

Introduction



ZHENGZHOU HUITONG PIPE FITTINGS CO.,LTD.

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I: DESCRIPTION OF COMPANY

Huitong Group was established in 1978. After 35 years' development and innovation, by now, Huitong Group has set up multiple subsidiary companies. Among them, Zhengzhou Huitong Pipe Fitting Co., Ltd., with the independent right of import and export, is mainly engaged in exporting steel pipe and pipe fittings for Huitong Group.

Zhengzhou Huitong Pipe Fittings Co., Ltd., with the strong support of Huitong Group, and years' development and innovation, are more and more professional in technical service and can manufacture products with all kinds of material, shape and size. Especially in elbows, tee, reducer, flange and pipe cap etc., we have gained more than 20 product patent, and hundreds of technology patent. Also, we have gradually taken an irreplaceable role in High-pressure, high-temperature and anti-corrosion area. With the continuous construction of energy in China, such as petrol gas, electric power, etc., our company has become the purchasing center of whole set fittings for such projects. In 2009, a foreign trade team established, is mainly engaged in oil gas and electric power projects abroad. By now, our products have been exported to Canada, Malaysia, Pakistan, UAE, Egypt, the Middle East countries, etc.. We have passed the qualification of ISO9001:2000 and API quality certification system. High-quality products and high-class service are well received

by abroad customers in this industry. The unique diversified production line can offer you one-package service, you can purchase all complex products from us at one time. What's more, our sufficient material stock and conventional product stock can ensure you receive satisfied product in the shortest time.

HT major materials are duplex steel(S2205, S31803, S32750, S32304, F51, F53, F60 etc.), also including stainless steel(347H, 317L, 254SMO, 800H, 600H, 310S, 309S, 316LMod, 316Ti, 904L, 316H, 304H, 316L and so on). HT has three series: Steel Pipe dimension(Φ 10- Φ 426), Profiled steel pipe fittings (Size: Φ 10- Φ 800, wall thickness: SCH5S-SCHXXS) and flange (Dimension: DN10-DN1200, PN150-PN3000).

HT has a complete range of specification, widely used in petroleum, chemical, electric power, shipbuilding, paper making, natural gas, environmental protection, sewage treatment and the nuclear industry and other industries.

With powerful financial strength, advanced managerial concept, excellent marketing service, strict quality control system and integrated marketing team, we would like to develop together with you hand in hand. Adhering to the operation principle of "faith first and clients foremost", we always supply high quality products, complete after-sales service and favorable prices. We sincerely hope to establish long-term cooperation with you on the basis of mutual benefits, reciprocity and common development.

II. GENERAL INFORMATION

1. Name of the Corporation : Zhengzhou huitong Pipe Fittings Co.Ltd.

2. Country and Nationality of the Corporation : Republic of China

3. Established : 2009

4. Type of Organization : A Joint-Stock Company

5. Line of Business :

a. Building&Construction

b. Mechanical Parts & Fabrication Service>>Flanges

c. Mechanical Parts&Fabrication Services>>Pipe Fittings

d. Hardware>Fastener

e. Minerals & Metallurgy>Steel>Steel Pipes

f. Minerals & Metallurgy>Steel>>Steel Sheets Plates

6. Board of Directors

Chairman : Mr. Liu Guosheng

7. Location of the Corporation

Head Office & Factory :

Zip Code: : 450000

No.66 Tianming Road, Jinshui District, Zhengzhou City, Henan Province, China.

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GENERAL INFORMATION [continued]

8: Contact Person

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III. INSTALLATION LIST

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INSTALLATION LIST

1. BUILDING&CONSTRUCTION

INSTALLTION LIST
BUILDING & CONSTRUCTION

SHEET 1 OF 3

CLIENT	LOCATION	DESCRIPTION	CONTACT PERIOD	MATERIALS
Bechtel Meizhouwan Thermal Power Project	USA	Pipe, Pipe Fittings, Flanges, Bolt, Gasket	2011-2012	CS SS
Bechtel Tianjin Motorola Project	USA	Pipe Framing, Pipe Fittings, Flange, Bolt, Gasket, Insulation Framing	2009-2011	CS SS
Bechtel Qinshan CANDU Nuclear BOP Project	USA	Pipe, Pipe Fitting, Flange, Gasket, Valve	2011-2012	CS SS
Bechtel IBM Shanghai Project	USA	Pipe Fittings, Rubber Bellow	2010-2012	CS
CSPC Nanhai Shell Project	CHINA	Pipe, Bolt, Flange, Pipe Fitting	2011-2012	CS SS WP11 WP22 WPHY60 A694 F60
Fluor Daniel Xiamen Kodak Project	CHINA	Pipe, Pipe Fittings, Flange, Bolt, Gasket	2012-2013	CS SS Copper
JGC Engineering Consultants(Shanghai) Co.,Ltd. TPC Project in Zhejiang	CHINA	BW Pipe Fittings, Flange, RFP Pipe, Insulating Pipe Support	2012-2013	CS SS PU
JGC Engineering Consultants(Shanghai) Co.,Ltd. CMA Project in Huizhou	CHINA	Pipe Fittings, Flange	2011-2012	CS SS
COOEC Pamyu FPSO Project	CHINA	Pipe, Pipe Fittings, Flange, Bolt	2010-2011	CS SS
COOEC BZ 25-1 FPSO Project	CHINA	Pipe, Flange	2011	CS SS
COOEC Chunxiao Gas Complex Project	CHINA	Pipe, Bolt, Flange	2012	CS SS
United Offshore Construction Co.(UOCC), CONHW	CHINA	Pipe Fittings, Flange, Pipe Framing, Manhole	2012-2013	CS SS

INSTALLTION LIST
BUILDING & CONSTRUCTION

SHEET 2 OF 3

Offshore Heavy Industry Co.,CONHW		Pipe, Pipe Fittings, Bolt, Pressure Gauge, Temperature Gauge	2011-2012	CS SS UNS S31803
CNOOC Lange Partical Chemical Fertiliser Project(Second Period)	CHINA	Pipe, Pipe Fittings, Flange, Bolt, Gasket	2010-2011	CS SS
COFCC Panyu FPSO Project	CHINA	Flange, Bolt, Gasket	2012	CS SS
COFCC Nanhai Shell Project	CHINA	Pipe, Pipe Fittings, Flange	2012	CS SS WPHY60 A694 F60
Yangzi Petrochemical Engineering Co.,Ltd.	CHINA	Pipe, Bolt, Gasket, Pipe Framing	2011-2012	CS SS Bronze
BASF-YPC Company Limited IPS Project	CHINA	Welding Gasket, Flange Cover, Hose Connector	2011-2012	CS SS
Daelim Industrial Co.,Ltd.BASF-YPC GTCC Power Plant Project	CHINA	IMC, EMT, GRC Conduit	2010-2012	CS
China Petrochemical int'l Co.,Ltd. Crude Oil Piping Line Project	CHINA	Flange, Bolt, Gasket	2008-2009	CS
CPPE Langfang Piping Buneau Suden Crude Oil Piping Line Project	CHINA	Flange, Bolt, Gasket	2010-2011	CS
BASF PTHF&THF Project	CHINA	Pipe, Pipe Fittings, Flange, Bolt	2007	CS SS P11 P22
Atomic Energy Canada Ltd.Qinshan CANDU Nuclear Project	CHINA	Pipe, Pipe Fittings, Flange, Bolt, Gasket, Valve	2007	CS SS Copper Bronze
Qinshan Nuclear No.3 Co.,Ltd.	CHINA	Pipe, Pipe Fitting, Flange	2008-2009	CS SS
China Textile Industrial Engineering Institute Polyester Project	CHINA	Pipe, Flange, Bolt, Gasket	2006	CS

INSTALLTION LIST
BUILDING & CONSTRUCTION

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China Textile&Chemical Fiber Engineering Corp,Polyester Project	CHINA	Pipe, Pipe Fittings, Flange, Bolt	2007	CS
Jiangxi Longpeng Special Fibre Co.,Ltd. Polyester Project	CHINA	Pipe, Pipe Fittings, Bolt	2008-2009	CS
Armec Engineering Ltd,SECCO Caojing Project	SHANGHAI CHINA	Pipe, Pipe Fittings, Bolt, Flange Cover	2010-2011	CS SS WP11 WP22 F11 F22
Vetoo Gray Petroleum Equipment(Shanghai)Co.,Ltd.	CHINA	Bolt	2011-2012	CS SS Alloy Steel
ABB Lummus Global Inc.SECCO Project	USA	Valve	2008	CS SS LTCS Alloy Steel
Zhejiang Thermal Power Construction Co.,Ltd.	CHINA	Pipe, Pipe Fittings, Flange, Bolt, Gasket, Valve	2010-2011	CS SS Copper Bronze
Invensys Construction&Enginerring Group	England	Pipe Framing, Pipe Fittings, Flange, Bolt, Gasket, Insulation Framing	2011-2012	CS SS
APP Group Jinhai Pulp Project	CHINA	Pipe, Pipe Fittings, Bolt, Valve	2012	CS SS 253MA Bronze

INSTALLATION LIST

2. MECHANICAL PARTS & FABRICATION SERVICE >>PIPE FITTINGS

INSTALLATION LIST
MECHANICAL PARTS & FABRICATION SERVICE>PIPE FITTINGS

SHEET 1 OF 2

CLIENT	LOCATION	DESCRIPTION	CONTACT PERIOD	MATERIALS
SWAGO (M) SDN. BHD.	Malaysia	Pipe Fittings, Flangolet	2010-2-23	CS DUPLEX STEEL
MTL LEWANDOWSKI, KAMINSKI, PITULSKI SP.J. ul.	Poland	Pipe Fittings	2010-11-23	DUPLEX 1.4539
Great Plains Stainless(NZ) Ltd	New Zealand	Pipe Fittings	2011-5-16	SS
Friulana Flange S.r.l.	Italy	Pipe Fittings	2011-6-23	Duplex 904L
JW IMPORTING&CONSULTING LLC	USA	Pipe Fittings, Flange	2011-11-10	CS,SS
JW IMPORTING&CONSULTING LLC	USA	Pipe Fittings, Flange	2012-4-22	SS
PERISERV (M) SDN. BHD.	Malaysia	Pipe Fittings	2012-5-11	SS
PT.VINCO PUTRA MANDITI.	Indonesia	BW Pipe Fittings, Flange	2012-6-27	SS
CRISTAL TECHNOLOGY CORPORATION PTE LTD	Singapore	Pipe Fittings	2012-8-13	SS
TP Engineering & Trading Supply Co., Ltd.	Thailand	Pipe Fittings	2012-9-21	Nickel Alloy Steel (Incoloy 800H)
ZHARBOLOVA A.N.	KZ(Kazakhstan)	Pipe Fittings	2012-10-27	SS
PT.GAYA JAYA TEHNIC	Indonesia	Pipe Fittings	2012-11-6	SS
ZHARBOLOVA A.N.	KZ(Kazakhstan)	Valve	2012-12-5	SS
ELSAFA TRADING CO.PETROCHEMICAL SUPPLIES	Egypt	Pipe Fittings	2013-1-17	SS
Intercontinental Technology Limited	Bangladesh	Pipe Fittings	2013-1-23	Duplex S31254
AMCO METAL	India	Pipe Fittings	2013-3-8	SS

