

COMPANY PROFILE



CEPHAS PIPELINES CORP.

HWA-JEON Factory

592-2, Hwajeon-Dong, Gangseo-Gu, Busan, Korea

Tel. : 82-51-290-3000

Fax : 82-51-290-3029



CEPHAS PIPELINES CORP.



1. General Information

1.1 Brief History

YEAR	Description
Jul-90	Established company named “Cephas Pipelines Corp”, in Busan Korea
Aug-98	Registered to K.O.P.E.C for Nuclear Power Plant
Oct-02	Achieved the CE mark for our whole products from SGS. (VS 01035/04/01)
May-03	Acquired ISO-14001 Approved by SGS Yarsley ICS.
2004	Established 2 ND Factory (50,000 Square Feet) located in BUSAN.
2008	Manufactured and supplied Butterfly valves for Jubail & Yanbu Infrastructure Project (RC C45 and C31R Project) in K. S. A. [DN3000 / 6 set, DN2800 / 23 set, DN2000 / 36 set]
Sep-08	Officially vendor approved by Saudi ARAMCO.
Mar-09	Manufactured and Supplied DN3600 Butterfly valve to Hyundai E&C (QATAR RAS LAFFAN POWER PLANT Project).
2009	Acquired USD 50 million Export Trophy from Korea Trading Association
2010	Acquired ‘Bronze Tower’ Awards from MKE(Ministry of Knowledge Economy)
2010	Acquired Fire Test Certificate for Triple Offset Butterfly Valve(SGS)





1. General Information

1.1 Brief History

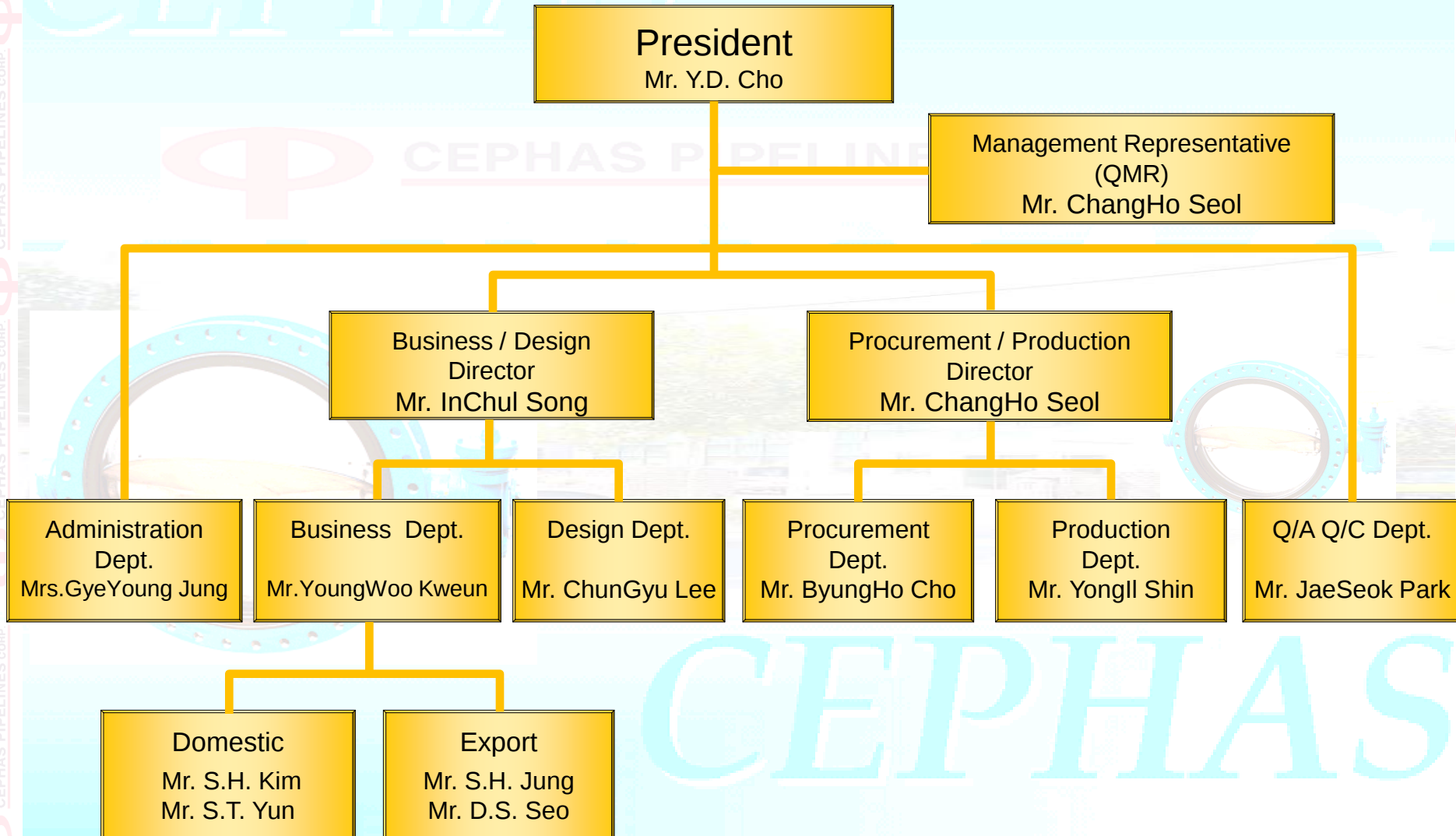
YEAR	Description
Nov. 2010	Manufactured and supplied Butterfly valves for Jubail & Yanbu Infrastructure Project (RC C46 Project) in K. S. A. [DN3000 / 3 set, DN2000 / 11 set, DN1500 / 25 set]
2010	GS E&C – Aramco Manifa Gas Facility Project
2010	SK E&C, DaeLim E&C, Samsung E&C – Aramco SATORP Project
2010	GS E&C – RUWAIS REFINERY EXPANSION #7 Project(190 SET, Triple Offset Valve)
2010	Established 3 RD Factory (125,000 Square Feet) / Combined 1 st and 2 ND Factory
2011	Acquired API609 MONOGRAM Certificate
2012	DOOSAN HEAVY IND. – RABIGH POWER 2(S.E.C) – DN100 ~ DN3400, Manual / MOV / NRV (500 set) – Ras Al Khair MSF DES.(S.W.C.C) – DN250 ~ DN1900, NRV (25set)
2012	SAMSUNG C&T – Qurayyah Independent Power PJT (S.E.C) – DN1950-Manual -12ea / MOV-12ea / NRV – 12ea
2012	DAELIM INDUSTRIAL – SHOAIBA II CCPP PJT (S.E.C) – DN80 ~ DN3000, Manual / MOV / NRV (154 set)
99 ~ 12	Manufactured and Supplied Butterfly valves for Oil and Gas, Desalination and Power plants. (About 150 projects)
2013	HYUNDAI HEAVY IND. –AZZOUR NORTH (M.E.W.)





1. Company Profile

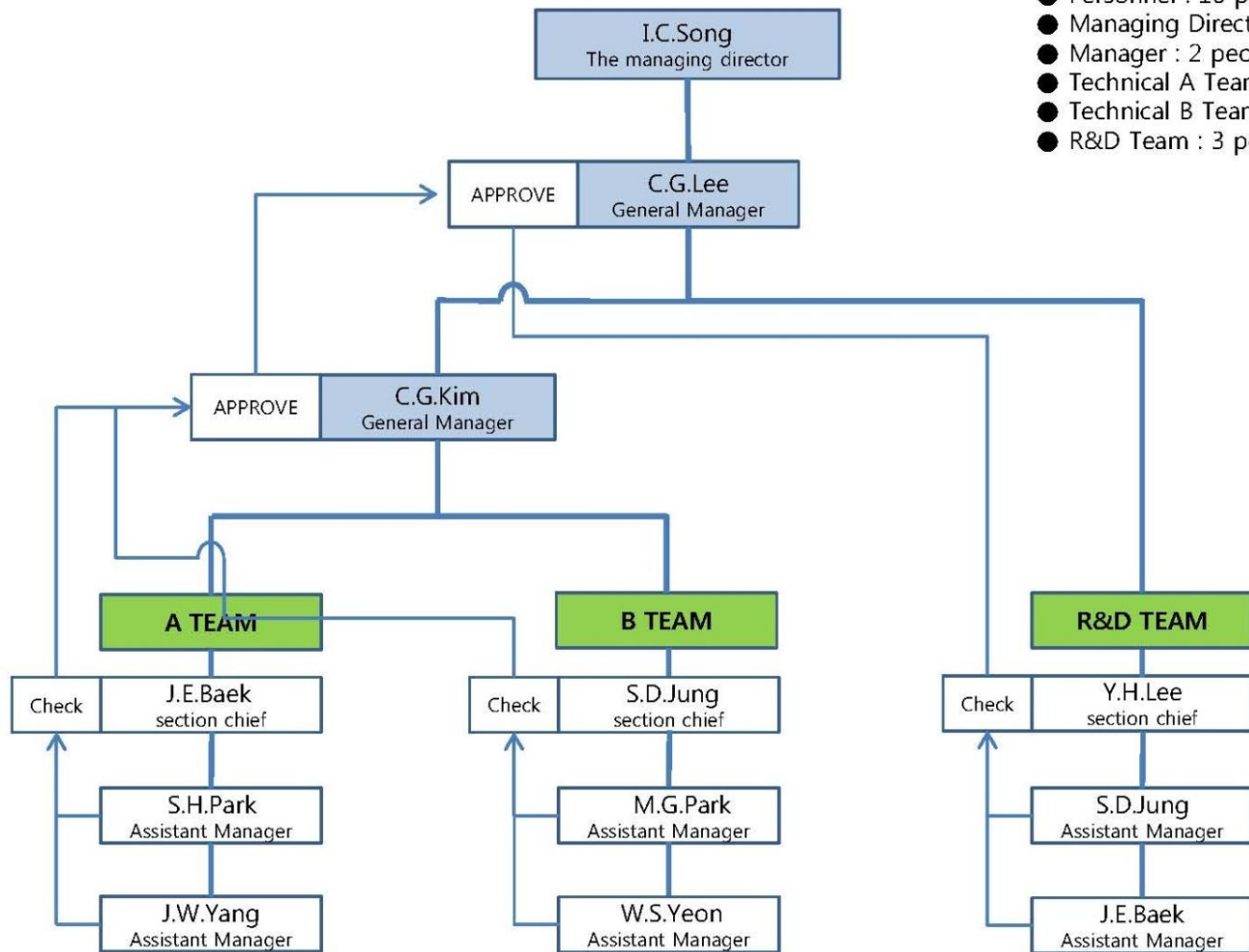
1.2 Organization





1. Company Profile

1.2 Technical & Development Organization



- Personnel : 10 people
- Managing Director : 1 people
- Manager : 2 people
- Technical A Team : 3 people
- Technical B Team : 3 people
- R&D Team : 3 people





1. General Information

1.3 Factory Size & Personnel

▶ 1.3.1 Factory Size & Capacity

HWA-JEON Factory

(Hwajeon-Dong, Gangseo-Gu, Busan, Korea)

