacement parts are required, the Foreman shall be notified to determine if the valve can be cost effectively repaired.

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SUBJECT: GENERAL SAFETY VALVE MAINTENANCE AND REPAIR MANUAL	Page 3 of 8
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4.6.3 The initial visual inspection shall include, but is not limited to damage and signs of binding, galling, corrosion, erosion, wire drawing, cracks, etc., that could lead to valve malfunction or seat leakage. Inspect threads for damage, insure that all fits are proper. Check wall thickness and all sealing surfaces on body and other pressure containment parts. Check concentricity, run out of spindle square-ness, and parallelism of parts and surfaces or parts to ensure proper alignment. The more experienced the personnel performing these inspections, the less equipment will be required. Precision measuring and test equipment is always available to all personnel and the Company encourages all employees to use it as frequently as they feel is necessary.

4.7 Overhaul the valve in accordance with the original work scope which may be amended as a result of subsequent inspections and/or further instructions from the customer. Since safety valve manufacturers and types are so varied in design and operating principles, it is impracticable to give specific overhaul and repair instructions herein. At best they would be overly generalized, and confusing since the same or similar parts are very often called different names. Therefore, when extensive repairs, parts replacement, rebuilding or fabrication, must be performed, the manufacturer or his applicable service manual, drawings or instructions for maintenance and repair to the particular valve shall be consulted. Generally, the normal overhaul will consist of the following minimum steps:

4.7.1 Restoration of seating surfaces to original dimensions and lapped procedures, tools, compounds and inspections procedures, as outlined elsewhere in this document.

4.7.2 Valve spindle straightening accomplished using soft tools with a maximum allowed total indicated run - out of .004" at any point.

4.7.3 Spindle dressing and disc insert dressing to insure that spindle point and disc insert bearing surfaces moves freely on and bears fully on their respective seats in the disc holder.

4.7.4 General machining of all body end connections mating and sliding surfaces and all other parts by removing as little metal as possible (skim cuts), so that tolerances and wall thickness' are not lost. Any part which is machined out of tolerance must be replaced.

Any part requiring welding will be done in accordance with the Quality Control Manual. Note: Check flange thickness at inspection and after machining. Flanges shall meet requirements of ANSI B 16.

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SUBJECT: GENERAL SAFETY VALVE MAINTENANCE AND REPAIR MANUAL	Page 4 of 8
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4.8 After repairs are complete, reassemble the valves and ensure that all parts have been kept together and thoroughly cleaned. Thinly coat all threaded areas and bearing surfaces, where applicable, with anti-seize compound which is compatible with the valve service and operating conditions. Studs, bolts, and nuts shall be replaced as necessary using the same type material as original.

4.8.1 Reassemble the valve in the reverse order in which it was disassembled less the bonnet cap or lifting gear assembly. Make certain that all parts to be re-used are present, in good repaired condition, and not mixed with other valve parts or scrapped parts.

4.8.1.1 All new replacement parts shall be properly identified as to part/stock number, manufacturer, contract, etc.

4.8.2 Utilize measurements recorded during disassembly to assure proper spring and ring settings.

4.8.2.1 After tightening of the bonnet nuts and compression screw, move the adjusting rings each way (returning to original position) to ensure against improper alignments, or bearing on disc holder, or on each other.

4.9 Prior to final setting and testing, ascertain which service the valve is used in so the closest simulation to actual operating conditions can be made on the test stand (i.e. steam, pneumatic, hydrostatic, hydraulic). Using the utmost in care, safety, and regular shop practices, only employees who have the experience, are fully qualified, and have demonstrated the highest level of competence shall be used to set and test safety valves. A general outline of the procedures to set and test safety valves is listed below. This procedure mainly describes a conventional type or self acting safety valve. It is actually impossible to list a step by step method to properly and expeditiously set and test a safety valve since so much depends on the skills in performance and technique acquired by experience, study, and observation. The final test must show the valve performance to be repeatable and in accordance with the original manufacturer's ASME Code specifications.