INSTALLATION LIST

MECHANICAL PARTS & FABRICATION SERVICE>PIPE FITTINGS

SHEET 2 OF 2

MS MEGA CO., LTD.	Thailand	Pipe Fittings	2013-5-19	SS
KPL INDUSTRY CO., LTD	Korea	Pipe Fittings	2013-6-6	SS
Great Plains Stainless(NZ) Ltd	New Zealand	Pipe Fittings	2011-5-16	
MI MO CO., LTD.	Vietnam	Pipe, weldolet, Cap	2011.9.8	S31803 duplex steel
Abbas Khodabakhsh	Iran	Pipe Fittings	2012.1.11	S31803 pipe fittings
HT Engineering Ltd	Ukraine	Pipe Fittings, flange	2012.9.17	F904L
SEENE	France	Pipe Fittings	2012.10.11	1.4462
Shree Mahalaxmi Enterprises	India	Pipe fittings	2012.10.24	Nickel alloy C-22
TMS STEEL TECH.CO.KR	France	Pipe Fittings, flange	2012.1	SS, CS

3. MECHANICAL PARTS & FABRICATION SERVICE>FLANGES

INSTALLTION LIST

MECHANICAL PARTS & FABRICATION SERVICE>FLANGES

SHEET 1 OF 2

CLIENT	LOCATION	DESCRIPTION	CONTACT PERIOD	MATERIALS
SWAGO (M) SDN. BHD.	MALAYSIA	FLANGOLET	2009-12-14	DUPLEX F51
HOANG SON IMPORT & EXPORT CO.,LTD	Vietnam	Flange	2010-11-23	SS
GLOBAL VISION INC.	USA	Pipe, Flange,	2011-1-6	Duplex 2205
GLOBAL VISION INC	USA	Flange	2011-4-22	Duplex S32760
PT. BUDIJAYA MAKMURSENTOSA	Indonesia	Flange	2011-6-7	Duplex 254SMO
BURKERT CONTROMATIC PHILIPPINES, INC.	Philippines	Flange	2011-6-23	Duplex 254SMO
PT. TRIOMANDIRI LESTARIJAYA	Indonesia	Flange	2011-7-11	Duplex F53
SWAGO (M) SDN. BHD.	MALAYSIA	Flange	2011-7-15	Duplex F51
Mangueras Guayana C.A	Venezuela	Flange	2011-9-16	CS SS
JW IMPORTING&CONSULTING LLC	USA	Pipe Fittings, Flange	2011-11-10	CS,SS
JW IMPORTING&CONSULTING LLC	USA	Pipe Fittings, Flange	2012-4-22	SS
PT. TRIOMANDIRI LESTARIJAYA	Indonesia	Flange	2012-6-8	DUPLEX F51
PT.VINCO PUTRA MANDITI.	Indonesia	BW Pipe Fittings, Flange	2012-6-27	SS
AL-KAFI GROUP	Saudi Arabia	Flange	2012-10-15	SS
RAMESH STEEL CORPORATION	India	Flange	2012-12-11	Duplex F53
AMCO METALS	India	Flange	2013-1-27	SS
MING RONG YUAN BUSINESS CO., LTD.	Taiwan	Flange	2013-5-23	Nickel Alloy Steel Hastelloy C-276
SWAGO (M) SDN. BHD.	Malaysia	Spectacle Blind and orifice plate	2009-11-18	Nickel Alloy Steel(Incoloy 825)

INSTALLTION LIST

MECHANICAL PARTS & FABRICATION SERVICE>FLANGES

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WEIR ARABIAN METALS COMPANY	UAE	Flange	2011.7.14	F44 duplex steel
Filter Concept Inc	India	Flange	2011.7.30	F51 duplex flange
Tecno industrial Piping S.R.L	Italy	Flange	2011.11.14	F53
TECNOGROUP	Egypt	Flange	2012.4.13	F51
RUBY CHANCE INDUSTRIAL CO., LTD.	Taiwan	Flange	2012.6.19	F53

4. MINERALS & METALLURGE>STEEL>STEEL ROUND BARS

INSTALLATION LIST
MINERALS & METALLURGE>STEEL>STEEL ROUND BARS

SHEET OF 1

CLIENT	LOCATION	DESCRIPTION	CONTACT PERIOD	MATERIALS
DF BOILER TUBE INDUSTRIES	Canada	Bright round steel	2009-11-30	DUPLEX UNS S31050
PT. ARYA CIPTA MANUNGGAL	Indonesia	Bright round bar	2013-1-15	Duplex 17-4PH
Peak Trade s.r.o.	Czech Republic	Forged Block	2012-3-14	Duplex Steel 1.4466
OFFICE SASAHARA	Japan	Round Bar	2011-10-24	Nickel Alloy Steel (Inconel 783)
IEE INTERNATIONAL LTD	India	Round bar	2012.2.1	2507

5. MINERALS & METALLURGE>STEEL>STEEL PIPES

INSTALLATION LIST
MINERALS & METALLURGE>STEEL>STEEL PIPES

SHEET OF 1

CLIENT	LOCATION	DESCRIPTION	CONTACT PERIOD	MATERIALS
GLOBAL VISION INC.	USA	Pipe Flange	2011-1-6	DUPLEX 2205
DF BOILER TUBE INDUSTRIES	Canada	Pipe	2011-2-11	SS
DF BOILER TUBE INDUSTRIES	Canada	Pipe	2011-4-29	SS
YAMARI SINGAPORE PTE LTD	Singapore	Pipe	2011-6-7	Nickel Alloy Steel(Alloy 20)
Anthony Natale	USA	Pipe	2011.6.15	Nickel alloy steel(800H)
AR HOLDINGS PTY LTD	Australia	Pipe	2011-7-26	SS
BC Petrochemical Sdn bhd.	Malaysia	Pipe	2011.7.7	Duplex S31803
Industrial Depot Sdn Bhd	Malaysia	Pipe	2011.8.5	S32205 duplex steel pipe
YAMARI SINGAPORE PTE LTD	Singapore	Pipe	2011-9-15	SS
MAYCO, S.A.	Ecuador	Pipe	2011.11.1	S31803 steel pipe
Tube Products Incorporate	India	Pipe	2012.1.31	S32750
INOXINDIA LIMITED.	India	Pipe	2012.5.14	S31803
Electrovek-Steel LLC	Ukraine	Pipe	2012.7.5	S32205
YAMARI SINGAPORE PTE LTD	Singapore	Pipe	2012-10-10	SS
Supplynor Chile Ltda.	Chile	Pipe, round bar	2012.12.4	2205
Maytun International Corp	Taiwan	Pipe	2013.2	254SMO

6. HARDWARE>FASTENER

INSTALLATION LIST
HARDWARE>FASTENER

SHEET OF 1

CLIENT	LOCATION	DESCRIPTION	CONTACT PERIOD	MATERIALS
Pumping And Technical Services Limited	UK	Bolt, Nut	2011-10-26	DUPLEX UNS S31803
YUEN FEE (WAN SOON) ENGINEERING SDN.BHD	Malaysia	Bolt, Nut	2011-11-7	Duplex 2205
Yuen Fee (Wan Soon) Engineering Sdn. Bhd.	Malaysia	U bolt ,Nut	2012-6-26	Duplex 2205
Premier alliance co.,ltd.	Thailand	Bolt	2012-9-25	Nickel Alloy Steel(HC-22)
Yuen Fee (Wan Soon) Engineering Sdn. Bhd.	Malaysia	U bolt ,Nut	2012-10-16	Duplex 2205
AMCO METALS	India	Bolt, Nut, Washer	2012-12-28	SS
	Philippines	Bolt, Nut	2013-6-6	Nickel Alloy Steel(Nimonic 80A)