▶ 125,000 Square Feet

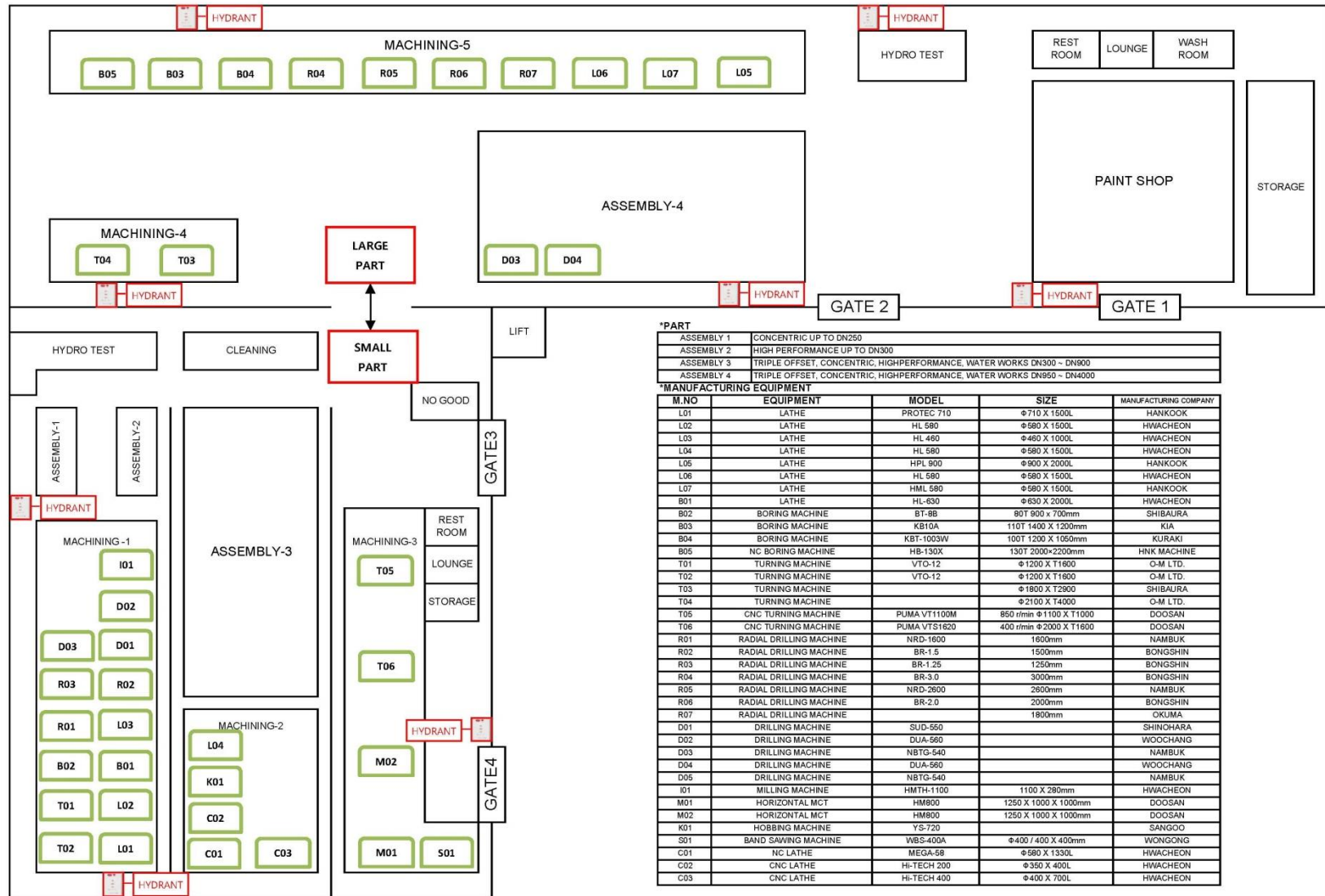
▶ Manufacturing Capacity : 5,000t / year





1. General Information

1.3.2 Factory Lay-out





1. General Information

▶ 1.3.3 Personnel

◆ Total 90 persons

POSITION	PERSONEL
▶ Director of Board	3 Persons
▶ General Administration Dept	5 Persons
▶ Design Dept	9 Persons (Engineer)
▶ Business Dept	9 Persons
▶ Procurement Dept	6 Persons (Engineer)
▶ Production Dept	48 Persons (Engineer)
▶ Q/C & Q/A Dept	10 Persons (Engineer)





1. General Information

1.4 Research and Development

► Brief History of R & D

R & D	Application	Date	Remark
1. BFV for Cargo System	Product Carrier, Chemical Tanker	1998.9	
2. Cryogenic BFV	LNG Receiving Terminal, LNGC	2000.8	
3. Triple Eccentric BFV	High Pressure and High Temperature	2003.1	
4. Rubber Coated Metal Seated BFV	Oil Tanker (Crude Oil)	2004.9	
5. Low torque Centerlined BFV for High Pressure	Power Plant, Desalination Plant, Water Treatment and etc.	2006.7	
6. Flow Control BFV	Power Plant, Desalination Plant Chemical Plant and etc.	2011.10	





1. General Information

1.5 Software

Software Name	Quantity	Remark
1. Auto CAD 2006 [2D]	6 copy	Design
2. Pro – Engineering Wide [3D]	3 copy	Modeling
3. CATIA V5 [3D] ANSYS Workbench VII.0	1 copy	Modeling CFD(Computational Fluid Dynamic) TSI(Thermal Structure International)

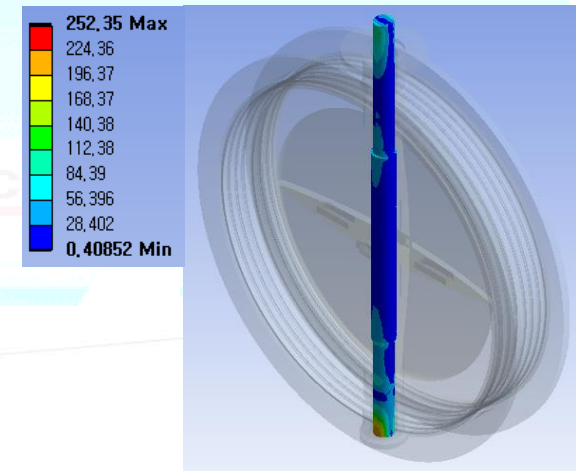
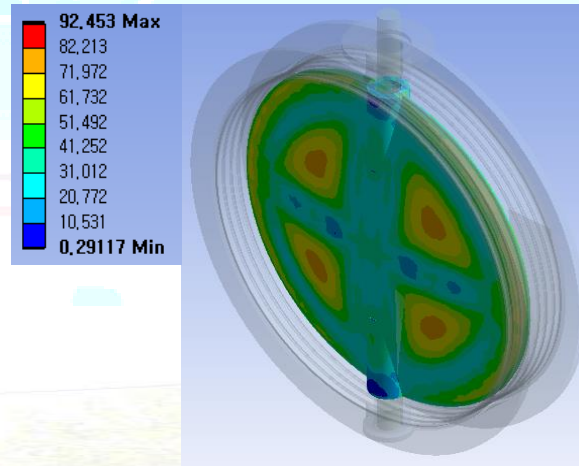
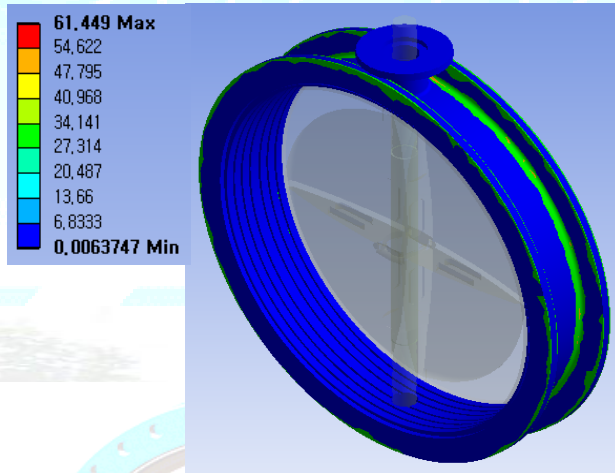




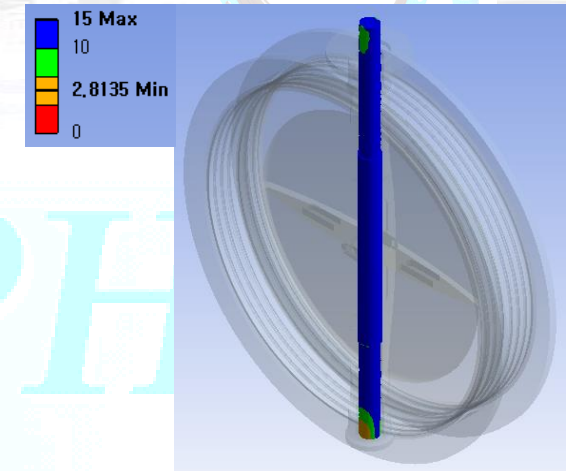
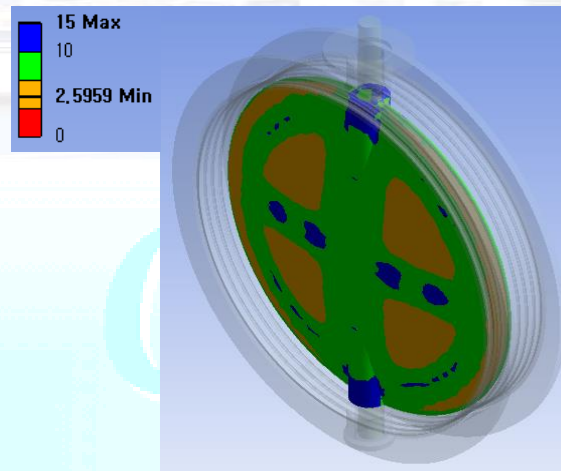
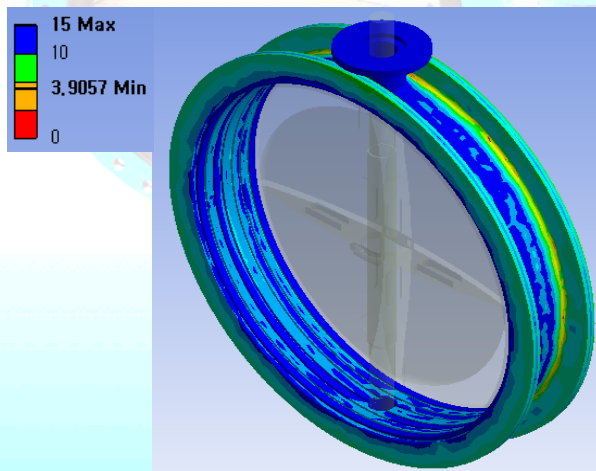
1. General Information

1.5.1 Structure Analysis(DN3000)

EQUIVALENT STRESS [MPa]



SAFETY FACTOR

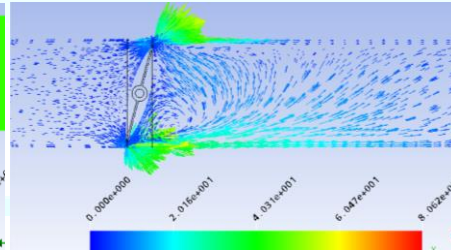
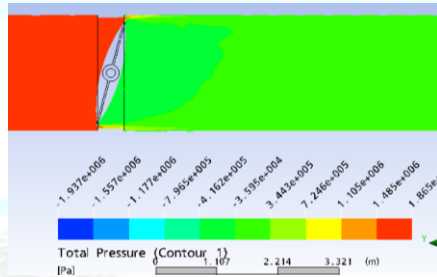




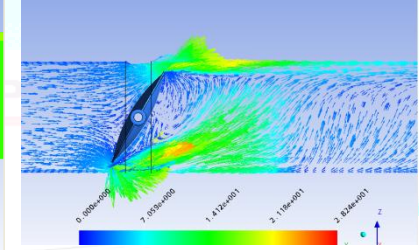
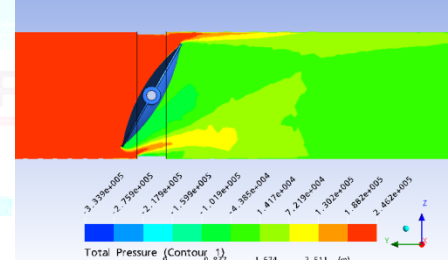
1. General Information

1.5.2 Fluid Analysis

15°

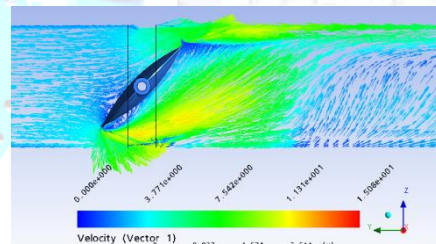
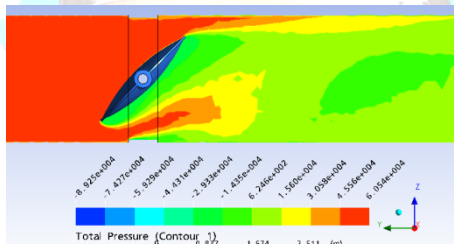


30°



Pressure Distribution Velocity Distribution Pressure Distribution Velocity Distribution