4.9.1 A suitable adapter for the size and pressure of the test valve shall be used.

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Valve Division Quality System Procedure		VP-6
SUBJECT: GENERAL SAFETY VALVE MAINTENANCE AND REPAIR MANUAL		Page 5 of 8
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4.9.1.1 For safety valves or safety relief valves used in gas, vapor, or steam service, which will require blowdown adjustments, the adapter shall not be less than the minimum inlet area of the test valve's nozzle. Also, there shall not be any restrictions between the accumulator tank and the test valve which would cause significant pressure drops or flow characteristics which would adversely affect the performance of the test valve. All gaskets used shall be compatible with the inlet configuration and set pressure of the test valve. The internal dimensions of the gasket shall never be less than the diameter of the test valve nozzle.

4.9.1.2 Fasten the test valve and adapter to an accumulator or pressure source of adequate volume in order to accurately set relieving pressure. For gas and steam testing, the accumulator shall be of sufficient volume to demonstrate response to blowdown adjustments.

4.9.2 Pop the valve to ascertain its initial spring setting and ring position in relation to final performance and tolerances required. Record or remember all intermediate performance pops and adjustments until the required final performance and settings are attained.

4.9.2.1 Set pressure is dependant upon spring compression which is controlled by an adjusting screw location on top of the valve. Compressing the spring raises the set pressure, and alternately, loosening the spring lowers the set pressure.

4.9.2.1.1 Valves set on air or water which are subject to more than 250 degrees F operating temperature shall receive the manufacturer's recommended cold set differential set pressure. The sum of these two differential set pressures shall never be used. It must be one or the other.

4.9.2.1.2 Set pressure tolerances as prescribed by the ASME are as follows:

	<u>Set Pressure</u>	<u>Tolerance</u>
Section I	0 to 70 PSIG	+/-2 PSIG
	71 to 300 PSIG	+/-3%
	301 to 1000 PSIG	+/-10 PSIG
	1000 PSIG and Greater	+/-1%
Section VIII	0 to 70 PSIG	+/-2 PSIG
	71 PSIG and Greater	+/-3% of set pressure

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SUBJECT: GENERAL SAFETY VALVE MAINTENANCE AND REPAIR MANUAL	Page 6 of 8
Reason for Revision:	Rev.2 12-02-08

NOTE: It is desired to maintain a set pressure tolerance of +/-1% or less.

4.9.2.1.3 When the required set pressure is attained, lock the adjusting screw with lock nut.

4.9.2.2 Next, adjust the “warm” or “simmer” via the nozzle ring (lower ring). Raising the ring closer to the seat will increase its effectiveness. This will eliminate simmer, creating a higher lift and sharper pop action. Conversely, lowering the ring away from the seat will increase simmer and eliminate bang up.

4.9.2.2.1 Single ring non-code or non-liquid trim safety relief valves used in liquid relief service shall have the nozzle ring lowered away from the seat as much as possible so the ring does not have any effect on valve performance.

4.9.2.3 Next, adjust the reseating pressure (blowdown) via the guide ring (upper ring). Raising the ring away from the seat decreases its effectiveness and will decrease the blowdown (higher reseat pressure). Conversely, lowering the ring towards the seat increases its effectiveness and will increase the blowdown (lower reseat pressure). Lowering the upper ring will also eliminate chatter which is a hammering action or vibration.

4.9.2.3.1 Blowdown/reseating tolerances ASME Section I Steam Internal Valves:

	<u>Set Pressure, psi</u>	<u>Maximum Blowdown</u>
Section I	< 67	4 psi
	≥ 67 and ≤ 250	6% of set pressure
	> 250 and < 375	15 psi
	> 375	4% of set pressure
Section VIII		
Air & Steam ALL Valves		3 PSI or 10% of set pressure whichever is greater

NOTE: It is desired to maintain a maximum reseating tolerance of 4% for Section I valves, and 7-10% for Section VIII valves.

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4.9.2.4 In general, no one independent change can be made to any one primary adjustment (i.e. set pressure, pop, or blowdown rings) without consideration of its secondary effect on other valve operations. Therefore, during final setting and testing of a safety valve, it must be balanced and fine tuned to the greatest extent possible and practicable. In effect, making safety valve ring adjustments must be “played by ear” both in the literal and figurative senses. To an experienced safety valve technician, the sound of valve action is a principle criterion.

4.9.2.5 After the valve is finally set, pop at least two (2) more to demonstrate repeatability.

- (1) 4.9.2.6 After completion of test, a seat tightness test shall be conducted. Unless otherwise designated by a manufacturer’s published specification or another specification agreed to by user the criteria shall be in accordance with API 527.