7. MINERALS & METALLURGY>STEEL>STEEL SHEETS PLATES

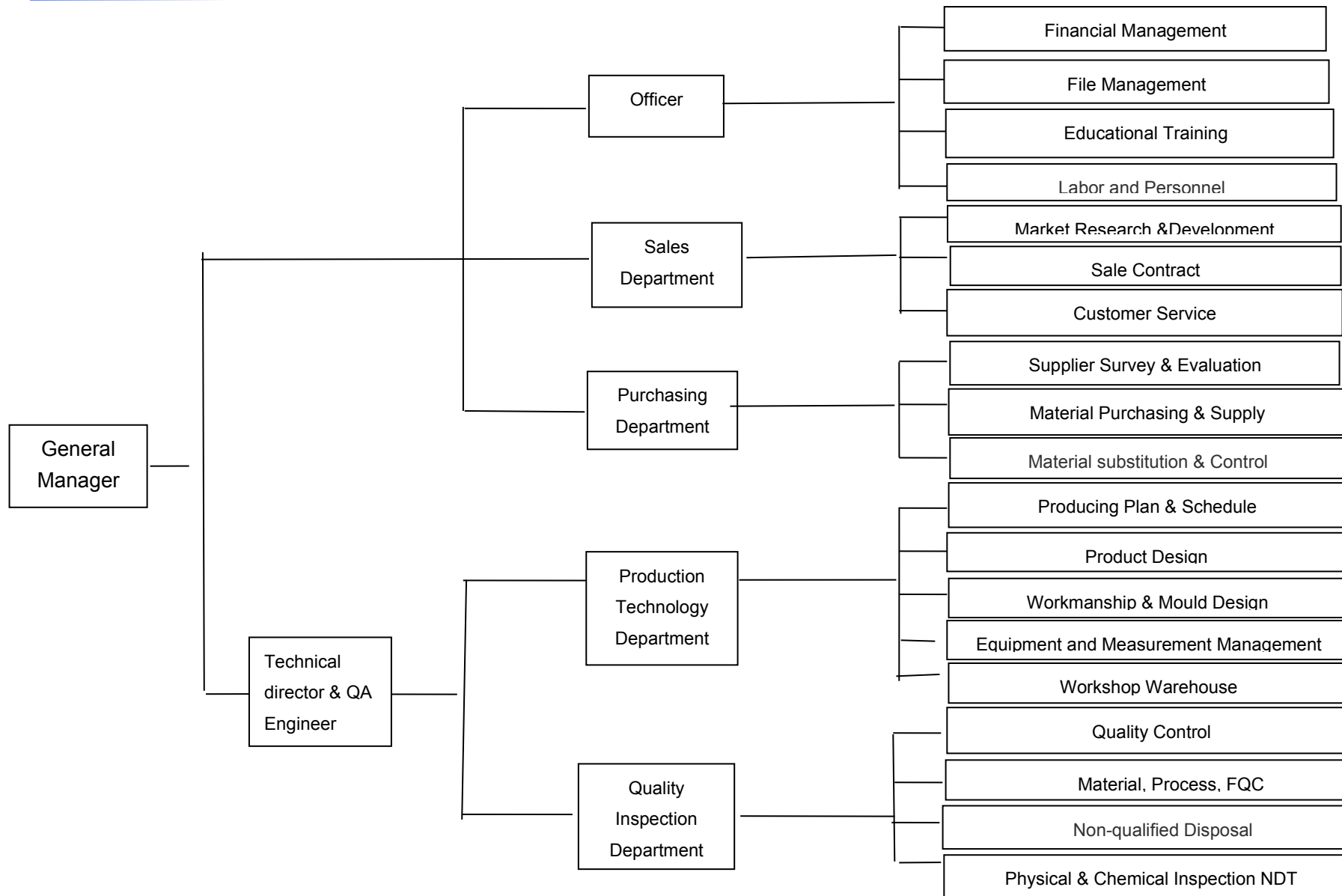
INSTALLATION LIST

MINERALS & METALLURGY>STEEL>STEEL SHEETS & PLATES

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CLIENT	LOCATION	DESCRIPTION	CONTACT PERIOD	MATERIALS
Stalnet LLC	Estonia	Steel Plate	2012-4-12	Nickel Alloy Steel(Incoloy 800H)
Supplynor Chile Ltda	Chile	Steel Plate	2012-9-5	Nickel Alloy Steel(HC-276)
Farjad Manufacturing Engineering Technology Co.	Iran	Steel Plate	2012-12-20	DUPLEX UNS S31803
DAERU, CO., LTD.	Korea	Steel Plate	2011-6-13	Nickel Alloy Steel(Incoloy 800H)
SAUDI ARCHIRODON LIMITED	Saudi Arabia	Steel Plate	2011-1-11	Nickel Alloy Steel(AL-6XN)
Universidad de Guadalajara	Mexico	Steel Plate	2012.10	S31803

ORGANIZATION CHART



VII. STATUS OF PERSONNEL

STATUS OF PERSONNEL

Number of Engineers:

Professional Engineers in Mechanical Engineering	2
Professional Engineers in Chemical Engineering	2
Professional Engineer in Environment Engineering	2
Mechanical Engineer Licensed(A Class)	2
Mechanical Engineer Licensed(B Class)	2
Chemical Engineer Licensed(A Class)	2
Chemical Engineer Licensed(B Class)	2
Environment Engineer Licensed(A Class)	2
Electrical Engineer Licensed(A Class)	2
Electrical Engineer Licensed(B Class)	2
Instrument Engineer Licensed(A Class)	2
Fabrication Engineer	2
TIG Description Designers	2
Operation Engineer	2
Sub-Total	28

Number of Technicians:

Welding Work Technicians	4
Plating Work Technicians	4

Assembling Work Technicians	4
Grinding Work Technicians	4
Piping Work Technicians	4
Lathe & Machine Work Technicians	4
Other Technicians	8
Maintenance Technicians	25
Sub-Total	57

STATUS OF PERSONNEL [continued]

Number of Administration and Account Members:

Administration Officers	10
Account Officers	10
Other clerks	10
Sub-Total	30

Total	<u>115</u>
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IX. LIST OF MAIN FACILITIES

LIST OF MAIN FACILITIES

<u>Description</u>	<u>Model</u>	<u>Q'ty</u>
- CNC machine	CK6150L	1
- Common Lathe	CS6140	2
- Common Lathe	CS6150	2
- Common Lathe	C620A	1
- Common Lathe	L-5	2
- Common Lathe	CW3163A	1
- Common Lathe	CW6280C	1
- Hengbei Lathe	DW2238A	2
- Vertical Drilling Machine	Z5125	1
- ZX-type Milling&Drilling Machine	ZX7032	1
- Radial Drilling Machine	Z3050×16/1	1
- Four-Column Hydraulic Press	YX32*500	1
- Four-Column Hydraulic Press	250T	1
- Horizontal Hydraulic Press	300T	1
- Vertical Mould Unloading Hydraulic Press	200T	
- Vertical Mould Unloading Hydraulic Press	150T	
- Horizontal Mould Unloading Hydraulic P	200T	
- Tee Forming Machine	1000T	
- Stainless Steel Elbow Pushing Machine	YLT80B	
- Stainless Steel Elbow Pushing Machine	200T	
- AC Welding Machine	ZX7-630STG	
- AC Welding Machine	WSM-500	
- AC Welding Machine	ZX7-500STG	
- Plasma Cutting Machine	LGK8-40/100	

- Sawing machine	GB--4235
- Sawing machine	GW 4230/50
- Sawing machine	GW 4230/60
- Sawing machine	GW 4230/X
- Air Compressor	LG-3.6/8
- Grinding Machine	J3G-400A
- bogie-hearth resistance furnace	RT-105
- Pipe Straightener	14"
- Pipe Straightener	5"
- Stainless Steel Drawing Machine	14"
- Stainless Steel Drawing Machine	8"
- Stainless Steel Drawing Machine	6"
- Stainless Steel Drawing Machine	5"
- Stainless Steel Drawing Machine	3"
- Jetting Machine	PX58

LIST OF MAIN FACILITIES [continued]

- Jetting Machine	PX58
- Annealing Furnace	

LIST OF MAIN FACILITIES [continued]

Inspection & Testing Tools

<u>Description</u>	<u>Specification</u>	<u>Q'ty</u>
- Thickness Gauge	0.038-0.635m	1

- Clamp Meter	600V, 1,200A	1
- Vernier Caliper	0-200mm	1
- Vernier Caliper	0-300mm	1
- Vernier Caliper	0-500mm	1
- Vernier Caliper	0-800mm	1
- Vernier Caliper	0-1000mm	1
- Vernier Caliper	0-2000mm	1
- Ultrasonic Thickness Gage	0-200mm	1
- Pressure Gage	<250Mpa	1
- Leeb hardness tester	Z3050 × 16/1	1
- Height Indicator	≤600mm	1
- Height Indicator	>600mm	1
- Magnetic Particle Flaw Detector	300T	1
- Spectroanalysis Instrument	200T	1
- Impact Testing Machine	150T	1
- Eddy Current Flaw Detector	200T	1
- Ultrasonic Flaw Detector	1000T	1
- Hydrostatic Testing Machine		-
- Tape Measure		4
- Industrial Endoscope		1
- Universal Testing Machine	50 Ton	1
- Dead Weight Tester	0-120kg/m ³	1
- Pinhole Tester	25,000V	3
-Temp.Controller	0-600℃	2
-Tachometer	0-1,000rpm	1

LIST OF MAIN FACILITIES [continued]

Laboratory Analysis Equipment

<u>Description</u>	<u>Specification</u>	<u>Q'ty</u>
- PH Meter	-	1
- Rotary Evaporator	-	1
- Lux Meter	0-50	1
- Water Bath	-	1
- Dry Over	50-300℃	1
- Pilot Plant for Condensate Polisher	-	1
- Microscope	-	1
-Refrigerator	180L	1
- Compressor	5kg/m ³	1
- Hydrometer	0.700-1.850	1

X. Q/A MANUAL

ZJSD/QM-2009

Zhengzhou Huitong Pipe Fittings Co.,Ltd.

QUALITY MANAGEMENT MANUAL

According to the ISO9001: 2008"quality management system—requirement" and API Spec Q1-8th Edition

(B/0)

Serial Number:

Controlled Status : YES

Issue Date: July 7, 2009

Effective Date: July 10, 2009

0.0 Issue order of QM

Issue order of QM

This manual (**A/0 Edition**) is formulated in accordance with API SPEC Q1-2003 Specification for Quality Programs for the Petroleum and Natural Gas Industry and ISO9001:2000 GB/T19001-2000) “QMS—requirement”, “Definition for safety management and monitoring of pressure pipe”, and “Safety registration management method for manufacturing unite of pressure pipe component” together with the actual conditions of our Company. It is now ratified and shall be implemented since July 10, 2007.

This manual is a program document of the quality management system of the Company, which gives guidance to carry out quality police, achieve quality objective and establish, implement and improve quality management system. It is also a criterion for the company to build such quality management system. All the staff must comply with it strictly.

GM: Mr.Liu Guosheng

April 8, 2009

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 - 8.2.3 Monitoring and measurement of processes
 - 8.2.4 Monitoring and measurement of product
- 8.3 Control of Nonconforming Product
- 8.4 Analysis of Data
- 8.5 Improvement
 - 8.5.1 Continual Improvement
 - 8.5.2 Corrective Action
 - 8.5.3 Preventive Action

Appendix A: API Monogram Control

Appendix B: List of control procedure

Appendix C: Process Model of the quality management system

Appendix D: Interaction between the processes of QMS

0.2 About COMPANY

Huitong Group was established in 1978. After 35 years' development and innovation, by now, Huitong Group has set up multiple subsidiary companies. Among them, Zhengzhou Huitong Pipe Fitting Co., Ltd., with the independent right of import and export, is mainly engaged in exporting steel pipe and pipe fittings for Huitong Group. Zhengzhou Huitong Pipe Fittings Co., Ltd., with the strong support of Huitong Group, and years' development and innovation, are more and more professional in technical service and can manufacture products with all kinds of material, shape and size. Especially in elbows, tee, reducer, flange and pipe cap etc., we have gained more than 20 product patent, and hundreds of technology patent. Also, we have gradually taken an irreplaceable role in High-pressure, high-temperature and anti-corrosion area. With the continuous construction of energy in China, such as petrol gas, electric power, etc., our company has become the purchasing center of whole set fittings for such projects. In 2009, a

foreign trade team established, is mainly engaged in oil gas and electric power projects abroad. By now, our products have been exported to Canada, Malaysia, Pakistan, UAE, Egypt, the Middle East countries, etc.. We have passed the qualification of ISO9001:2000 and API quality certification system. High-quality products and high-class service are well received by abroad customers in this industry. The unique diversified production line can offer you one-package service, you can purchase all complex products from us at one time. What's more, our sufficient material stock and conventional product stock can ensure you receive satisfied product in the shortest time.