45°



Pressure Distribution Velocity Distribution

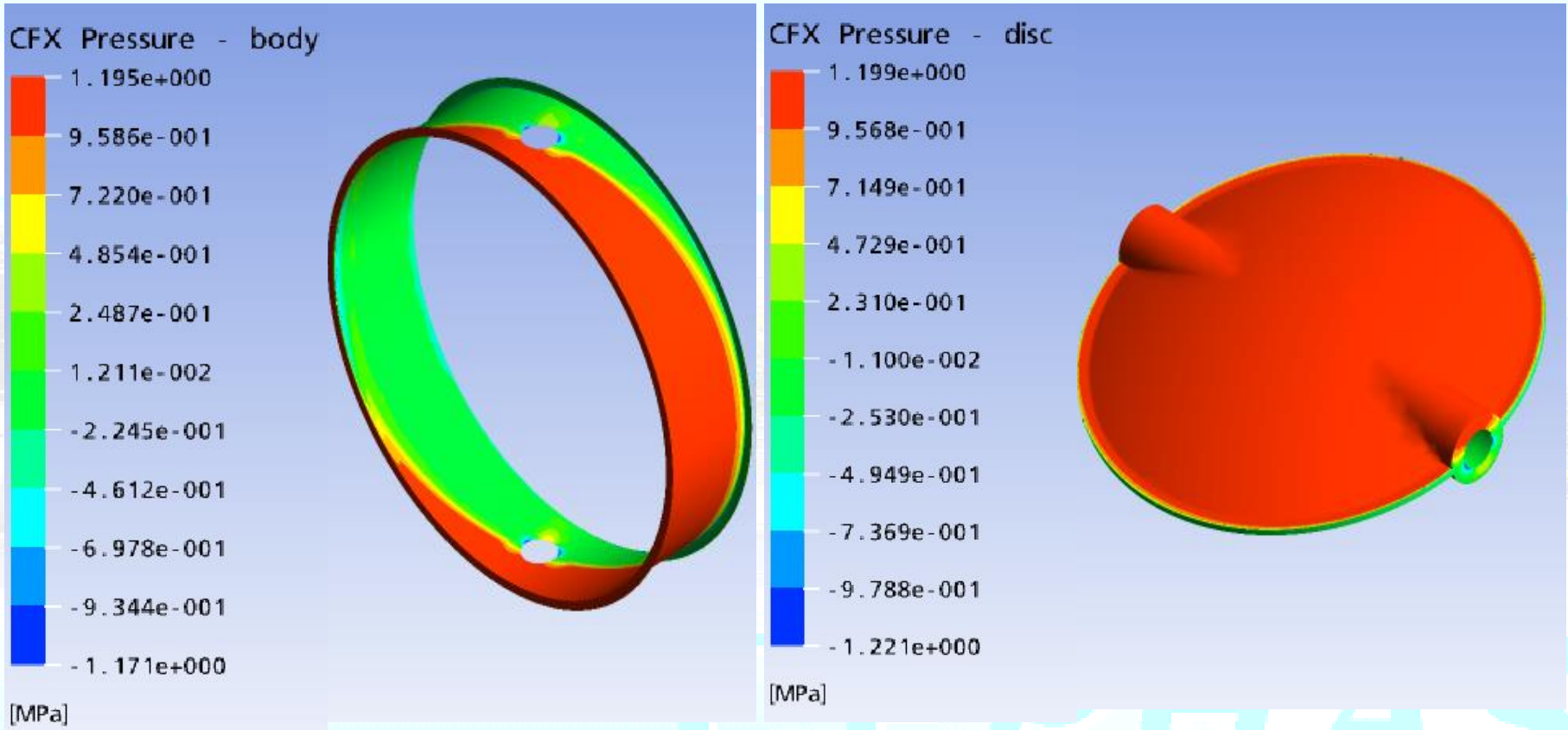




1. General Information

1.5.2 Fluid Analysis

15 opening degree



Pressure Distribution on valve body and disc surfaces

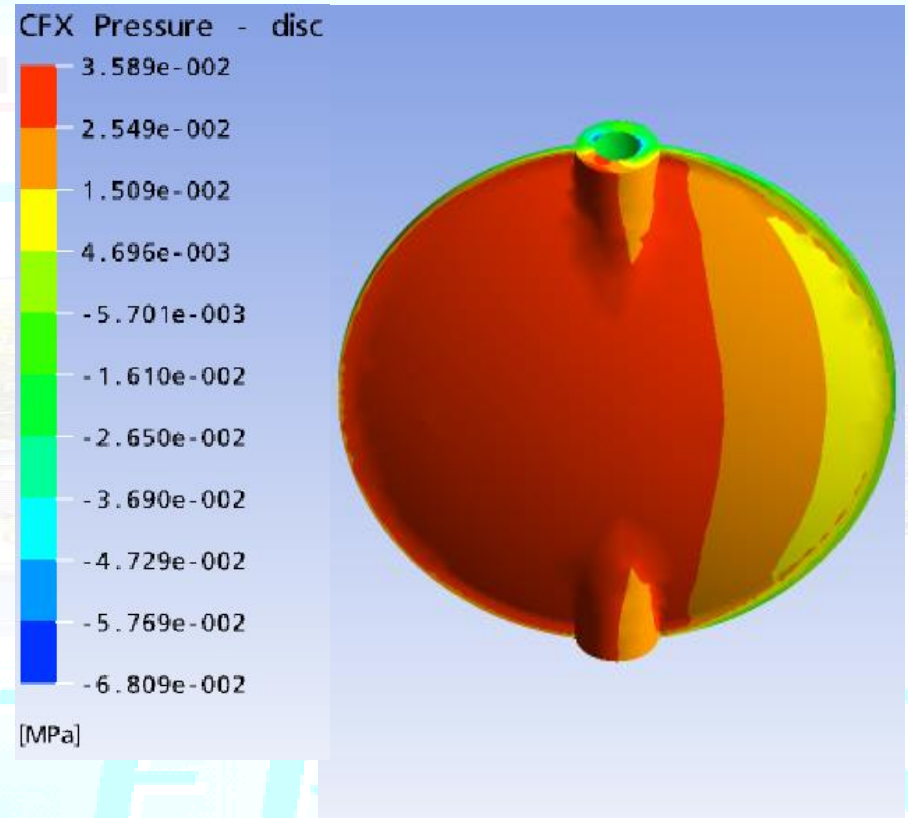
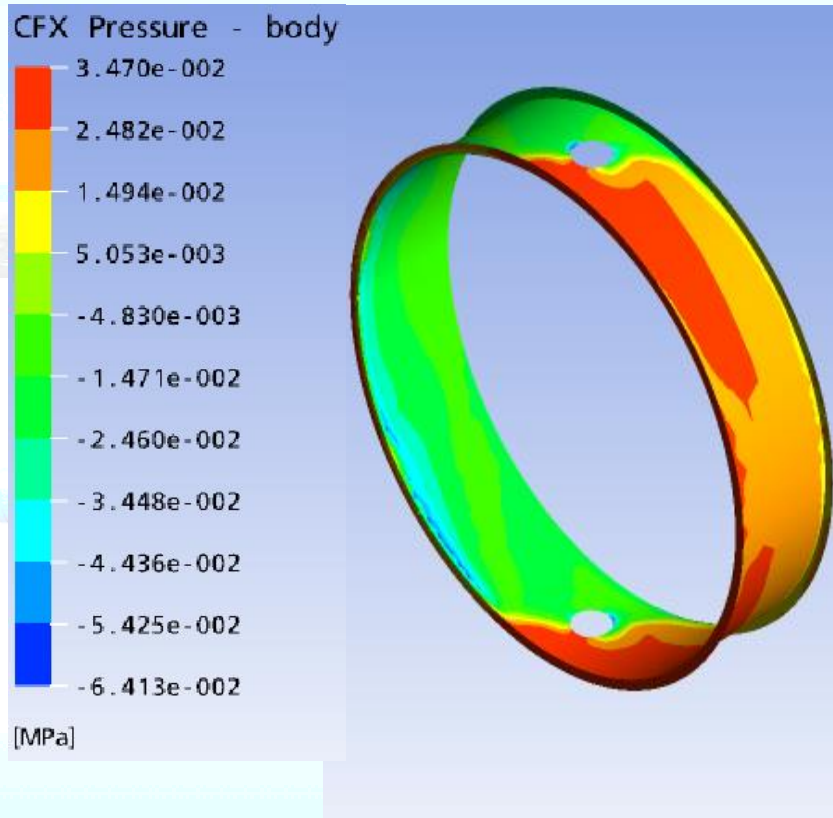




1. General Information

1.5.2 Fluid Analysis

45 opening degree



Pressure Distribution on valve body and disc surfaces





2. Production Range

2.1 Butterfly Valves

Product		Size	Available Spec.	Remark
Butterfly Valves -Concentric -Double & Triple offset	Manual Operated	DN40 – DN4000	API JIS ANSI DIN / AWWA BS / ISO	Manufactured In Cephas
	Electric Operated	DN40 – DN4000		
	Hydraulic Operated	DN40 – DN4000		
	Metal Seated	DN50 – DN3000		
	PTFE Seated	DN50 – DN3000		
Combined Check Valve		DN250 – DN4000		
Damper		DN250 – DN4000	API, ANSI, BS, ISO	
Dual Check Valve		DN50 – DN2000	API, ANSI, BS, ISO	
Knife Gate Valve		DN500 – DN1500	API, ANSI, BS, ISO	

2.2 Counter Flange & Bolt, Nut

Flange (RF, FF, SLIP ON, Welding Neck)	DN 40 – DN4000	ANSI, AWWA, DIN, ISO, DIN	
BOLT & NUT	Sermagard, Xylan Coating TAKECOAT	OFFSHOR, OIL & GAS	