4.9.2.6.1 Seat tightness of closed bonnet or bellows valves being set on air shall be performed with all connections and openings in the body pressure tight. The cap which covers the adjusting screw must be installed. The initial leakage test of the valve shall be made using the API Standard 527 commercial seat tightness of safety relief valves with metal seats.

4.9.2.6.2 Seat tightness of any valves being set on water shall be tested at 90% of set pressure and for a sufficient amount of time to elapse in order to allow excess water to flow from the valve outlet. The valve then should be tight with no water dripping from the outlet.

4.9.2.6.3 Seat tightness for valves with resilient seat material (O-Ring Valve), refer to OEM Specifications.

4.9.2.7 A back pressure test of the body casing for leakage is to be performed to all closed bonnet, packed (sealed) stem or bellows valves after adjustments to set pressure, blowdown, and the seat tightness tests are complete. The pressure at which a valve is to be tested shall be 30 PSI unless otherwise specified by customer.

4.9.2.8 Any deficiency noted during final testing which can not be corrected or “adjusted out” in a reasonable period of time shall be cause for rejection. The rejected valve shall be returned to the assembly section, dismantled and the Shop Foreman or his designee shall perform the initial inspection.

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- 4.10 Before final testing is completed, install the cap gasket and cap or lift lever assembly to the valve. Assure proper clearance between lift fork and stem lifting nut. After proper installation actuate assembly to insure proper action. All of the valve adjusting points shall be sealed on stand by tester, using stainless steel safety wire with lead identification seal. It is desired that adjustments shall be safety wired shut, that is, in a manner in which any attempt to change adjustments will readily break the seal. The valves sealing also conforms with the requirement of the ASME Codes.
- 4.11 Shipping preparation shall include the following:
- 4.11.1 All of the valve adjusting points shall be sealed at the shipping area using stainless safety wire with lead identification seal. It is desired that adjustments shall be safety wired shut, that is, in a manner in which any attempt to change adjustments will readily break the seal. The valves sealing also conforms with the requirement of the ASME Codes.
- 4.11.2 Completion of all Quality Control reports to accompany the valve to the customer.
- 4.11.3 Completion of proper shipping documents and bills of lading.
- 4.11.4 Stamping all applicable information concerning the valve onto a stainless steel name plate and fastening it to a main component of the valve in order to be tamper proof and to prevent its loss.
- 4.11.5 Painting, blanking of ends, preservation, and packaging, using suitable methods which have proven to protect the valves shall be used.
- (2) 4.11.6 All flanged valves should be securely bolted to pallets in the vertical position to avoid side loads on guiding surfaces.
- (2) 4.11.7 All threaded valves should be securely packaged and cushioned during transport. Valve inlet and outlet connection, drain connections, and bonnet vents should be protected during shipment and storage to avoid internal contamination of the valve. Ensure all covers and/or plugs are removed prior to installation.
- (2) 4.11.8 Lifting levers should be wired or secured so they cannot be moved while the valve is being shipped or stored. These wires shall be removed before the valve is placed in service. Rupture disks should be carefully checked for damage prior to installation.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure	Process No. VP-7
SUBJECT: PRESSURE RELIEF VALVE TRAINING PROGRAM	Page: 1 of 2
Reason for Revision:	Rev.1 08-30-05

1.0 Purpose

To ensure personnel performing the repair of ASME Code Pressure Relief Valves are competent on the basis of appropriate education, training, skills and experience.

2.0 Scope

This procedure applies to all employees performing activities which may affect quality.

3.0 Job Classifications

- Trainee – entry level position, up to one year minimum experience, mechanical and technical.
- Technician – one year minimum experience. Must demonstrate both technical and mechanical competence including valve setting and testing.
- Senior Technician – one year experience as a technician. Must demonstrate Quality Control awareness, knowledge and ability. Position requires formal factory and/or National Board training while in the employment of Chalmers & Kubeck, Inc.

4.0 Training

4.1 Technical: documented seminars held on an as needed basis and will encompass the following as appropriate:

- Video Presentations
- Quality System Manual review
- ASME Section I & Section VIII review
- ASME Section IX review
- NBIC 23 review
- (1) • NB 18

4.2 Documentation: includes attendance records and subject matter on session. This shall be kept on file by the Quality Control Manager.