HT major materials are duplex steel (S2205, S31803, S32750, S32304, F51, F53, F60 etc.), also including stainless steel (347H, 317L, 254SMO, 800H, 600H, 310S, 309S, 316LMod, 316Ti, 904L, 316H, 304H, 316L and so on). HT has three series: Steel Pipe dimension ($\Phi 10$ - $\Phi 426$), Profiled steel pipe fittings (Size: $\Phi 10$ - $\Phi 800$, wall thickness: SCH5S-SCHXXS) and flange (Dimension: DN10-DN1200, PN150-PN3000).

HT has a complete range of specification, widely used in petroleum, chemical, electric power, shipbuilding, paper making, natural gas, environmental protection, sewage treatment and the nuclear industry and other industries.

With powerful financial strength, advanced managerial concept, excellent marketing service, strict quality control system and integrated marketing team, we would like to develop together with you hand in hand. Adhering to the operation principle of "faith first and clients foremost", we always supply high quality products, complete after-sales service and favorable prices. We sincerely hope to establish long-term cooperation with you on the basis of mutual benefits, reciprocity and common development.

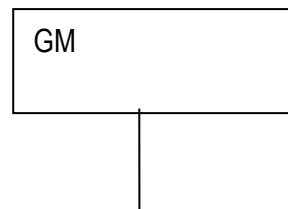
Add: No.66 Tianming Road, Jinshui District, Zhengzhou City, Henan Province, China. 450000

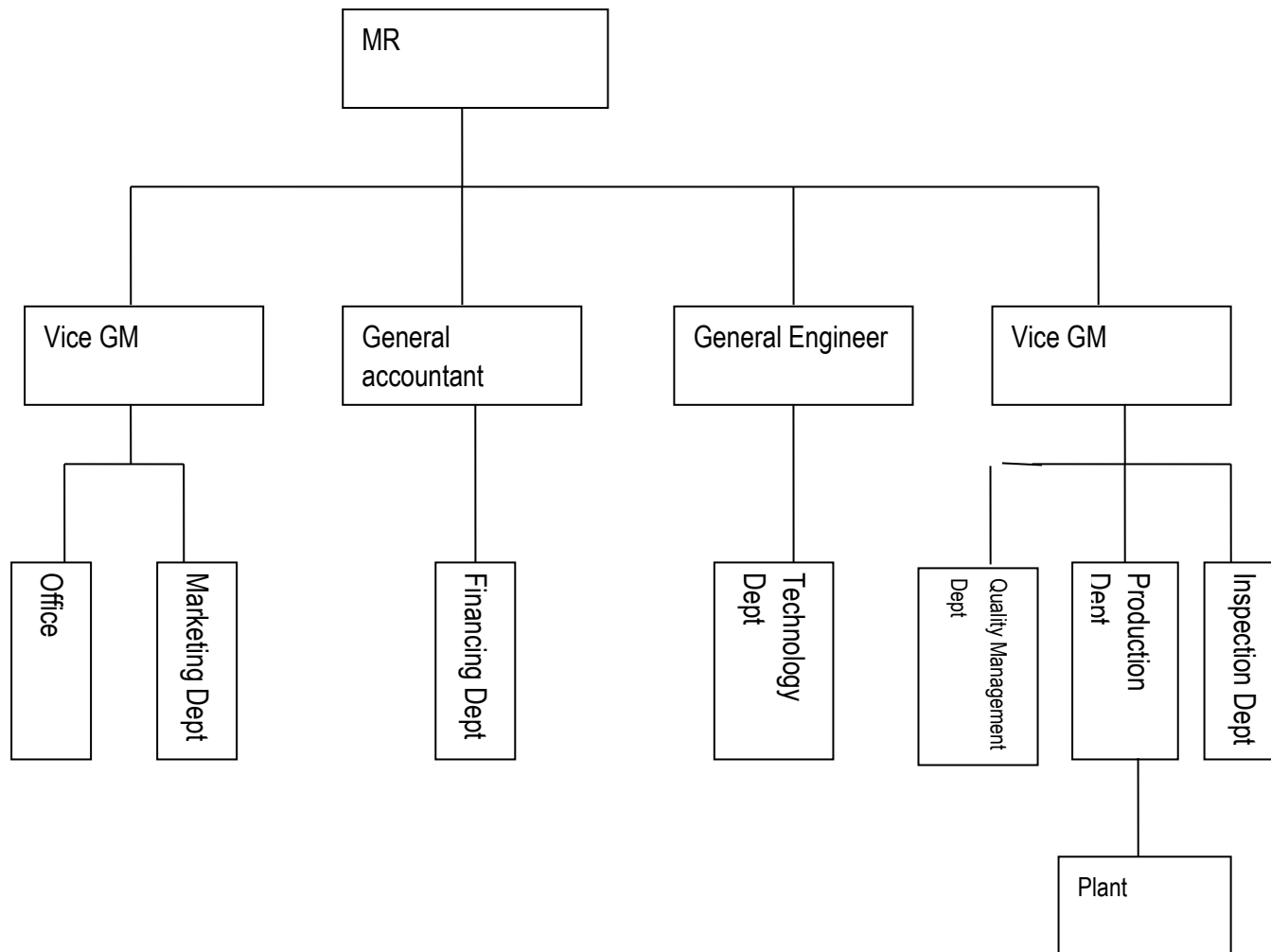
Tel: 86-371-60953359

Fax: 86-371-60953359

Code: 450000

0.3 Organization Chart of Quality Management System





0.4 Distribute Chart for Quality Management System

QMS ELEMENT	Management (GM & MR)	Office	Inspection Dept	Quality Management Dept	Technology Dept	Production Dept	Marketing Dept
4.1 General Requirement	●	○	○	●	○	○	○
4.2.1 General	○	●	○	●	●	○	○
4.2.2 Quality manual	○	●	○	●	●	○	○
4.2.3 Document control	○	●	○	●	●	○	○
4.2.4 Record control	○	○	○	●	○	○	○
5.1 Management Commitment	●	○	○	●	○	○	○
5.2 Customer Focus	●	○	○	●	○	○	○
5.3 Quality Policy	●	○	○	●	○	○	○
5.4 Planning	●	○	○	●	○	○	○
5.5 Responsibility, Authority & Communication	●	○	○	●	○	○	○
5.6 Management Review	●	○	○	●	○	○	○
6.1 Provision of Resource	●	○	○	●	○	○	○
6.2 Human Resource	○	●	○	○	○	○	○
6.3 Infrastructure	○	●	○	○	○	●	○
6.4 Work Environment	○	●	○	○	○	●	○
7.1 Planning of Product Realization	○	○	●	●	○	●	○
7.2 Customer-related Processes	○	○	○	○	○	○	●
7.3 Design & Development	○	○	○	○	●	○	○
7.4 Purchasing	○	○	○	○	○	○	●
7.5.1 control of Production & Service Provision	○	○	●	●	○	●	○
7.5.2 validation of processes for production and service provision	○	○	●	●	○	●	○
7.5.3 identification and traceability	○	○	●	●	○	●	○
7.5.4 customer property	○	○	●	●	○	●	○
7.5.5 preservation of product	○	○	●	●	○	●	○

7.6 Control of Monitoring & Measuring Devices	○	○	●	●	○	●	○
8.1 General	●	○	○	●	○	○	○
8.2.1 Customer Satisfaction	●	○	○	●	○	○	○
8.2.2 Internal Audit	●	○	○	●	○	○	○
8.2.3 Monitoring & Measurement of Processes	●	○	○	●	○	○	○
8.2.4 Monitoring and Measurement of Product	○	○	●	●	○	○	○
8.3 Control of Nonconforming Product	○	○	○	○	●	●	○
8.4 Analysis of Data	○	○	○	●	○	○	○
8.5 Improvement	●	○	○	●	○	○	○
Appendix A API Monogram Control	○	○	○	●	○	○	○



management function



assistance function

0.5 Approval Order of Quality Policy, Quality Objective

0.5.1 Company' s Quality Policy

Build up the comity, effort, honesty and innovation as our spirit.

Keep the “quality best , customer first and continual improvement as our service principle.

0.5.2 Company Quality Objective

- A. The pass rate of products when leave factory reaches 100%
- B. The Customer Satisfaction Degree is more than 95% and increases every year.
- C. The performance rate of contracts shall reach 100%

GM: Mr.Liu Guosheng

July 7, 2009

0.6 Appointment of Management Representative

Appointment

In order to implement ISO 9001:2000, API Spec Q1 2003, “Definition for safety management and monitoring of pressure pipe” , and “Safety

registration management method for manufacturing unite of pressure pipe component” strength QMS operation, I authorize Zhang Zhibo as our Management Representative.

MR shall have defined responsibility and authority for:

- A. Ensuring that processes needed for the quality management system are established, implemented and maintained.
- B. Reporting to top management on the performance of the quality management system and any need for improvement
- C. Ensuring the promoting the awareness of customer requirements throughout the organization
- D. Arranging the internal audit, monitoring the implementation of corrective and preventive measurement
- E. Liaison with external parties on matters relating to the quality management system.

GM: Mr.Liu Guosheng

July 7, 2009

1. Scope

1.1 General

This International Standard specifies requirements for a quality management system where our company

- A. Have a ability to consistently provide product that meets customer and applicable regulatory requirements
- B. Aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements

In this QM, term “product” applies only to the product intended for, or required by, a customer.

ISO9001:2000 and API Spec Q1 8th Edition, define the quality management system requirements for the design, development, production, installation and service of products for the petroleum, petrochemical and natural gas industries.

1.2 Application

All requirements of ISO 9001:2008 are generic and are intended to be applicable to all organizations, regardless of type, size and product provided.

Where any requirements of the Standard cannot be applied to our company and the products, this can be considered for exclusion. And the explanation will be given in correspond section of this manual.

Where exclusions are made, claims of conformity to API SPEC Q1 are not acceptable unless these exclusions are limited to requirements within the following clauses, and such exclusions do not affect the organization' s ability, or responsibility, to provide product that meets customer and applicable regulatory requirements

Section 7.3 Design and development

Section 7.5.1 Control of service provision

Section 7.5.2 Validation of processes for production and service provision

Section 7.5.4 Customer property

Note: the Exclusion to Section 7.5.2 only applies to the supplemental of 7.5.2.1

All requirements of API Spec Q1 are applied to the QMS of our company, so no exclusions are made to this Standard.

2. Normative reference

- ISO 9000:2005 Quality Management System --- Fundamentals and Vocabulary.
- ISO 9001:2008 Quality Management System --- Requirements.
- ISO 9004:2008 Quality Management System ---- Guideline for Performance Improvements,
- API Spec.Q1 8th Edition Specification for Quality Programs for the Petroleum and Natural Gas Industry,.