2. Production Range

2.3 Applications



Power Plant



Off-shore



Chemical Plant



LNGC



Desalination Plant



Water treatment Line





2. Production Range

2.3 Applications



► **Petroserv
GVA 7500
Semi Rig
- DSME**



► **Petroserv
DRILLSHIP
- DSME**



► **Odfjell
GVA7500
Semi Rig
- DSME**



► **LNG
CARRIAR
AL KHATTIYA
AL KARAANA
AL NUAMAN
AL BAHIYA
- DSME**



2. Production Range

2.3 Applications



► **SHUAIBAH
IWPP PH.3
PROJECT**
- Doosan
Heavy
Industry
- DN 1800



► **MARAFIQ
POWER &
DES.
PROJECT**
- Hyundai
Heavy
Industry
- DN 1950



► **SHUAIBAH
IWPP PH.3
PROJECT**
- Doosan
Heavy
Industry
- DN 800



► **RAS
LAFFAN C
IWPP
PROJECT**
- Hyundai
E&C
- DN 1600





2. Production Range

2.3 Applications



- C31R PROJECT
- AL HARBY
- DN 2800



- C31R PROJECT
- AL HARBY
- DN 2800



- SOHAR POWER & DES. PROJECT
- Doosan Heavy Industry
- DN 1000

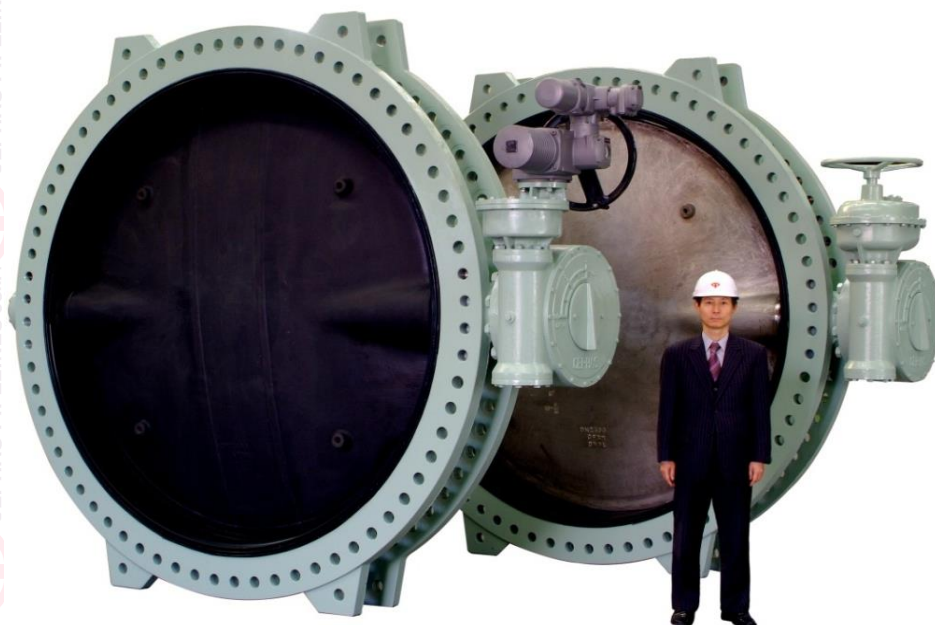


- TPSC SIDI KRI PROJECT
- TOSHIBA
- DN 1800



2. Production Range

2.4 Rubber-lined BTV (SRS910, 911, 912)



► **MODEL : SRS912 (DN2400)**

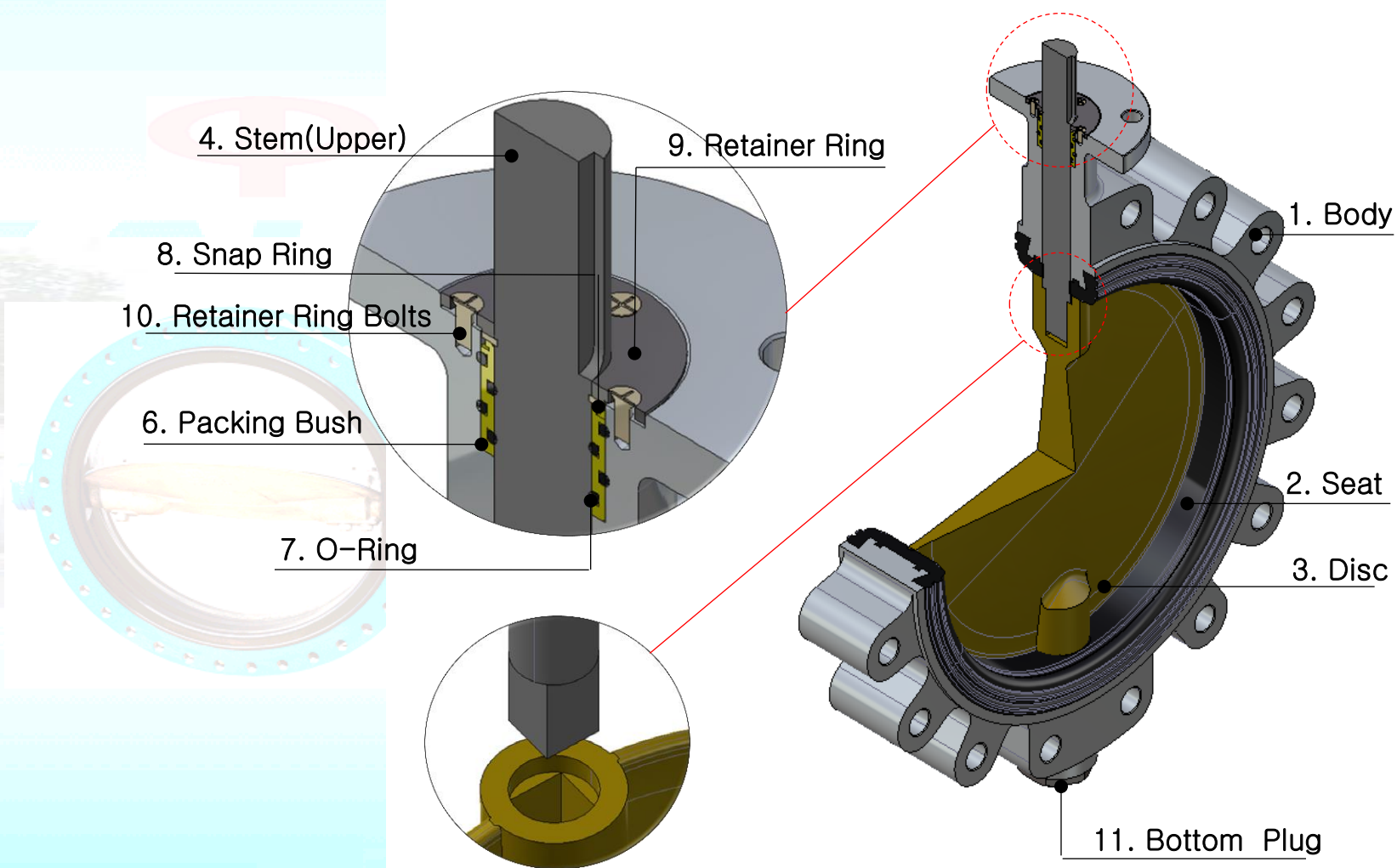
- **MODEL : SRS912**
- **PROJECT : RAS LAFFAN**
- **CLIENT : HYUNDAI E&C**
- **VALVE SIZE : DN3600**
- **APPLICATION : SEA WATER**





2. Production Range

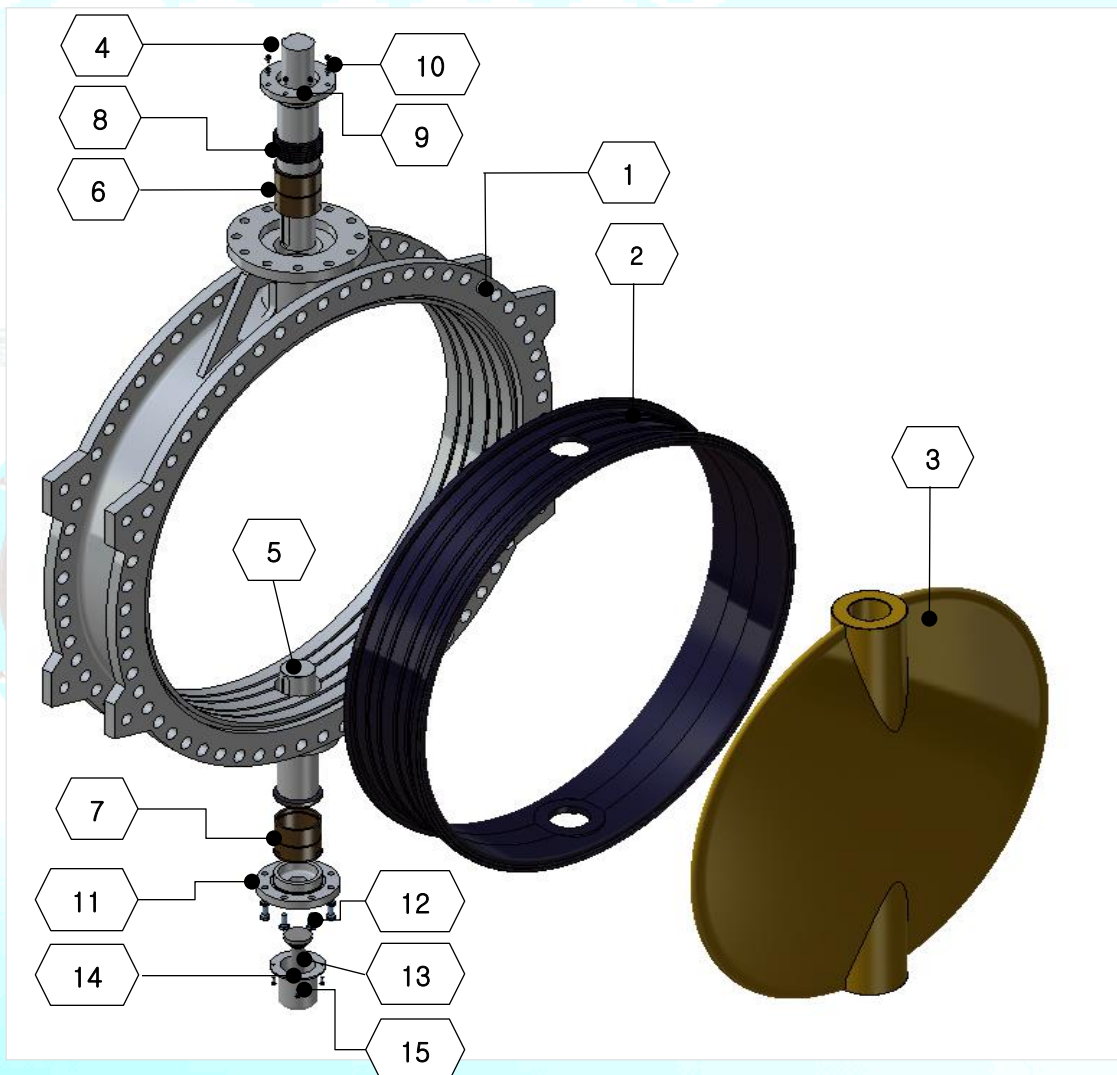
2.4 Construction for Rubber lined BTV (50A ~ 1000A)





2. PRODUCTION RANGE

2.4 Construction for Rubber lined BTV (1050A ~ 4000A)



NO	PART NAME
1	BODY
2	SEAT
3	DISC
4	STEM(UPPER)
5	STEM(LOWER)
6	BUSH(MAIN)
7	BUSH(STUB)
8	PACKING
9	RETAINER RING
10	RETAINER RING BOLTS
11	END COVER
12	END COVER BOLTS
13	CONTROL SHAFT
14	CONTROL SHAFT BOX
15	CONTROL SHAFT BOLTS





2. Production Range

2.5 Water Works BTV (SRS913, 914)



► **MODEL : SRS913 (DN3400) - MARAFIQ**
(Body & Disc : B148 C95800)





2. Production Range

2.5 Water Works BTV (SRS913, 914)



► **MODEL : SRS913**
Body & Disc : CF3M

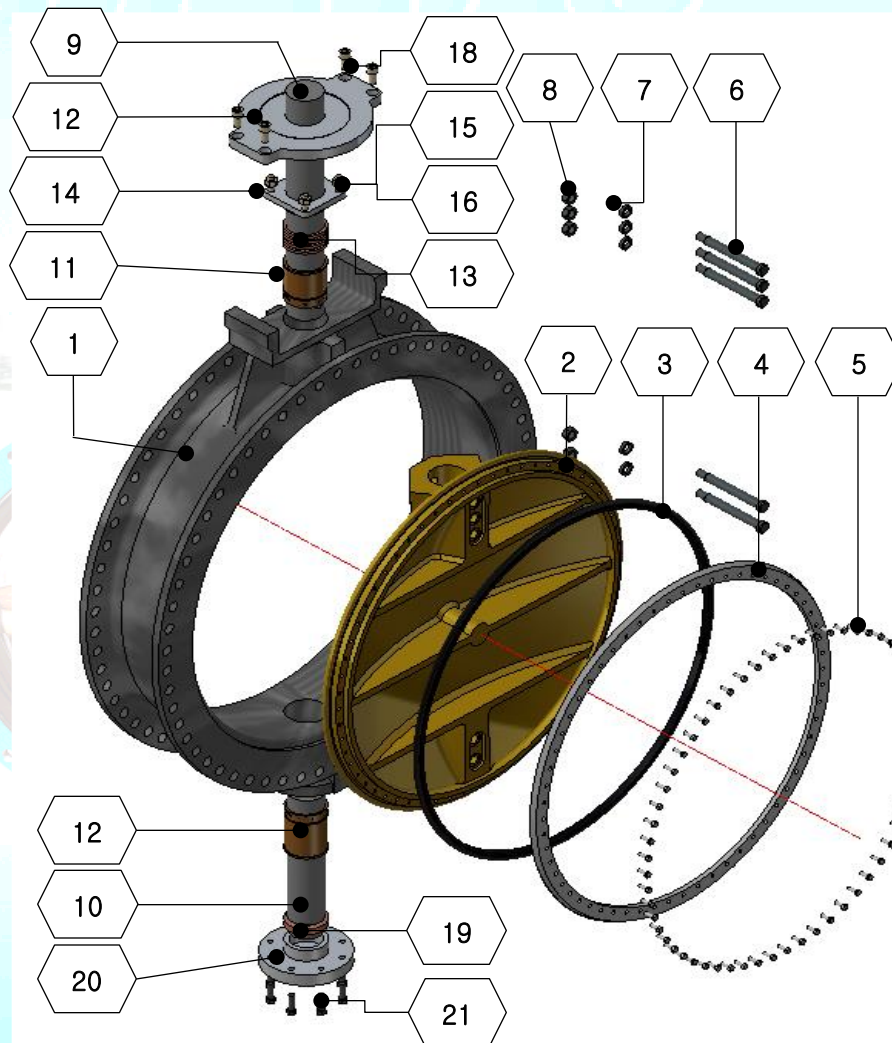
► **MODEL : SRS913**
Body & Disc : A536 Ductile Iron





2. Production Range

2.5 Construction for WATERWORKS BFV (SRS913, 914)



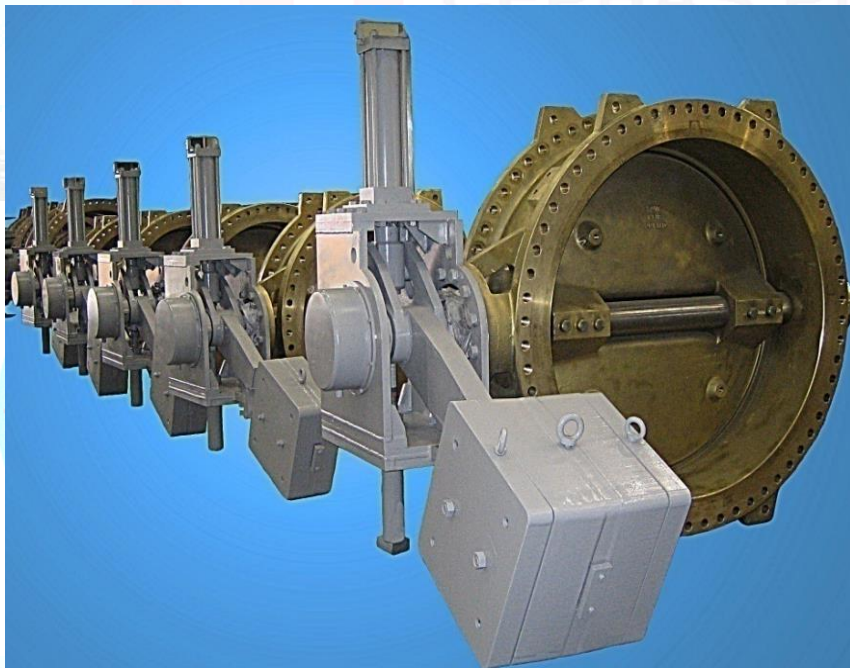
NO	PART NAME
1	BODY
2	DISC
3	SEAT
4	RETAINER RING
5	RETAINER RING BOLTS
6	DISC PIN
7	DISC PIN WASHER
8	DISC PIN NUT
9	STEM(UPPER)
10	STEM(LOWER)
11	BUSH(MAIN)
12	BUSH(STUB)
13	PACKING
14	PACKING GRAND
15	PACKING GRAND NUTS
16	PACKING GRAND BOLTS
17	TOP COVER
18	TOP COVER BOLTS
19	COLLAR
20	END COVER
21	END COVER BOLTS