4.3 Mechanical: Shop and Field audits shall be performed annually to demonstrate mechanical and technical competence and conformity to the Quality System Manual.

4.4 Records

4.4.1 The Employee Classification Record (CK-108), Certificate of Achievement (CK-109) and the Technician Audit Report (CK110) shall be retained by the Quality Control Manager in the employee file.

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure	Process No. VP-7
SUBJECT: PRESSURE RELIEF VALVE TRAINING PROGRAM	Page: 2 of 2
Reason for Revision:	Rev.1 08-30-05

5.0 References

ASME Section I and VIII
 NBIC 23
 Employee Classification Record (CK-108)
 Certificate of Achievement (CK-109)
 Technician Audit Report (CK-110)

<i>Chalmers & Kubeck, Inc.</i> Valve Division Quality System Procedure		Process No. VP-8
SUBJECT: FIELD / MOBILE REPAIR		Page: 1 of 4
Reason for Revision:		Rev.2 12-02-08

1.0 Purpose

To describe the scope of repairs, the persons responsible and equipment to be used for field repairs of ASME Code Safety and Safety Relief Valves. To again meet all applicable sections of Sections I and VIII Division 1 and Manufacturer's specifications

2.0 Scope

- 2.1** Field repairs of Safety and Safety Relief Valves will incur the same strict standards which we adhere to for in-house repairs, with the exception of some limitations such as cleaning of the valve and parts.
- 2.2** All sections of this manual which may be applied to field repairs will be followed. All activities affecting the quality of field repaired valves will be supervised and controlled from this location where Chalmers & Kubeck, Inc. "VR" Certificate is issued.
- 2.3** The scope of repairs to include complete on –site repair and testing in place of safety and safety relief valves.

3.0 Responsibility

- 3.1** It is the responsibility of the Quality Control Manager to ensure that all personnel used in field repairs are qualified. Each supervisor of a field service crew will have had factory training from at least one manufacturer.
- 3.2** The Quality Control Manager shall perform annual audits of repairs in the field unannounced to ensure that all Quality Control and Manufacturer's procedures are adhered to. This audit will include a sampling of valves repaired in the field, including performance testing.

4.0 Field Equipment

- 4.1** Chalmers & Kubeck, Inc. Valve Division has fully equipped mobile service units. Equipment includes – a drill press, bench grinders, lapping facilities, portable boring, milling and facing machinery, air motors, hand tools, NDE equipment and hydraulic testing equipment. This enables us to completely recondition valves in-line/on-site without the need to leave the job site or sue other outside services.
- 4.2** Only qualified Chalmers & Kubeck, Inc. service technicians and/or qualified OEM personnel will be utilized in the field repair of ASME Code Pressure Relief Valves.

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5.0 Drawing and Specification Control

5.1 Covered under the requirements of Process VCK-4.5 of this manual.

6.0 Material and Parts Control

6.1 Covered under the requirements of Process VCK-4.6 of this manual.

6.2 It is the responsibility of the Field Service Crew Supervisor to inspect parts supplied by the customer to ensure that only the proper parts are being used, and are dimensionally correct. If a discrepancy is found, he must notify the customer immediately to take corrective action.

7.0 Repair and Inspection.

7.1 Welding, NDE and Heat Treatment is included in the scope of work for field repairs. If a valve is in need of welding, NDE and heat treatment in order to repair it, the requirements of Process VCK-4.9 of this manual shall apply.

8.0 Valve Testing and Setting.

8.1 Valve testing and setting in the field falls under the requirements of Procedure VP-6 of this manual, except where Hydroset/EVT is used.

8.2 Valves are tested under actual service conditions. Set pressure tolerances will be accordance with Process VCK-4.10 of this manual.

8.2.1 The application of a cold differential set pressure is not necessary, when the valve is installed in-line.

8.3 The only way blowdown can be attained in the field is by testing actual line conditions, by popping the valve(s) thus documenting actual set pressure and blowdown pressures. At the completion of the tests, Form CK-102 will be completed subsequent to each test by the Field Service Supervisor.

8.4 Hydro setting / EVT of the Valves.

8.4.1 All personnel using lift assisted equipment will be trained by the manufacturer. Manufacturer test procedures shall be used in testing all valves.