3. Terms and Definitions

The manual adopts terms and definitions given in ISO9001:2009 and API Spec Q1 8th Edition,

- a. Supplier-----Organization -----Customer
- b. The term “Organization” replaces the term “Supplier” used in API Spec.Q1, and refers to the unit to which this manual applies. Also, the term “Supplier” now replaces the term “subcontractor”.
- c. Throughout the text of this manual, wherever the term “product”occurs, it can also mean “service”.
- d. Three Inspections System: It includes operator inspection himself, operator's inspection each other, and inspector special inspection.

4. Quality Management System Requirements

4.1 General Requirements

The company shall establish, document, implement and maintain a quality management system and continually improve its effectiveness in accordance with the requirements of ISO 9001:2009 and API Spec Q1 8th Edition ,

The company shall

- A. Identify the processes needed for the quality management system and their application throughout the organization.
- B. Determine the sequence and interaction of these processes,
- C. Determine criteria and methods needed to ensure that both the operation and control of these processes are effective,
- D. Ensure the availability of resources and information necessary to support the operation and monitoring of these processes.
- E. Monitor, measure and analyze these processes, and
- F. Implement actions necessary to achieve planned results and continual improvement of these processes.

These processes shall be managed by the company in accordance with the requirements of ISO 9001:2009 and API Spec Q1 8th Edition, where the company chooses any process that affects product conformity with requirements, the company shall ensure control over such processes. There is no outsourced process. Control of such outsourced processes shall be identified within the quality management system.

4.1.1 Company shall maintain responsibility for product conformance to specified requirements when processes are outsourced.

4.2. Documentation Requirement

4.2.1 General

The quality system documentation shall include:

- A. Documented statements of a quality policy and quality objectives,
- B. Quality manual
- C. Documented procedures required by ISO 9001:2008 and API Spec Q1 8th Edition,
- D. Documents needed by the organization to ensure the effective planning, operation and control of its processes,
- E. Records required by ISO 9001:2009 and API Spec Q1 8th Edition,

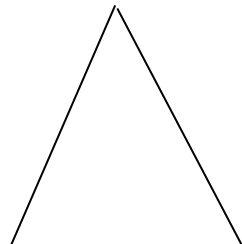
The extent of the quality management system documentation of our company due to:

The size of organization and type of activities

The complexity of processes and their interactions

The competence of personnel

The documentation can be in any form or type of medium



QUALITY
MANUAL

PROCEDURE

WORK INSTRUCTION

QUALITY RECORDS

4.2.2 Quality Manual

Our company establishes and maintains a quality manual that includes:

- A. The scope of the quality management system, including details of an justification for any exclusions (see 1.2)
- B. The documented procedures established for the quality management system, or reference to them
- C. A description of the interaction between the processes of the quality management system (**please refer to Appendix C and Appendix D**)

The quality manual shall identify the manner in which our company addresses each specific requirement of API Spec Q1 8th Edition, including both the requirements of ISO 9001:2009 and the supplemental requirements of API Spec Q1 8th Edition,

This quality manual shall be controlled according to the requirements given in 4.2.3

4.2.3 Control of documents

Documents required by the quality management system shall be controlled. Records are a special type of document an shall be controlled according to the requirements given in 4.2.4

Document control is the management the all activities of document edit, review, approve, issue, use, change, re-approve, identified, obsolete etc.

Our company shall establish “**procedure for control of Document and data control**”, to define the controls needed:

- A. To approve documents for adequacy prior to issue
- B. To review an update as necessary and re-approve documents

- C. To ensure that changes and the current revision status of documents are identified
- D. To ensure that relevant versions of applicable documents are available at points of use
- E. To ensure that documents remain legible and readily identifiable
- F. To ensure that documents of external origin are identified and their distribution controlled
- G. To prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

The Office, The quality management Dept and The technology Dept are responsible for the management of document control; all function departments implement it by procedure for control of Document and data.

A master list or equivalent control feature shall be used to identify the documents required by the quality management system, and their current revision status

Changes to documents shall be reviewed and approved by the same functions that performed the original review and approval.

4.2.4. Control of Records

Our company should establish and maintain records to provide evidence of conformity to requirements and of the effective operation of the quality management system. Records shall remain legible, readily identifiable and retrievable. Procedure for Control of Quality Records shall be established to define the controls needed for the identification, storage, protection, retrieval, retention time and disposition of records.

The documented procedure shall identify the functions responsible for the collection and maintenance of records.

Records required by applicable industry product standards shall be retained for not less than the time period specified by the industry standard or five years, whichever is longer. Records required to provide evidence of conformity to requirements and of the effective operation of the quality management system shall be retained for a minimum of five year.

The quality management Dept is responsible for the management of records control, all function Departments implement it by Procedure for Control of Quality Records

5. Management Responsibility

5.1. Management Commitment

The General Manager shall provide evidence of its commitment to the development and implementation of 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, see 5.3.
- C. Ensuring the quality objectives are established, see 5.4.1.
- D. Conducting management reviews, see 5.6
- E. Ensuring the availability of resources

5.2. Customer Focus

The GM shall ensure that customer requirements are determined and are met with the aim of enhancing customer satisfaction. (See 7.2.1 and 8.2.1)

5.3. Quality Policy

GM shall ensure that the quality policy:

- A. Is appropriate to the purpose of the organization
- B. Includes a commitment to comply with requirements and continually improve the effectiveness of the quality management system
- C. Provides a framework for establishing and reviewing quality objectives
- D. Is communicated and understood within the organization
- E. Is reviewed for continuing suitability (see 5.6)

Company's Quality Policy as follows:

Build up the comity, effort, honesty and innovation as our spirit.

Keep the "quality best, customer first and continual improvement" as our service principle.

5.4. Planning

5.4.1 Quality Objectives

The GM & MR shall organize The quality management Dept shall establish the quality objectives and ensure:

- A. Consistent with the quality policy
- B. Analyzed at relevant functions and levels within the organization
- C. Including those needed to meet requirement for product (see 7.1 a)
- D. Being measurable and monitoring
- E. Being reviewed in management review (see 5.6)

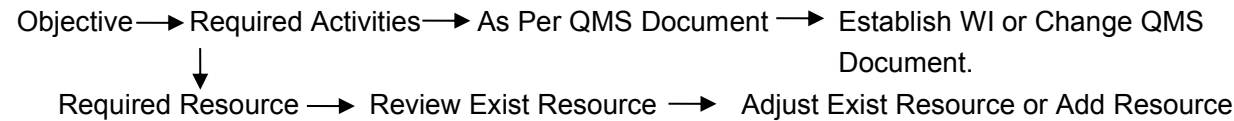
5.4.2 Quality management system planning

Management Representative shall assist General Manager to plan the quality system to ensure that:

- A. Meet the requirement of quality objectives
- B. Meet the requirement of quality management system (see 4.1)
- C. The integrity of the quality management system is maintained when changes to the quality management system are planned and implemented.

Note: see also 5.6、7.1、7.1.1、7.3.1、7.5.1、8.1 and 8.2.2

Our company's quality management system control is described as follows:



5.5 Management, Responsibility, Authority and Communication

5.5.1 Responsibility and Authority

The General Manager shall establish Organization Chart of Quality Management System (see 0.3) and define and communicate functions and their interrelations within the company, including responsibilities and authorities (see 0.4), in order to facilitate effective quality management.

GM implements it.

5.5.1.1 General Manager shall have defined responsibility and authority for:

- A. The implementation of national law, regulation and relevant police
- B. The establishment and approval of quality police, quality objective and ensuring the employees to understand it
- C. Ensuring resources demand and sufficient resources provision, and determination of organization and function responsibility
- D. In charge of management review and the continual effectiveness of QMS
- E. In charge of product quality

5.5.1.2 MR shall have defined responsibility and authority for:

See 5.5.2

5.5.1.3 Other department and personnel shall have defined responsibility and authority for:

The GM authorizes The quality management Dept to establish and maintain the procedure for control of responsibility and authority, and implement it.

5.5.2 Management representative

GM shall appoint a member of management who, irrespective of other responsibilities, shall have responsibility and authority that includes:

- A. Organizing the establishment of QM, ensuring that processes needed for the quality management system is established, implemented and maintained.
- B. Reporting to GM on the performance of the quality management system and any need for improvement
- C. Ensuring the promoting the awareness of customer requirements throughout the organization
- D. Liaison with external parties on matters relating to the quality management system

E. Assistant to the GM to plan the QMS, and establish quality policy and quality objective, and the analyzing between various levels and functions

F. Assistant to the GM to organizing management review

G. Organizing internal review

H. Organizing the continual improvement of QMS

5.5.3. Internal Communication

The MR shall assist to General Manager to establish the communication process between various levels and functions within the company. And ensure the communication takes place regarding the effectiveness of quality management system

The communication channels shall be:

A. Using production (quality, safety) meeting (once per month), notice-boards, audio-visual, receiving of instructions, assignments and tasks in written, verbal and transmitted forms and news letters

B. Held the special meeting to analysis the special quality work and quality problem.

5.6. Management Review

5.6.1. General

General Manager shall hold review of the quality management system, at planned interval of every 12 months, to ensure its continuing suitability, adequacy and effectiveness. The review shall evaluate the need for changes and improvement to the company quality management system, including quality policy and quality objectives. Records of management reviews are maintained. The quality management Dept maintains the record of management review

In order to ensure the implementation of management review, our Company shall establish and maintain the **procedure for control of management review**

5.6.2. Review Input

The input to the management review shall include information on:

A. Result of audits including internal audits and external audits;

B. Customer feedback including the measuring result of customer satisfaction;

C. Process performance and product conformance and trends of product nonconformity;

D. Status of preventive and corrective actions;

E. Follow-up actions from previous management review;

F. Changes that could affect the quality management system including the changes of applicable oil and gas industry standards

G. Improving advises from departments and employees;

5.6.3. Review Output

The outputs from the management review shall include results and actions related to:

- A. Conformance, sufficiency and effectiveness of the quality management system performance;
- B. Improvement of the quality management system and its processes;
- C. Improvement of product related to customer requirements
- D. Resource suitability and needs including personnel.

Results of management reviews shall be informed to related departments. Results and records of management reviews shall be maintained by The quality management Dept

Management Representative shall have responsibility and authority for the plan and implementation of review output and report the result to General Manager.

6. Resource Management

6.1. Provision of Resources

The company shall determine and provide the resources needed:

- A. To implement and maintain the quality management system and continually improve its effectiveness
- B. To enhance customer satisfaction by meeting customer requirements

6.2. Human Resources

6.2.1. General

The Office shall evaluate personnel who are assigned responsibilities defined in the quality management system shall be competent on the basis of applicable education, training, skills and experience.