2. Production Range

2.6 Combined Check BTV (SRS913NR)



► MODEL : SRS913NR (DN1800)



► MODEL : SRS913NR (DN2000)





2. Production Range

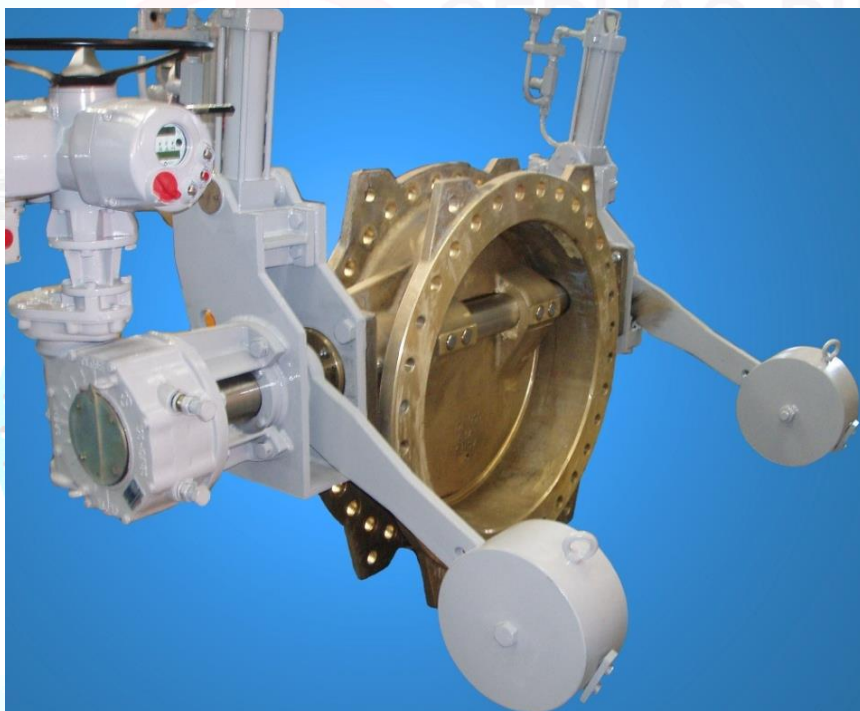
► Design feature for Hydraulic Operation





2. Production Range

2.7 Butterfly Check BTV (SRS913CH)



► MODEL : SRS913CH (DN900)



► MODEL : SRS913CH (DN1500)





2. Production Range

2.8 High Performance BTV (SRS924,925,926)

► **Size : DN50 ~ DN3000**

(RUBBER, METAL, RTFE, FIRE SAFETY. ETC)

► **Applications : Steam, Gas, Sea water, Ship side, Fire water, Hot & Cold water.**



► **MODEL : SRS924-TF**



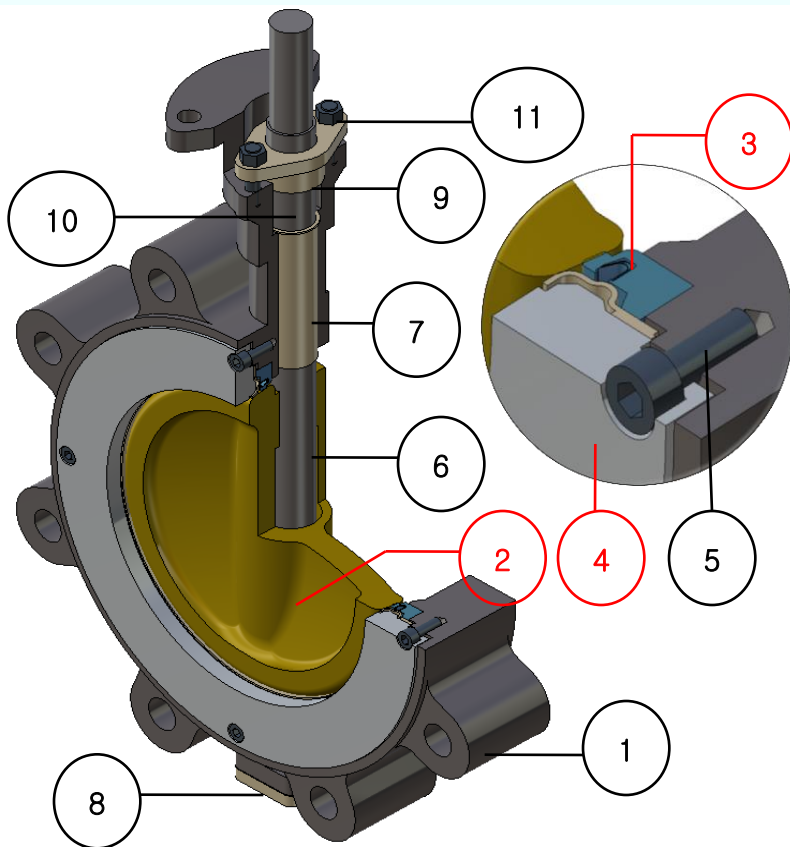
► **MODEL : SRS925-FM**





2. Production Range

► Construction for SRS925 TF (Fire Safety Line)



NO	PART NAME	MATERIAL	REMARK
1	BODY	A216 WCB	
2	DISC	A351 CF-8M	
3	SEAT	RTFE+316L	Rubber Teflon
4	RETAINER RING	A240 T304	
5	RETAINER RING BOLTS	B8M	
6	STEM	A240 T316	
7	BUSH	A240 T304	
8	END COVER	A216 WCB	
9	PACKING GRAND	A216 WCB	
10	PACKING	GRAPHITE	
11	PACKING GRAND BOLTS	B8M	



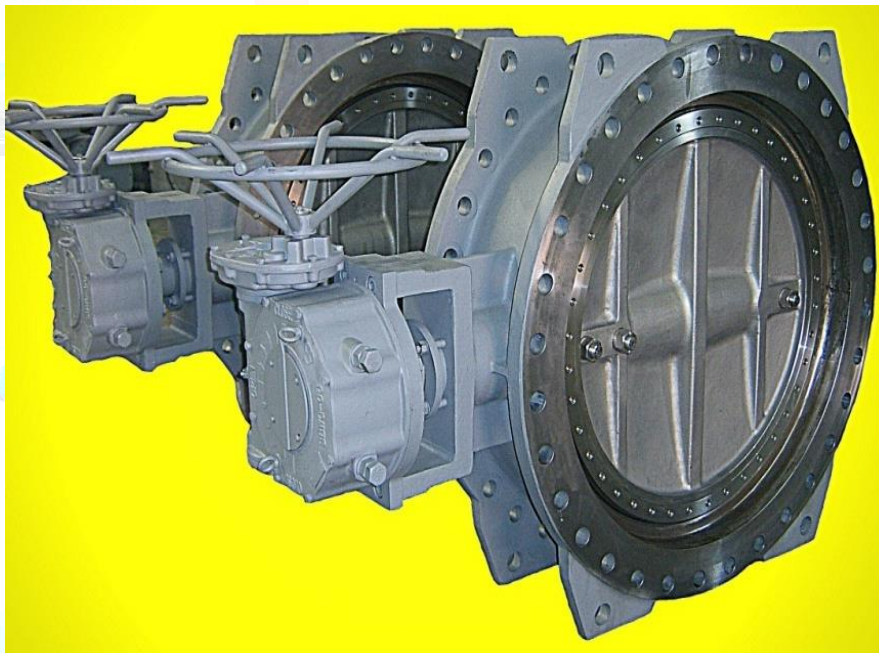


2. Production Range

2.9.1 TRIPLE OFFSET BTV

► **Size : DN200 ~ DN4000**

(METAL TO METAL, METAL TO TEFLON, METAL TO LAMINATED)



► **MODEL : SRS936 (DN1200)**



► **MODEL : SRS936FM [# 300 - 600A]**





2. Production Range

2.9.2 QUADRUPLE OFFSET BTV

► **Size : DN100 ~ DN4000**

(METAL TO METAL, METAL TO TEFLON, METAL TO LAMINATED)



► **QUADRUPLE OFFSET BTV / 600LB / 300A**

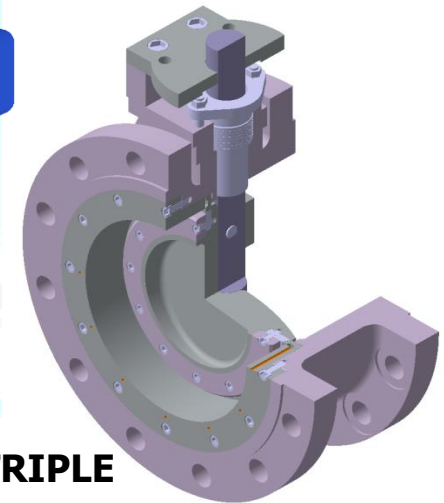




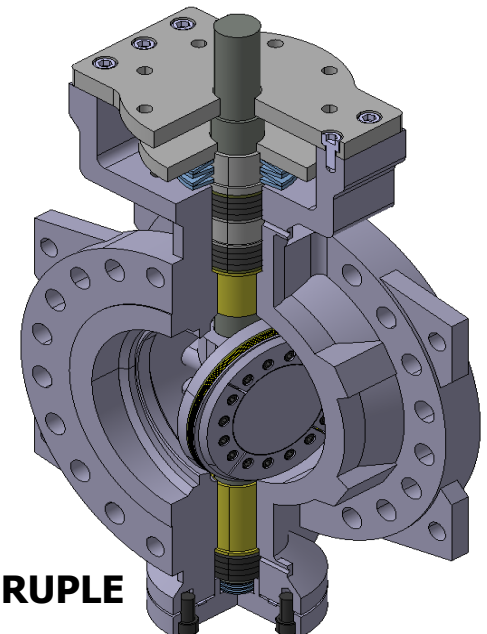
2. Production Range

2.9.3 TIPLE & QUADRUPLE OFFSET BTV

- a. Model NO : I930~4H & I940~4H
- b. Bi-directional bubble tight shut-off design
- c. Fire-safety design
- d. Developed Geometry results in
 - Low torques
 - Zero seat/seal friction
 - Extended service life
 - Continued seal through thermal cycling
- e. Excellent flow and throttling characteristics covering services from cryogenic to high temperatures.
- f. Fully rated for end of line duty
- g. Standard materials conform to NACE
- h. Seat is field replaceable
- i. Spiral wound gaskets and all flange finishes including RTJ
- j. Anti-blowout device on
- k. ISO mounting flange
- l. Packing seal : Live loading design (Vibration)
- m. Possible to make gate Valve face to face



► TRIPLE



► QUADRUPLE





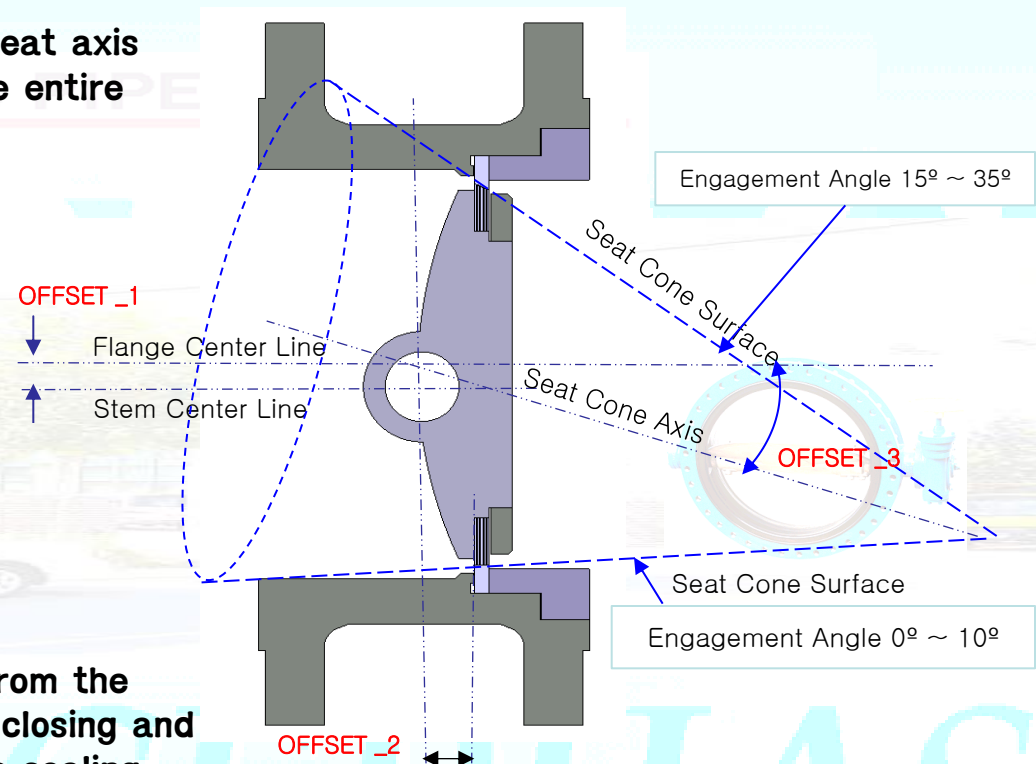
2. Production Range

2.9.4 Principle of Operation TRIPLE

OFFSET _1 : The shaft is offset behind the seat axis to allow complete sealing contact around the entire seat

OFFSET _2 : The shaft centerline is offset from the pipe and valve which provides interference free opening and closing of the valve

OFFSET _3 : The seat cone axis is offset from the shaft centerline to eliminate friction during closing and opening and to achieve uniform compressive sealing around the entire seat.