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8.4.2 Hydro setting / EVT of Safety Valves is utilized when actual full function testing may cause damage to the valve or if testing is impractical when system design considerations preclude testing at full pressure. Blowdown can not be measured. The ring settings which are recorded prior to the disassembly of the valve are returned to their original settings if the valve was known to be operating properly prior to repair. If not the rings will be set to manufacturers suggested ring settings.

8.4.3 Upon completion of the Hydroset / EVT, Hydroset Test Report (CK-107) shall be filled out and submitted to the customer. This report contains the date of the test, size, type or model, serial number, set pressure, actual steam pressure during the test, the amount of hydraulic pressure needed to lift the valve, actual set pressure, name, customer's representative, location of the valve (s), see sample – Section 7 of this manual.

8.4.4 Electromagnetic Valve Tester (EVT)

8.4.5 EVT Computer Generated Report – for content see EVT Test Report (CK-115) Section 7 of this manual.

8.5 Tightness and Leakage

8.5.1 Tightness or Leakage of a valve will be limited to visible or audible passage of media, due to discharge piping which is not readily removable.

8.6 Back Pressure Testing

8.6.1 Back pressure testing of valves which vent to a closed system will be checked during actual service conditions, inspecting all possible points of leakage, visibly or with the use of a soap solution.

8.7 Gauges

8.7.1 Gauges used for testing valves in the field are the responsibility of the Field Supervisor. He will ensure that all gauges used in the field repair are in accordance with Process VCK-4.11 of this manual.

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8.7.2 It is the responsibility of the Field Crew Supervisor to check all gauges use in field repair and testing on a dead weight tester prior to each job. If owner gauges are used, current calibration evidence will be obtained and documented on CK-101. This will be the responsibility of the Field Crew Supervisor. If no records can be obtained, Field Service Supervisor will resolve situation and document it on CK-101.

8.8 Sealing the Valve at completion of all tests shall be in accordance with Process VCK-4.10 paragraph 3.3.6.12.

9.0 Valve Stamping

9.1 Valve Stamping shall be performed in accordance with Procedure VP-3 of this manual.

10.0 “VR” Stamp Control

10.1 The “VR” Stamp is the responsibility of the Field Service Supervisor while in the field. The “VR” Stamp will only be applied after valve has been set in the field. The Field Crew Supervisor will be responsible for documenting this on the Test Report used.

11.0 Calibration of Measurement and Test Gauges.

11.1 Calibration of Measurement and Test Gauges falls under the requirements of Process VCK-4.11 of this manual.

12.0 Sample Forms

12.1 Sample Forms of Hydroset and EVT Reports are contained in Section 7 of this manual.

13.0 Owner / User Personnel

13.1 Owner / User personnel will be used only under the following conditions:

- (2)
- A. Personnel are trained to Part 3 – S7.9
 - B. Personnel work under direct supervision of Chalmers & Kubeck, Inc. Technicians;
 - C. Personnel will be assigned and removed from job by Chalmers & Kubeck, Inc.
 - D. Personnel used are documented on Form CK-101 Traveler.

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1.0 Purpose

To ensure all services provided by the Valve Division of Chalmers & Kubeck, Inc. meets or exceeds all Federal, State, and Local Regulations, including:

- OSHA
- DOT
- Local Jurisdictional Requirements
- API
- Engineering Standards (ASME, National Board)
- ISO Standards

2.0 Scope

This procedure is specific to DOT related items, either shop or field, requiring inspection, repair, or testing by the Valve Division of Chalmers & Kubeck, Inc. to verify compliance.

3.0 Responsibility

3.1 It is the responsibility of the Division Manager to ensure that this procedure is effectively implemented. When changes to the procedure are required, that they are effectively implemented.

3.2 The Shop Foreman and Field Service Coordinator are responsible for:

- Maintaining active & qualified employees for the DOT program;
- Ensuring that all annual DOT requirements are met (DOT Drug Panel Testing & Training);
- Assigning Qualified Personnel to perform DOT job assignments;
- Implementation of random drug testing requirements;
- Communication with customer to determine if DOT requirements are applicable to Chalmers & Kubeck, Inc. services.

3.3 The Safety Director is responsible for maintaining and revising the DOT procedure, as well as all training requirements.

3.4 All work to be performed on DOT equipment will be implemented in compliance with the Chalmers & Kubeck Valve Division Quality System Manual.