6.2.2. Training, Awareness and Competence

The company shall establish and maintain the “procedure for control of human resources”, The Office implements the procedure to ensure:

- A. Determine the necessary competence for personnel performing work affecting product quality
- B. Evaluate the necessary competence for personnel performing work affecting product quality and identify training need
- C. The training requirements shall provide for quality management system training and for job training of personnel
- D. The frequency of training shall be defined
- E. Provide on-the-job training for personnel in any new or modified job affecting product quality, including contract or agency personnel
- F. Provide training or take other actions to satisfy these needs
- G. Evaluate the effectiveness of the actions taken
- H. Ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives, and be informed about the consequences to the customer of nonconformity to quality requirements

I. Maintain appropriate records of education, training, skills and experience. (See 4.2.4)

The Office shall establish and maintain the annual training plan and examine the personnel who perform the quality management, test, verification and special assigned tasks shall be qualified on the basis of appropriate education, training and experience. Only those who are accredited through examination can work at the posts. These personnel include: Inspection and test personnel; Internal quality audits personnel; Personnel performing special processes.

Training and qualification records shall be maintained by The Office.

6.3. Infrastructure

Company shall establish and maintain Procedure for control of infrastructure and work environment. The Office and The production Dept shall identify, provide and maintain the facilities it needed to achieve conformity of product, including:

- A. Buildings, workspace and associated facilities;
- B. Equipment, (both hardware and software);
- C. Supporting services (such as transport or communication)

6.4 Work Environment

Company shall establish and maintain **Procedure for control of infrastructure and work environment**. The Office and The production Dept shall determine and manage the work environment needed to achieve conformity to product requirements.

The Office and The production Dept shall identify the requirement of the work environment, The Office and The production Dept ensure that:

- All things are located in the specified place;
- The located place is helpful to the quality;
- The located place is helpful to the worker safe.

The Office and The production Dept shall have the responsibility for managing the work environment:

- a. The production site shall be:
 - Bright and orderly;
 - All things are located in the specified place;
 - The production transmission pass unimpeded;
 - Clean and tidy;
 - The environment device shall be maintained controlled.
- b. The production operators shall:
 - Control the equipment and tools are in good condition;
 - Ensure the drawings and documents are clean and tidy;

- Dress with the specified working clothes;
- Implement the working procedure and operation regulation strictly.

The Office and The production Dept shall supervise all departments according to the requirements of the working environment.

7. Product Realization

7.1. Planning of Product Realization

The inspection Dept、The quality management Dept and The production Dept shall plan and develop the process needed for product realization. Planning of product realization shall be consistent with the requirements of the other processes of the quality management system (see 4.1)

In planning product realization, The inspection Dept、The quality management Dept and The production Dept shall determine the following, as appropriate:

- A. Quality objectives and requirement for the product
- B. The need to establish processes, documents, and provide resources specific to the product
- C. Required verification, validation, monitoring, inspection and test activities specific to the product and the criteria for product acceptance
- D. Records needed to provide evidence that the realization processes and resulting product meet requirements (see 4.2.4)

The output of this planning shall be in a form suitable for the company's method of operations

A document specifying the processes of the quality management system (including the product realization processes) and the resources to be applied to a specific product, project or contract, can be referred to as a quality plan

The organization may also apply the requirements given in 7.3 to the development of product realization processes

The inspection Dept、The quality management Dept and The production Dept shall define the methods from external product requirements, including design and development inputs/outputs, and translate these requirements into the product realization process.

7.2. Customer – Related Processes

7.2.1. Determination of Requirements Related to the Product

Our company shall establish and maintain **Procedure for Control of Customer – Related Processes**; The marketing Dept implement the management of Customer – Related Processes

The marketing Dept shall determine:

- A. Requirements specified by the customer, including the requirements for delivery and post-delivery activities
- B. Requirements not stated by the customer but necessary for specified or intended use, where known
- C. Statutory and regulatory requirements related to the product
- D. Any additional requirements determined by the organization

7.2.2 Review of Requirements Related to the Product

The marketing Dept shall organize related department and personnel to review the requirements related to the product. This review shall be conducted prior to the company's commitment to supply a product to the customer (e.g.: submission of tenders, acceptance of contracts or orders, acceptance of changes to contracts or orders) and shall ensure that:

- A. Product requirements are defined
- B. Contract or order requirements differing from those previously expressed are resolved
- C. The organization has the ability to meet the defined requirements

Records of the results of the review and actions arising from the review shall be maintained by The marketing Dept (see 4.2.4)

Where the customer provides no documented statement of requirement, the customer requirements shall be confirmed by the organization before acceptance

Where product requirements are changed, the organization shall ensure that relevant documents (such as quality plan, design documents, and technique procedure) are amended and that relevant personnel are made aware of the changed requirements

If the company has Internet sales, a formal review is impractical for each order. Instead The marketing Dept shall review relevant product information such as catalogues or advertising material.

7.2.3. Customer Communication

The marketing Dept shall establish and implement effective arrangements for communication with customers in relation to:

- A. Product information;
- B. Enquiries, contracts or order handling, including amendments
- C. Customer feedback, including customer complaints

7.3. Design and Development

7.3.1. Design and Development Planning

The company shall establish and maintain "Procedure for control of Design and Development"; The technology Dept shall plan and control the design and development of product

During the design and development planning, The technology Dept shall determine:

- A. The design and development stages
- B. The review, verification and validation that are appropriate to each design and development stage
- C. The responsibilities and authorities for design and development

The technology Dept shall manage the interfaces between different groups involved in design and development to ensure effective communication and clear assignment of responsibility

Planning output shall be updated by The technology Dept as appropriate, as the design and development progresses

When design and development are outsourced, the company shall ensure the supplier meets the requirements of 7.3 and provide objective evidence that the supplier has met these requirements

Design documentation shall include the methods, assumptions, formulas, and calculations

7.3.2. Design and Development Input

Inputs relating to product requirements shall be determined and records maintained (see 4.2.4) by The technology Dept these inputs shall include:

- A. Functional and performance requirements, including customer specified requirements (see 7.2.2)
- B. Applicable statutory and regulatory requirements
- C. Where applicable, information derived from previous similar designs
- D. Other requirements essential for design and development

These inputs shall be reviewed for adequacy by The technology Dept to ensure requirements complete, unambiguous and not in conflict with each other.

The technology Dept shall identify, document and review the product design input requirements. And consider the result of contract review.

7.3.3. Design and Development Output

The technology Dept shall documents the Design and Development Output. The outputs of design and development shall be provided in a form that enables verification against the design and development input and shall be approved by GM prior to release

The technology Dept shall ensure design and development meets the following requirements:

- A. Meet the input requirements for design and development (see 7.3.2)
- B. Provide appropriate information for purchasing, production and for service provision
- C. Contain or reference product acceptance criteria
- D. Specify the characteristics of the product that are essential for its safe and proper use

7.3.4. Design and Development Review

At suitable stages, The technology Dept shall organize relevant department and personnel to perform the systematic reviews of design and development in accordance with planned arrangements (see 7.3.1)

- A. To evaluate the ability of the results of design and development to meet requirements
- B. To identify any problems and propose necessary actions

Participants in such reviews shall include representatives of functions concerned with the design and development stages being reviewed.

Records of the results of the reviews and any necessary actions shall be maintained by The technology Dept (see 4.2.4)

A final design review shall be conducted and documented. And ensure individuals other than the person and persons who developed the design approve the final design

7.3.5. Design and Development Verification

Verification shall be performed by The technology Dept in accordance with planned arrangements (see 7.3.1) to ensure that the design and development outputs have met the design and development input requirements. And maintain records of the results of the verification and any necessary actions (see 4.2.4).

Design verification activities can include one or more of the following:

- A. Confirming the accuracy of design results through the performance of alternative calculations
- B. Review of design output documents independent of activities of 7.3.4
- C. Comparing new design to similar proven designs

7.3.6. Design and Development Validation

Design and development validation shall be performed and filed by The technology Dept in accordance with planned arrangements (see 7.3.1) to ensure that the resulting product is capable of meeting the requirements for the specified application or intended use, where known. Wherever practicable, validation shall be completed prior to the delivery or implementation of the product by The technology Dept records of the results of validation and any necessary actions shall be maintained (see 4.2.4)

Design validation can include one or more of the following:

- A. Standard tests
- B. Functional and/or operational tests of trial product
- C. Tests specified by industry standards and/or regulatory requirements
- D. Field performance tests and reviews.

7.3.7. Control of design and development changes

Design and development changes shall be identified and records maintained by The technology Dept The changes shall be reviewed, verified and validated, as appropriate by The technology Dept and approved before implementation. When review the design and development changes, The technology Dept shall evaluate the effect of the changes on constituent parts and product already delivered.

Records of the result of the review of changes and any necessary actions shall be maintained (see 4.2.4)

Design and development changes, including changes to design documents, shall require the same controls as original design and development, and design documentation.

7.4. Purchasing

7.4.1 Purchasing Process

The company shall establish and maintain the procedure for control of purchasing, the marketing Dept ensures that purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product shall be dependent upon the effect of the purchased product on subsequent product realization or the final product.

The marketing Dept shall evaluate and select suppliers based on their ability to supply product in accordance with the company's requirements and establish criteria for selection, evaluation and reevaluation.

Criteria for selection, evaluation and reevaluation of suppliers shall include one or more of the following:

- A. Inspection of supplier's final product by The marketing Dept at supplier's facility.
- B. Inspection of supplier's final product by The marketing Dept upon delivery.
- C. Surveillance of supplier's by The marketing Dept conformance to the company's purchasing requirements.
- D. Verification by The marketing Dept. that the supplier's quality management system conforms to an internationally recognized quality management system standard/technical specification.

When there are mergers, acquisitions or affiliations associated with suppliers, The marketing Dept should verify the continuity of the supplier's quality management system and its effectiveness.

Where the company chooses to outsource any special process, The marketing Dept shall require that the supplier comply with the requirements of 7.5.2, as applicable (see 4.1).

Records of the results of evaluations and any necessary actions arising from the evaluations shall be maintained by The marketing Dept. (see 4.2.4).

7.4.2 Purchasing Information

Purchasing information shall be documented by The marketing Dept and describe the product to be purchased and be provided to the suppliers, including where appropriate

Requirements for approval of products, procedures, processes and equipment

Requirements for qualification of personnel,

Quality management system requirements

The type, class, grade or other precise identification

The title or other positive identification, and applicable issues of specifications, drawings, process requirements, inspection instructions and other relevant technical data

The marketing Dept shall ensure the adequacy of specified purchase requirements prior to their communication to the supplier.

7.4.3 Verification of Purchased Product

The company shall establish and implement the inspection or other activities necessary for the ensuring that purchased product meets specified purchase requirements.

Where the company or its customer intends to perform verification at the supplier's premises, The marketing Dept shall state the intended verification arrangements and method of product release in the purchasing information.