2. Production Range

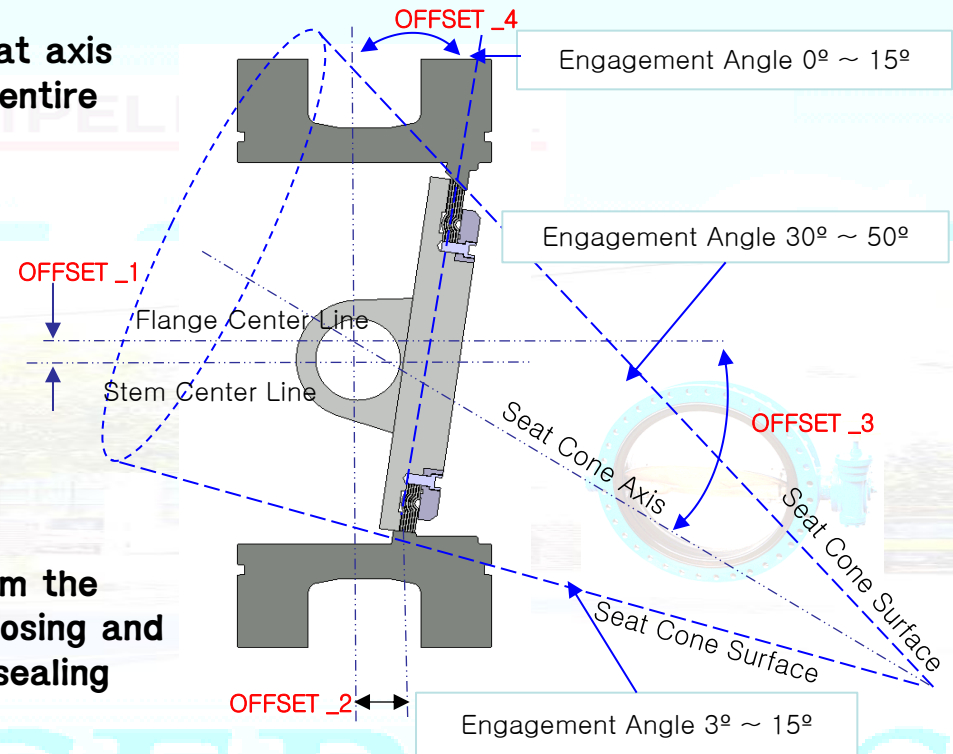
2.9.5 Principle of Operation Quadruple

OFFSET _1 : The shaft is offset behind the seat axis to allow complete sealing contact around the entire seat

OFFSET _2 : The shaft centerline is offset from the pipe and valve which provides interference free opening and closing of the valve

OFFSET _3 : The seat cone axis is offset from the shaft centerline to eliminate friction during closing and opening and to achieve uniform compressive sealing around the entire seat.

OFFSET _4 : Disc is structurally designed so that Moment is induced to orient disc to the close position when the internal pressure is applied.





2. Production Range

2.9.6 Standard specifications

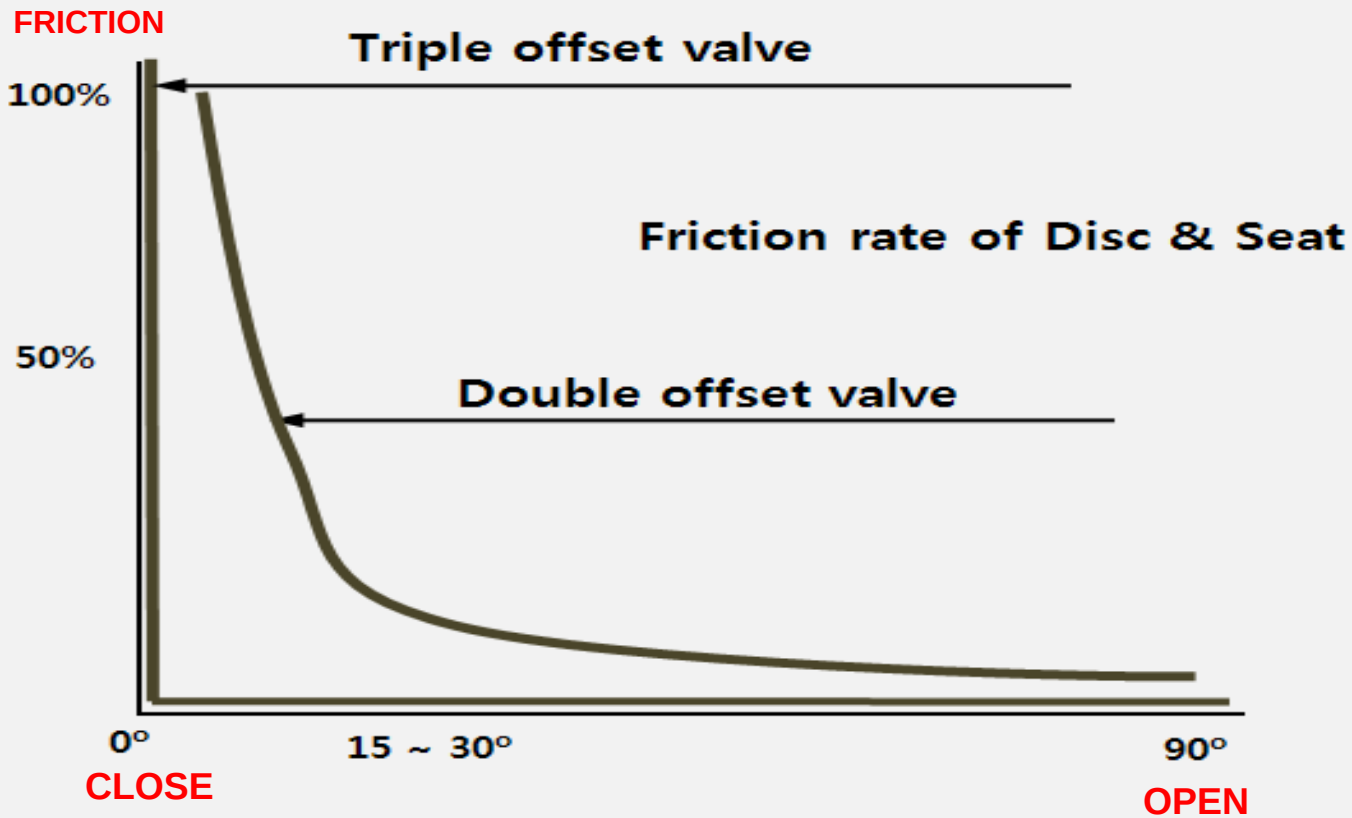
Standard Specifications	
Design	API Std 609 , BS 5155 , ANSI B16.34 , ASME SEC
Valve Size	3" (80mm) ~ 160" (4000mm)
Pressure Classes	Class 150 , 300 , 600 , 900, 1500
Body Styles	Lugged , Wafer Flangeless , Double Flanged , Butt Weld End
Flange Accommodation	ANSI B16.5 : DN80 ~ DN600 ANSI B16.47 Series A&B : DN700 ~ DN1200
Face to Face Dimensions	Lug and Wafer Type API Std 609 Table2 : DN80 ~ DN600 API Std 609 Table1 : DN750 , 900 , 1050 , 1200 ISO 5752 Wafer Short : DN700 , 800 , 1000 Double Flanged Type ISO 5752 / BS 5155 Double Flange Short
Pressure - Temperature Ratings	ASME / ANSI B16.34 : for steel ASME / ANSI B16.24 : for bronze Working temperature range as standard -29 degree C (-20°F) to +538 degree C (1000°F) With selection of suitable materials -100 degree C (-148°F) to +700 degree C (1292°F)
Pressure Teste	Shell test , Seat test : API Std 598 Seat Leakage rate API Std 598 , ISO 5208 Rate A, ANSI B16.104 (ANSI / FCI 70-2) Class VI
Firesafe	Certified fire-safe to BS 6755 Part2 / API 6FA and API 607
Marking	API Std 609 MSS SP-25
Operators	Manual , Pneumatic, Electric , Hydraulic





2. Production Range

2.9.7 Offset Valve – Disc/Seat Friction





3. Certifications & Qualifications

3.1 Certifications

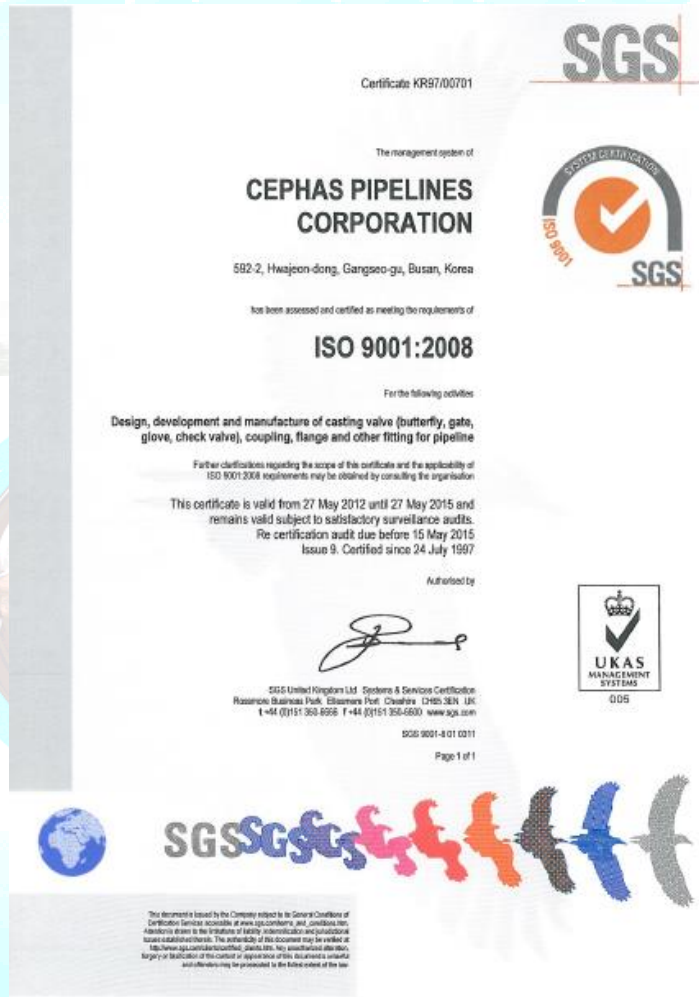
Data	Certified From	Model & Size	Remark
Sep-94	D.N.V	Rubber-lined BFV DN80-DN1000 PN10	Type Approval
Jul-97	SGS	Design, Development and Manufacture of Butterfly Valves, Coupling	ISO 9001 : 2008
Jan-98	D.N.V	High performance Cargo Valve DN40-DN1000, PN10/16 (#125 & #150)	H/P Type Approval
Mar-99	RMRS	Rubber-lined BFV High performance Cargo BFV DN40 – DN1000, PN10/16(#125–)	H/P Type Approval
Apr-99	LR	SRS-924 TF Fire safe BFV(DN80-DN400)	Fire safe H/P BFV Type Approval
Jun-00	SGS	The whole products manufactured In Cephas workshop	PED Cert. (CE Marking)
May-03	SGS	The whole products manufactured In Cephas workshop	ISO 14001 : 2004
Aug-05	BV	Rubber-lined & High performance BFV	Type Approval
Oct-10	SGS	Fire Test Certificate for Triple Offset valve	150LB ~ 900LB Flange / Lug Type
Aug-11	API	Butterfly Valve Category A / B	API Standard 609



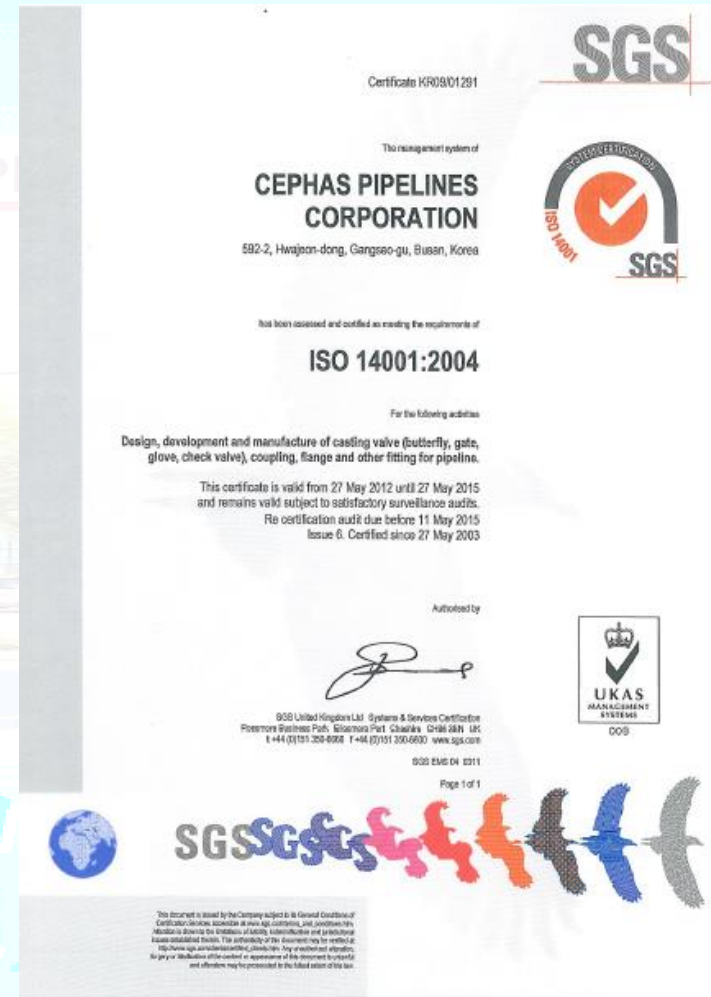


3. Certifications & Qualifications

► ISO 9001 : 2008



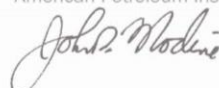
► ISO 14001 : 2004





3. Certifications & Qualifications

▶ API Monogram

  American Petroleum Institute	Certificate of Authority to use the Official API Monogram License Number: 609-0054 ORIGINAL
	The American Petroleum Institute hereby grants to CEPHAS PIPELINES CORP. 592-2, Hwajeon-Dong Gangseo-Gu, Busan South Korea the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and API Standard 609 and in accordance with the provisions of the License Agreement. In all cases where the Official API Monogram is applied, the API Monogram should be used in conjunction with this certificate number: 609-0054 The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute. The scope of this license includes the following products: Butterfly Valves - Category A; Butterfly Valves - Category B QMS Exclusions: No Exclusions Identified as Applicable Effective Date: AUGUST 9, 2011 Expiration Date: AUGUST 9, 2014 To verify the authenticity of this license, go to www.api.org/compositelist.
	American Petroleum Institute  Director of Global Industry Services





3. Certifications & Qualifications

► SEC Approval Letter

Generation Projects Engineering Department

Tel: 01-494-7040
Fax: 01-494-7101
Email: GEPENING@sec.com.sa



الشركة السعودية للكهرباء
Saudi Electricity Company

Date : 13 January 2011

To : CEPHAS PIPELINES CO. LTD.
Korea

Attn: Mr. S.H. JUNG.

Fax : +82 51 290 3029

Phone : +82 51 290 3006

E-mail : shjung@cephasvalves.com

Subject : Prequalification of CEPHAS PIPELINES CO. LTD.

Reference to the above mentioned subject, SEC is pleased to inform you that, CEPHAS PIPELINES CO. LTD. is qualified with Saudi Electricity Company as a Manufacturer of the following products with the prescribed limitation:

No.	Description	Limitations
1	Butterfly valves.	- Concentric, -Double & Triple and quadruple offset design. 80 mm to 900 mm ANSI CLASS 600, 1000 mm to 4000 mm with Double, Triple and quadruple offset design, ANSI Class 300.
	Dual Check Valve	NO
5	combined check valve	NO

We are looking forward to work with you in the future.

Best regards,

Khaled Saad Al-Rashed
Department Manager
Generation Projects Engineering

► TAKREER Vendor Approval Letter



FACSIMILE MESSAGE

To : M/s. Engineering Supply Establishment
Attn: General Manager

Fax No.: 6275410
Abu Dhabi

From : Procurement Support Department Manager

Fax No.: 5027442

Abu Dhabi Oil Refining Company (TAKREER)
P.O. Box 8998 - Tel. (9712) 6227030 - Fax (9712) 6227031

Ref. No. : TKR/S/S/ 449 /FES/2010

Date : 23 FEB 2010

Subject : REGISTRATION & PRE-QUALIFICATION STATUS

Reference to the Documents of your Principal M/s. Cephas Pipelines Corp. - South Korea, submitted by you as a Manufacturer. Please be informed that based on the evaluation, the above principal has been included in TAKREER records as a possible source for supply of the following products:

- > Valves: Check-Non Slam
- > Valves: Butterfly (Flanged & Water Type)

Please note that at the time of release of enquiries, a further short listing takes place based on exhibited interest at that time and the specifics of material / equipment in question as the need may be.

You are advised to quote your Principal's Registration No. **510104** in all future correspondence.

Regards,

Hashim Al Hashemi

If you do not receive all the pages,
please call Telephone: (9712) 6827479

No. of pages to follow:

Confidentiality Notice: This fax is Confidential. If you are not the intended recipient, please notify us immediately. We should not copy the Fax or use it for any purpose or disclose its contents to any other person. Thank you.

28.01.14
TAKR P.01





3. Certifications & Qualifications

► GASCO VENDOR LIST

ABU DHABI GAS INDUSTRIES LTD. (GASCO)			PROJECT VENDORS LIST		REV. 01
PROJECT PROCUREMENT & CONTRACTS DEPT.			FOR		
PROJECTS CONTROL DIVISION			MAJOR GOODS		MAY 2009
SL.	ITEM DESCRIPTION	PG NO.	VENDORS M/S.	VENDOR LOCATION	REMARKS FOR BIDDERS
		174515	KOREA PILLER	S. KOREA	
		174530	KOREA PARTS & FASTENERS	S. KOREA	
		174530	KPF	S. KOREA	
		180505	HYUNDAI	S. KOREA	
		180505	KANGLIM CSP	S. KOREA	
		180515	HUSTEEL	S. KOREA	
		180515	HYUNDAI PIPE	S. KOREA	
		180515	SAMSUNG CORPORATION	S. KOREA	
		180515	SEAH STEEL	S. KOREA	
		180525	CHANGWON SPECIAL METAL	S. KOREA	
		180525	GANA STAINLESS STEEL	S. KOREA	
		180525	LS INDUSTRIES	S. KOREA	
		180525	POSCO SS (CHANGWON SPECIAL STEEL)	S. KOREA	
		180515	HYUNDAI PIPE	S. KOREA	
		180530	LS INDUSTRIES	S. KOREA	
		180530	SAMSUNG CORPORATION	S. KOREA	
		180530	SEAH STEEL	S. KOREA	
		180575	SUNG KWANG BEND CO.	S. KOREA	
		180575	TK CORPORATION	S. KOREA	
		180580	KEONSAE HIGH PRESSUE CO. LTD.	S. KOREA	
		180580	SUNGKWANG BEND CO. LTD	S. KOREA	
		180595	KOREA FLANGE	S. KOREA	
		180615	JFC	S. KOREA	
		180615	SPIREX SARCO	S. KOREA	
		180620	UNISON	S. KOREA	
		180625	UNISON	S. KOREA	
		184510	KPC	S. KOREA	
		184511	KPC	S. KOREA	
		184511	PAN KOREA METAL	S. KOREA	
		184520	CEPHAS VALVES	S. KOREA	
		184520	KOREA UNICOM	S. KOREA	
		184520	UNICOM VALVE	S. KOREA	
		184525	KPC	S. KOREA	
		184525	SWI VALVE	S. KOREA	
		184530	KPC	S. KOREA	
		184530	LS INDUSTRIAL SYSTEM	S. KOREA	
		184530	PAN KOREA	S. KOREA	
		184530	PK VALVE	S. KOREA	
		184530	TY VALVES	S. KOREA	
97	VALVES: PLUG	184555	3Z CORPORATION	S. KOREA	
		184570	PAN KOREA	S. KOREA	
		184605	SAMSON	S. KOREA	
		190510	SAMKANG	S. KOREA	
		190515	DAEJOO HEAVY INDUSTRIES	S. KOREA	
		190515	KOOKJAE	S. KOREA	
		190515	SUNG CHANG	S. KOREA	
		204505	GAON	S. KOREA	
		204505	LS CABLES	S. KOREA	
		204510	LS CABLES	S. KOREA	
		204510	LS CABLES	S. KOREA	
		204520	GAON	S. KOREA	
		204525	SUHAN	S. KOREA	
		206510	HYUANDI	S. KOREA	
		208010	HYUANDI EXPLOSION	S. KOREA	
		210505	HYUNDAI ELECTRICAL	S. KOREA	

► TAKREER Vendor LIST



SUPPLIERS PRINCIPALS AND THEIR PRODUCT

TYPE : V

COMPANY : 000640 ENGINEERING SUPPLY ESTABLISHMENT

Date : 15-JUL-2008

Related Company	Related Company Name	Access Point Grade	Agency/ Agency Link	Expiry Date	Product Group/ Work Group	PGWG Description
508116	BAYARD	R	A		PG - 184525	VALVES: GATEGLOBE/CHECK UPTO 2.0"
		R			PG - 184565	VALVES: ACCESSORIES & SPARES - ALL
		R			PG - 184565	VALVES: STOCKISTS/AGENTS
		R			PG - 412010	FIRE HYDRANTS & MONITORS
610104	CEPHAS PIPELINES CORP.	R	R		PG - 184520	VALVES: BUTTERFLY (FLANGED & WAFER TYPE)
		R			PG - 184535	VALVES: CHECK-NON SLAM
		R			PG - 184560	VALVES: WAFER CHECK
		-	-			
		R			PG - 184552	VALVES: NEEDLE
		-	-		PG - 184510	VALVES: BALL
510564	BROOKSBANK VALVES LIMITED	R			PG - 184515	VALVES: SPECIAL/NON STANDARD BALL VALVES
		R			PG - 184530	VALVES: GATEGLOBE/CHECK ABOVE 2.0"
		R			PG - 184555	VALVES: PLUG
		R			PG - 184570	VALVES: BRONZE 2" & ABOVE
		-	-			
902988	SINCLAIR FOUNDRY PRODUCTS	R	R		PG - 180565	PIPES: EPOXY COATINGS
902989	SHURLONT PIPING PRODUCTS USA	R	R		PG - 180005	PIPES: ALL TYPES- SUPPLIERS

MAXIMO report
submit.sg



3. Certifications & Qualifications

► SABIC Vendor Approval Letter

Saudi Basic Industries Corporation
SABIC Engineering & Project
Management
Shared Services
Al-Jubail



الشركة السعودية للصناعات الأساسية
مسابك للشؤون الهندسية وإدارة المشاريع
الخدمات المشتركة
الجبيل

Approval Letter:

☒ URGENT ☐ ORDINARY ☐ CONFIDENTIAL

Date: 21 Nov. '10
Ref : 2111110_2

No. of Pages: 01

To : Mr. Sung-Han, Jung
Assistant Manager
Subject : SABIC Approved Product for Cephas Pipelines Corp.

Dear Sir,

We would like to inform you that your company has been included in SABIC - E&PM (Engineering & Project Management) Approved Vendors List:

Product	Specs	Manufacturer
Butterfly Valves	Appendix -1	Cephas Pipelines Corp. - Korea

The approval given to you by SABIC does not guarantee your company will be given projects however your company will have the opportunity along with its approved vendor/sources to join future projects invitations proposal.