Company shall establish and maintain "Procedure for control of monitoring and measurement of products" and The marketing Dept implements the verification of purchasing product.

7.5 Productions and Service Provision

7.5.1. Control of Production and Service Provision

The company shall establish and maintain the **procedure for control of production and service provision**, The inspection Dept, The quality management Dept and The production Dept plans (see 7.1) and describes the control of production and service activities performed, ensuring the provision of production and service under control. Controlled conditions shall include, as applicable

- A. The availability of information that describes the characteristics of product
- B. The availability of work instructions, as necessary
- C. The use if suitable equipment
- D. The availability and use of monitoring and measuring devices
- E. The implementation of monitoring and measurement
- F. The implementation of release, delivery and post-delivery activities

7.5.1.2 Process control

Process controls shall be documented in routings, travelers, checklists, process sheets, or other types of control features and shall include requirements for verifying compliance with plans, control features, and reference standards/codes. The process control documents shall include or reference instructions, workmanship and acceptance criteria for processes, tests, inspections, and customer's inspection hold or witness points.

7.5.2. Validation of Processes for Production and Service Provision

The company shall establish and implement the Procedure for control of special process; The inspection Dept、The quality management Dept and The production Dept implements the validation of personnel qualification and special processes for production and service provision.

The inspection Dept, the quality management Dept and The production Dept shall validate any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement. This includes any processes where deficiencies become apparent only after the product is in use or the service has been delivered.

The inspection Dept、The quality management Dept and The production Dept shall validate and demonstrate the ability of these processes to achieve planned results.

The inspection Dept, the quality management Dept and The production Dept shall establish arrangements for these processes including, as applicable

- A. Define criteria for review and approval of processes.
- B. Approval of equipment and qualification of personnel
- C. Use of specified methods and procedure
- D. Requirements for records (see 4.2.4)
- E. Revalidation

The special processes are welding process and the outsourced heat treatment process. The special process should be validated by The inspection Dept、The quality management Dept and The production Dept and continuously monitored by The inspection Dept, the quality management Dept and The production Dept to ensure meeting specified requirements. The outsourced heat treatment is controlled per as the purchasing requirement in 7.4 sections.

7.5.3. Product Identification and Trace-ability

The company shall establish and maintain the procedure for control of product identification and trace-ability

Where appropriate, the inspection Dept, The quality management Dept and The production Dept shall identify the product by suitable means throughout product realization

The inspection Dept, the quality management Dept and The production Dept shall identify the product status with respect to monitoring and measurement requirements

Where traceability is a requirement, the inspection Dept、The quality management Dept and The production Dept shall control and record the unique identification of the product (see 4.2.4)

The company shall establish control features for identification and traceability of the product by suitable means from receipt and during all stages of

production, delivery and installation, as required by the company, the customer, and the applicable product specifications.

Control features shall include requirements for maintenance or replacement of identification and traceability marks, and records.

The company features shall establish control features for the identification of product status

7.5.4. Customer Property

The company shall establish and maintain procedure for control of customer property. The inspection Dept, the quality management Dept and The production Dept shall exercise care with customer property while it is under the company's control or being used by the company. The company shall identify, verify, protect and safeguard customer property provided for use or incorporation into the product. If any customer property is lost, damaged or otherwise found to be unsuitable for use, this shall be reported to the customer and records maintained (see 4.2.4)

7.5.5 Preservation of Product

The company shall establish and maintain the procedure for control of product preservation and preserve the conformity of product during internal processing and delivery to the intended destination. This preservation shall include identification, handling, packaging, storage and protection. Preservation also applies to the constituent parts of a product; to detect deterioration, the condition of product or constituent parts in stock shall be assessed at specified intervals. The company shall use an inventory management system to optimize inventory turns over time and assure stock rotation, such as FIFO

- A. The inspection Dept is in charge of the implementation of procedure for control of product preservation
- B. The inspection Dept define the method of handling, storage, packaging, and preservation, in accordance with the product characteristics and contract requirements
- C. The quality management Dept shall provide method for the prevention of product damage, scratch and loss in the process of production and delivery.
- D. The production Dept provides warehouses and storage areas for safe storage to prevent products from damage, scratch and so on before the usage and delivery; and inspect the storage product condition and preservative term to prevent the nonconformity.
- E. The quality management Dept shall provide method for special transportation and package, in accordance with the contract requirements
- F. The production Dept shall provide appropriate package for the finished products, make marks on the package, and use the ways of protection and isolation storage.
- G. The production Dept shall maintain the marks of final inspection and test and the relevant quality record.

7.6. Control of Monitoring and Measuring Devices

The company shall establish and maintain Procedure for control of measurement and monitoring equipment calibration and maintaining. The inspection Dept, the quality management Dept and The production Dept shall determine the monitoring and measurement to be undertaken and define the device type, unique identification, location, frequency of checks, checks method, and acceptance criteria and control, calibrate and maintain monitoring and measuring devices to ensure that monitoring and measurement can be carried out and are carried out in a manner that is consistent with the monitoring and measurement requirements. The monitoring and measuring devices needed to provide evidence of conformity of product to determined requirements (see 7.2.1)

Where necessary to ensure valid results, measuring equipment shall:

- A. Be calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no such standards exist, the basis used for calibration or verification shall be recorded
- B. Be adjusted or re-adjusted as necessary
- C. Be identified to enable the calibration status to be determined
- D. Be safeguarded from adjustments that would invalidate the measurement result
- E. Be protected from damage and deterioration during handling, maintenance and storage

In addition, The inspection Dept, the quality management Dept and The production Dept shall assess and record the validity of the previous measuring results when the equipment is found not to conform to requirements. The inspection Dept, the quality management Dept and The production Dept shall take appropriate action on the equipment and any product affected. Records of the results of calibration and verification shall be maintained by The inspection Dept, the quality management Dept and The production Dept (see 4.2.4)

When used in the monitoring and measurement of specified requirements, the ability of computer software to satisfy the intended application shall be confirmed by The inspection Dept, the quality management Dept and The production Dept this shall be undertaken prior to initial use and reconfirmed as necessary

The inspection Dept, the quality management Dept and The production Dept shall ensure that the environmental conditions are suitable or the calibrations, inspections, measurements and tests being carried out

Records of the calibration/verification activity for all gauges, measuring and test equipment, needed to provide evidence of conformity of product to determined requirements, including employee and customer owned equipment should include:

- A. Equipment identification, including the measurement standard against which the equipment is calibrated
- B. Revisions following engineering changes
- C. Any out-of-specification readings as received for calibration/verification
- D. An assessment of the impact of out-of-specification condition
- E. Notification to the customer if suspect product or material has been shipped

8. Measurement, Analysis and Improvement

8.1 General

The MR shall organize The quality management Dept to plan and implement the monitoring measurement, analysis and improvement processes needed

- A. To demonstrate conformity of the product,
- B. To ensure conformity of the quality management system,
- C. To continually improve the effectiveness of the quality management system.

This shall include determination of applicable methods, including statistical techniques, and the extent of their use.

8.2. Monitoring and Measurement

8.2.1. Customer Satisfaction

Company shall establish and maintain the “ procedure for control of customer satisfaction”, the quality management Dept monitors information relating to customer perception as to whether the company has met customer requirements. The methods for obtaining and using the information shall be determined as following:

A. Information obtaining

The quality management Dept obtains the customer satisfaction and dissatisfaction information by customer explains, service, survey paper, visit etc.

B. Information Utilizing

The quality management Dept shall analysis (apply statistics technique if necessary) the customer satisfaction and dissatisfaction information once a year at least. The analysis result shall be submitted to management review as a basis of follow-up improvement action.

8.2.2. Internal Audit

The company shall establish and maintain procedure for control of Internal Audit. And regulate the following content:

- A. The quality management Dept shall conduct annual inter audit program, and report to the MR for approval. The program shall have intervals and be conducted once a year at least
- B. An audit program shall be planned by The quality management Dept the internal audit implementation plan shall be established and approved by MR; The implementation plan shall take into consideration the states and importance of the processes and areas to be audited, as well as the results if previous audits
- C. The quality management Dept shall define the audit criteria, scope, frequency and methods; selection of auditors and conduct of audits shall ensure objectivity and impartiality of the audit process. Auditors shall not audit their own work. The audit shall be performed and supervised

by personnel independent of the audited work

- D. The internal audit shall determine whether the QMS conforms to the planned arrangements (see 7.1), to the requirements of ISO 9001 and API SpecQ1 and to the QMS requirements established by the organization, and is effectively implemented and maintained. The results of the audits shall be documented and reported to the MR. The report including the nonconforming item found, issued to the relevant department and personnel after the approval, and finally submitted to the GM and management review.
- E. The auditor shall submit the nonconforming report about the nonconforming item found; the management responsible for area being audited shall identify the response times for submission of an action plan to address detected nonconformities and take actions without undue delay to eliminate detected nonconformities and their causes.
- F. The auditor shall follow up the implementation of nonconformity measurement and validate its effectiveness and report to the MR (see 8.5.2)
- G. The records of audit plan; implementation, report and verification shall be maintained by The quality management Dept (see 4.2.4)

8.2.2.1 Response Times

Company shall identify response times for addressing detected nonconformities .

8.2.3. Monitoring and Measurement of Processes

The company shall establish and maintain the procedure for control of monitoring and measurement of process. The quality management Dept shall apply suitable methods for monitoring and, where applicable, measurement of the QMS processes. These methods shall demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective action shall be taken (see 8.5.2), as appropriate, to ensure conformity of the product. The detailed responsibility is as follows:

- A. The quality management Dept shall monitor and measure the implementation of the monitoring and measurement of processes in all functional departments, and by the ways of internal audit and data analyzing
- B. The technology Dept shall monitor and measure the design and development processes
- C. The quality management Dept shall monitor and measure the product monitoring and measurement of processes
- D. The quality management Dept shall monitor and measure the processes related customers, delivery and after-delivery action, and customer satisfaction
- E. The production Dept shall monitor and measure the processes of purchasing and product and service provision
- F. The Office shall monitor and measure the processes for control of human resources
- G. The quality management Dept shall monitor and measure the processes of continual improvement

The relevant department shall maintain the records of valid process parameter change

8.2.4. Monitoring and Measurement of Product

The company shall establish and maintain the procedure for control of monitoring and measurement of products. The inspection Dept, the quality management Dept and The production Dept shall monitor and measure the characteristics of the product to verify that product requirements have been met. This shall be carried out at appropriate stages of the product realization processes in accordance with the planned arrangements (see 7.1). These actions shall include: the verification of purchasing products, the monitoring and measurement of technique products, the monitoring and measurement of final products.

Personnel other than the persons who performed or directly supervised the production of the materials or products shall perform final acceptance and product release.

The inspection Dept, the quality management Dept and The production Dept shall maintain the evidence of conformity with the acceptance criteria. Records shall indicate the persons authorizing release of product (see 4.2.4)

Product release and service delivery shall not proceed until the planned arrangements (see 7.1) have been satisfactorily completed, unless otherwise approved by a relevant authority and, where applicable by the customer.

8.3. Control of Nonconforming Product

The company shall establish the "Procedure for Control of Nonconforming Product" and define the controls and related responsibilities and authorities for dealing with nonconforming product in a documented procedure to ensure that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery.

The technology Dept and The production Dept shall deal with nonconforming product by one or more of the following ways:

By taking action to eliminate the detected conformability

Degrading for other usage

Rejected or scrapped

By authorizing its use, release or acceptance under concession by a relevant authority and, where applicable, by the customer

By taking action to preclude its original intended use or application

Records of the nature of nonconformities and any subsequent action taken, including concessions obtained, shall be maintained by The technology Dept and The production Dept.

When nonconforming product is corrected it shall be subject to re-verification to demonstrate conformity to the requirements. When nonconforming product is detected after delivery or use has started, The technology Dept and The production Dept shall take action appropriate to the effects, or potential effects, of the nonconformity.

The process of evaluation, release and acceptance of nonconforming product shall include one or more of the following:

- A. Accepting products that do not satisfy manufacturing acceptance criteria provided:
 - 1. Products satisfy the design acceptance criteria
 - 2. The violated manufacturing acceptance criteria are categorized as unnecessary to satisfy the design acceptance criteria, or
 - 3. Products are repaired or reworked to satisfy the design acceptance criteria or manufacturing acceptance criteria
- B. Accepting products that do not satisfy the original design acceptance criteria provided
 - 1. The original design acceptance criteria are changed per 7.3.7, and
 - 2. The material or products satisfy the new design acceptance criteria

Field nonconformity analysis:

- A. Nonconforming product that is detected after delivery or use has started is commonly known as a “field nonconformity”.
- B. The documented procedure for nonconforming product shall include requirements for identifying, documenting and reporting incidents of field nonconformities or product failures
- C. The documented procedure shall ensure the analysis of field nonconformities, provided the product or documented evidence supporting the nonconformity is available to facilitate the determination of the cause.

8.3.1 Customer Notification

Company shall notify customers in the event the product which does not conform to design acceptance criteria has been delivered and company shall maintain records of such notification.

8.4. Analysis of Data

The company shall establish and maintain procedure for control of identification and use of statistical technique. The quality management Dept shall identify and use statistical analyzing technique.

All departments shall determine and collect appropriate data, and The quality management Dept shall analyze appropriate data to demonstrate the suitability an effectiveness of the quality management system and to evaluate where continual improvement of the effectiveness of QMS can be made. This shall include data generated as a result of monitoring and measurement and from other relevant sources.

The analysis of data shall provide information relating to:

- A. Customer satisfaction (see 8.2.1)
- B. Conformity to product requirements (see 7.2.1)
- C. Characteristics and trends of processes and products including opportunities for preventive action
- D. Suppliers

The result of data analysis shall be submitted to management review.

8.5 Improvement

The company shall establish and maintain procedure for Control of continual improvement. The MR organizes all departments to implement the continual improvement. The company shall strive to continually improve efficiency of QMS through the use of quality policy and quality objectives, auditing result, data analysis, corrective and preventive measures and management review.

8.5.2. Corrective Action

Company shall work out “procedure for Control of continual improvement”. The quality management Dept and relevant departments shall determine action to eliminate the causes of potential nonconformities in order to prevent recurrence. Corrective actions shall be appropriate to the effects of the nonconformities encountered.

A documented procedure shall be established to define requirements for:

- A. Reviewing nonconformities (including customer complaints)
- B. Determine the causes of non-conformity.
- C. Evaluate the need for action to ensure that non-conformity do not recur
- D. Determine and implementing action needed.
- E. Records the result of the corrective action taken (see 4.2.4)
- F. Reviewing corrective action taken

The quality management Dept shall define identify response times for the submission of an action plan to address corrective action and ensure that any corrective action is effective.

The implementation status of corrective action shall be submitted to the management review.

8.5.2.1 Response times

Company shall identify response times for addressing corrective action.

8.5.3. Preventive Action

Company shall work out “procedure for Control of continual improvement”. The quality management Dept and relevant departments shall determine action to eliminate the causes of potential nonconformities in order to prevent recurrence. Corrective actions shall be appropriate to the effects of the nonconformities encountered.

A documented procedure shall be established to define requirements for:

- A. Determining potential non-conformity and their causes

- B. Evaluating the need for action to prevent occurrence of nonconformities
- C. Determining and implementing action needed
- D. Records the result of the preventive action taken (see 4.2.4)
- E. Reviewing preventive action taken

The quality management Dept shall ensure that any preventive action is effective.

The implementation status of preventive action shall be submitted to the management review.

Appendix A API Monogram Used Management

1 Purpose

The company shall establish and maintain < Procedure for Control of API Monogram Application> to ensure that the product used the API monogram meets API requirements.

2 Scope

This chapter is applicable to the management and control of the use of the API monogram on the product, which meets API standard.

3 Responsibilities

The quality management Dept is responsible for applying and removing the API monogram.

4 Control Requirement

4.1 The quality management Dept shall apply the monogram, license number, and date of manufacture to monogrammed products in accordance with a marking procedure as specified by the applicable API product specification.

4.2 The monogram shall be removed if the product is subsequently found to be in nonconformance with API specified requirements.

4.3 Records required by API product specifications shall be maintained in accordance with < Procedure for Control of Quality Record>.

4.4 The company shall report to API any question in application of API monogram.

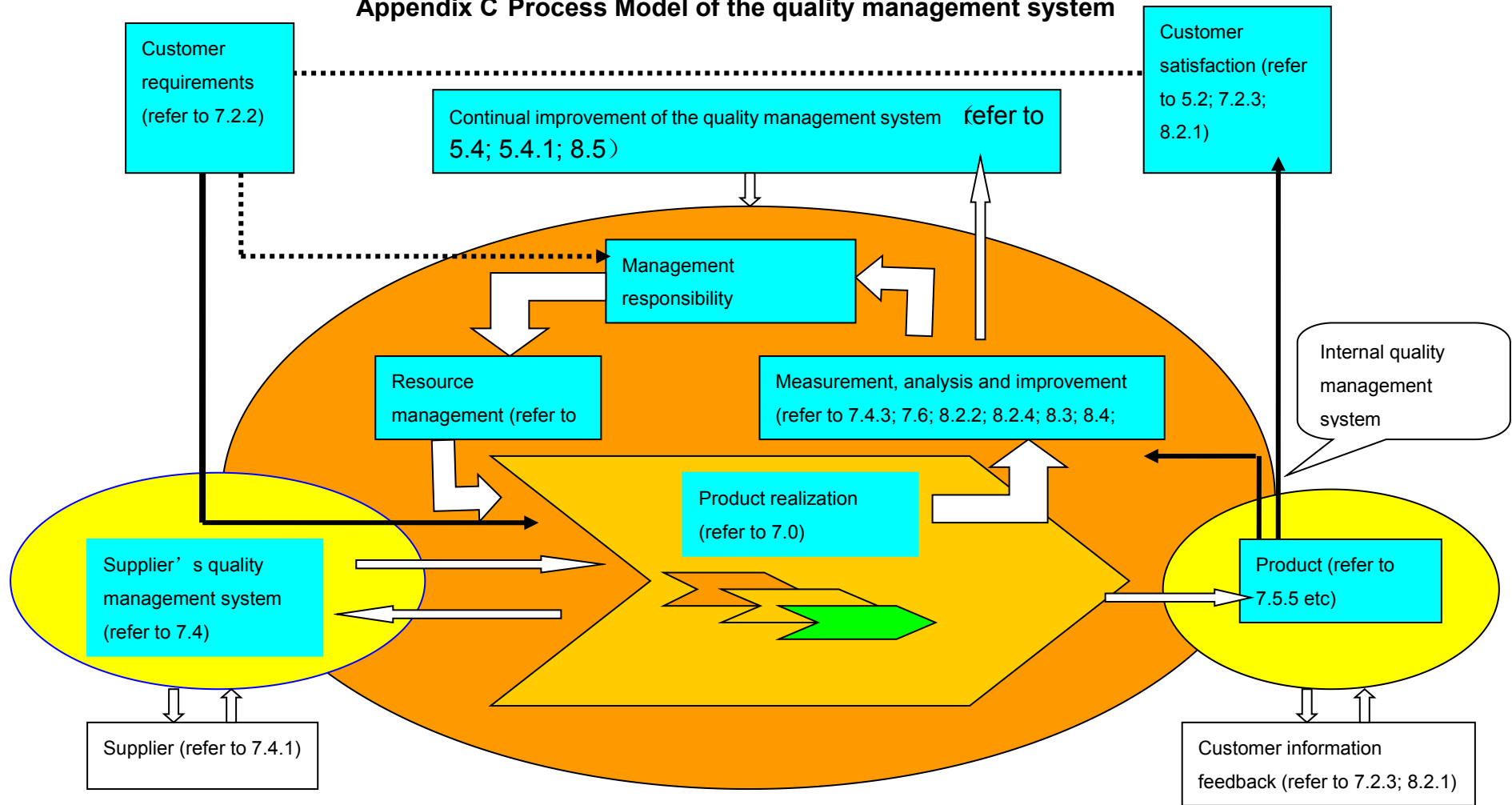
Appendix B List of documented procedure

1.	Procedure for control of Document and data control
2.	Procedure for Control of Quality Records
3.	Procedure for control of responsibility and authority
4.	Procedure for control of management review
5.	Procedure for control of human resources

6.	Procedure for control of infrastructure and work environment
7.	Procedure for Control of Customer – Related Processes
8.	Procedure for control of planning of production realization
9.	Procedure for control of Design and Development
10.	Procedure for control of purchasing
11.	Procedure for control of production and service provision
12.	Procedure for control of special process
13.	Procedure for control of product identification and trace-ability
14.	Procedure for control of customer property
15.	Procedure for control of product preservation
16.	Procedure for control of measurement and monitoring equipment calibration and maintaining
17.	Procedure for control of customer satisfaction
18.	Procedure for control of Internal Audit
19.	Procedure for control of monitoring and measurement of process and products
20.	Procedure for Control of Nonconforming Product
21.	Procedure for control of identification and use of statistical technique
22.	Procedure for Control of continual improvement
23.	Control Procedure for API Monogram Application

Appendix C Process Model of the quality management system

Appendix C Process Model of the quality management system



Note: Internal quality management system;

Supplier's quality management system (material, service)

Appendix D Interaction between the processes of QMS