In order to update our vendor data base, please fill in the attached form (Annexure II) and send it back to the undersigned. This is for the confirmation on your address and contact details.

Best Regards,

Sultan A. Al-Sakit
Mega Projects Procurement - Prequalification
Vendor Committee Leader
T +966 (3) 342 2795
F +966 (3) 341 2817
E sakitsa@SABIC.com

CC: AAL/AVL

P. O. Box -11425 Al-Jubail Industrial City - 31961 - Saudi Arabia
Tel. 966 (3) 340 1660 Fax. 966 (3) 341 2816

► KUWAIT NATIONAL PETROLEUM COMPANY



Kuwait National Petroleum Company Product Wise Vendor Report

User: MAXIMO

Company	Name	CLASS	SUB-CLASS	16 VALVES	15 VALVES, BUTTERFLY	Telephone	Fax	Local Agent	Telephone	Fax
137019	BAC VALVES S.A. - SAUN					+34 972 677032	+34 972 309040			
177018	FOURIES ENGINEERING (INDIA) LTD			0091 022 4394400	0091 022 4927544					
177004	ADVANCE VALVES PRIVATE LIMITED, INDIA			+91-120-2462746375	+91-120-3440376			PETROLEUM SERVICES CO. KUWAIT	4410801253	4410801566
177004	BOK ENGINEERING INDUSTRIES LTD, INDIA			0091 836 2331499	0091 836 2330799			CANAR TRADING & CONTOG. CO. KUWAIT	3987667	3987227
220788	SAUDI VALVES MANUFACT. EST.			966-3-3418512	966-3-3418515					
277154	CEPHAS PIPELINES CORPORATION, S.K.OREA,			0062518371261	0062518321265					
306174	NEELIS CONTROLS OY			358 24 80 150	358 204 80 151					
427004	GUNTEC VALVE MFG&PTD LTD			+27 11 4744 18004	+27 11 4746 13607					
Total Vendors for the Product =						30				

Run Date : 18/04/2011 9:42:39 AM

Page 3 of 4

Report = product_wise_vendor_act





3. Certifications & Qualifications

► ZADCO Vendor List



TROUVAY & CAUVIN ENGINEERING SUPPLY LLC -
(05151)

Phone: 0097126271496 - Fax: 0097126275410

Contact: Nadim Selman - Email:
info.abudhabi@trouvaycauvin.com

Product Group	PG Description	Principal	Principal Name	MLCAS_P	License Type	Status
162615	VALVES - BUTTERFLY - ALL TYPE	M033431	CEPHAS PIPELINES CORP.	AAAA*	CSA	NOTEVAL





3. Certifications & Qualifications

► FIRE SAFETY CERTIFICATE FOR TRIPLE OFFSET VALVE

SGS **ORIGINAL** Certificate No. B-50/2010-0272/006 Page 1 of 1

FIRE TEST CERTIFICATE

Date : Oct. 28, 2010

Applicant / Manufacturer : Cephas Pipelines Corporation.

Date and place of test : Oct. 27, 2010 at the manufacturer's premises in Pusan, Korea

Kind of test : Witness of Fire Test

Test valve : **Cast Steel Butterfly Valve**
- 8", 600Lbs, RF, A216 WCB : 1 unit

Design standard : API 609

Applicable drawing : AI923H020800A6G80A

Test standard : API STANDARD 607 - Six Edition, September 2010.

.. ..

This is to certify that the fire test was performed by the manufacturer under our witness as above, and the results were satisfied with the requirements in API 607 so we hereby confirm that by carrying out a test on a mid-range size of the same design in Ferritic material, the coverage of the qualification ranges 600Lbs through 900Lbs rating with 8" and Larger size for the Ferritic, Austenitic & Duplex material as per Para.7.2.2 of API607.

Note
This certificate reflects only our witness findings at the time and place of test and does not refer to any other matters.

.. ..

"In accordance with Client's instructions, the Company's involvement has been limited to witnessing/observing a third party's intervention(s) at the third party's laboratory/test house or other facilities and installations used for the intervention(s). The Company's sole responsibility was to be present at the time of the third party's intervention(s) to forward the results, or confirm the occurrence, of the intervention(s). The Company is not responsible for the condition or calibration of apparatus, instruments and measuring devices used, the analysis methods applied the qualifications, actions or omissions of the third party's personnel or the analysis results.

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SGS Korea Co., Ltd.

S. H. Chun
Manager, Industrial Division

SHJ/bil

SGS Korea Co., Ltd. HPL, KT Busan IT center, 330-29 Beomil 2dong, Dong-gu, Busan 601-706 Republic of Korea www.kr.sgs.com
Member of SGS Group Société Générale de Surveillance

IND 001

SGS **ORIGINAL** Certificate No. B-50/2010-0272/009 Page 1 of 1

FIRE TEST CERTIFICATE

Date : Oct. 28, 2010

Applicant / Manufacturer : Cephas Pipelines Corporation.

Date and place of test : Oct. 27, 2010 at the manufacturer's premises in Pusan, Korea

Kind of test : Witness of Fire Test

Test valve : **Cast Steel Butterfly Valve**
- 8", 150Lbs, Lug, A216 WCB : 1 unit

Design standard : API 609

Applicable drawing : AI921F000800A1G10A

Test standard : API STANDARD 607 - Six Edition, September 2010.

.. ..

This is to certify that the fire test was performed by the manufacturer under our witness as above, and the results were satisfied with the requirements in API 607 so we hereby confirm that by carrying out a test on a mid-range size of the same design in Ferritic material, the coverage of the qualification ranges 150Lbs through 300Lbs rating with 8" and Larger size for the Ferritic, Austenitic & Duplex material as per Para.7.2.2 of API607.

Note
This certificate reflects only our witness findings at the time and place of test and does not refer to any other matters.

.. ..

"In accordance with Client's instructions, the Company's involvement has been limited to witnessing/observing a third party's intervention(s) at the third party's laboratory/test house or other facilities and installations used for the intervention(s). The Company's sole responsibility was to be present at the time of the third party's intervention(s) to forward the results, or confirm the occurrence, of the intervention(s). The Company is not responsible for the condition or calibration of apparatus, instruments and measuring devices used, the analysis methods applied the qualifications, actions or omissions of the third party's personnel or the analysis results.

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SGS Korea Co., Ltd.

S. H. Chun
Manager, Industrial Division

SHJ/bil

SGS Korea Co., Ltd. HPL, KT Busan IT center, 330-29 Beomil 2dong, Dong-gu, Busan 601-706 Republic of Korea www.kr.sgs.com
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IND 001





3. Certifications & Qualifications

► BV Type Approval



RECOGNITION FOR BV MODE II SCHEME

CEPHAS PIPELINES CORP.
BUSAN - KOREA (REPUBLIC OF)

Summary of the range of the recognition which is detailed in the subsequent page(s):

Butterfly Valves - Rubber lined type : SRS910, SRS911, SRS911SL, SRS912 and High performance type : SRS924, SRS925, SRS926

This certificate is issued to attest that BUREAU VERITAS has performed, at the above company's request and in compliance with the requirements of EN ISO 9001, a satisfactory assessment of the manufacturing facilities and associated quality procedures related to the range of the recognition.

This certificate will expire on: 04 Jun 2013

For BUREAU VERITAS,
At BV PUSAN, on 12 Jan 2010,
Keum-Ho Lee



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or revision of this document, and in consultation with any authorities for which it may provide.

The electronic version is available at: <http://www.veristar.com/veristar/bv/viewPublicPdfRecognition.jspx?id=ffm1w1w1u>

BV Mod. Ad.E 697 May 2009

This certificate consists of 2 page(s)

Page 1 / 2

Certificate number: SMS.W.II.11109/B.0

www.veristar.com

Page 2 / 3

Certificate number : 14508/A0 BV

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION

Butterfly valves:

- Rubber lined type SRS 910, SRS 911, SRS 911 SL, SRS 912
- High Performance type SRS 924 ST, SRS 925 ST, SRS 926 ST, SRS 924 TF, SRS 925 TF, SRS 926 TF

1.1 Technical data

Valve type	Size	Body type
SRS 910	DN 50 (2") to DN 1200 (48")	Walter
SRS 911	DN 50 (2") to DN 1200 (48")	Lugged
SRS 911 SL	DN 50 (2") to DN 1200 (48")	Semi-lugged
SRS 912	DN 50 (2") to DN 1200 (48")	Flanged
SRS 924*	DN 50 (2") to DN 1000 (40")	Walter
SRS 925*	DN 50 (2") to DN 1000 (40")	Lugged
SRS 926*	DN 50 (2") to DN 1000 (40")	Flanged

* ST (Teflon seat) and TF (Fire safe Teflon with metal) types

Flange rating: PN 10, PN 16, JIS 10K, 16K, ANSI B 16.1 class 125/150LB, ANSI B 16.5 class 150LB

Temperature range according to manufacturer's recommendations:

- NBR seat	-10 °C / 80 °C	- Viton seat	-10 °C / 150 °C
- EPDM seat	-15 °C / 110 °C	- Silicon	-20 °C / 140 °C
- Teflon (RTFE/PTFE)	-50 °C / 200 °C	- Metal (316 SS)	-100 °C / 300 °C

1.2 Material

- Body
- Cast iron JIS G 5501 FC200/250, DIN 1691 GG20/25, BS 1452-220, ASTM A126 class B
 - Ductile cast iron JIS G 5502 FCD400/450, DIN 1693 GGG40, BS 2789 420/12, ASTM A536 Grade 65-45-12
 - Carbon steel casting JIS G 5101 SC480, BS 1504-161 Grade A/B, ASTM A216 Grade WCB
 - Stainless steel JIS G 5121 SUS314, ASTM A351 CF8/CF8M, CF3/CF3M
 - Aluminium Bronze JIS H 5111 BC6, JIS H 5114 ALBC2/ALBC3, BS 1400 AB2, ASTM B 148 C95800
- Disc
- Ductile cast iron JIS G 5502 FCD400/450, DIN 1693 GGG40, BS 2789 420/12, ASTM A536 Grade 65-45-12
 - Stainless steel JIS G 5121 SUS314, ASTM A351 CF8/CF8M, CF3/CF3M
 - Aluminium Bronze JIS H 5114 ALBC2/ALBC3, BS 1400 AB2, ASTM B 148 C95800
- Seat
- NBR, EPDM, Viton, Teflon, Metal

2. DOCUMENTS AND DRAWINGS

- Manufacturer's catalogues RS 95-1 and HP 01-1R
- Data calculation sheets N° CPS-E-BT-01 rev. 0 and N° CPS-E-TQ-01 rev. 0
- Material inspection and hydraulic test reports
- Installation and maintenance manual N° CPS-E-IM-01 rev. 0
- Drawings of all series butterfly valves

3. TEST REPORTS

BV qualification tests carried out in the manufacturer's workshops in the presence of a Society's Surveyor and found satisfactory:

- Hydraulic test at 1.5 times the working pressure
- Leakage test at 1.1 times the working pressure
- Hydraulic/Material test report dated 26/01/2005

4. APPLICATION / LIMITATION

4.1 May be used for the following services on board:

- Shipside valves
- Sea water and fresh water
- Bilge and ballast transfer
- Tank cleaning systems
- Fuel-oil and lubricating oil transfer
- Inert gas systems
- Cargo oil for tankers
- Non essential systems

4.2 The butterfly valves belong to class II and class III according to the relevant requirements stated in Part C, Chapter 1, Sec 10 and Part E, Chapter 7 of the Bureau Veritas Rules. Valves fitted on the ship side and collision bulkhead belong to class II.

4.3 The use of ordinary cast iron and stainless steel is to be restricted as per the Rules.

BV mod. Ad.E 530 April 2005

This certificate consists of 3 pages





3. Certifications & Qualifications

► Fire Safe Type Approval



Type Approval Certificate Extension

This is to certify that Certificate No. 01/10085(E2) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER Cephas Pipelines Corp.
PLACE OF PRODUCTION 1520-7, Dadae-Dong, Saha-Gu, Busan, 604-050 Korea
DESCRIPTION Firesafe wafer-type Butterfly Valve
TYPE SRS 924-TF
APPLICATION Marine and Offshore Piping Systems
• Petrochemical
• Sea water, but except as shipside valves
• Ethylene
• LPG

STANDARD BS 6755 Part 2: 1987

RATINGS

Nominal size (mm)	Nominal pressure rating
80 to 150	150, 300 (Class rating)
200 to 400	20 kgf/cm ²

Note: For pressure-temperature rating, see the producer's catalogue.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid certificate."

The attached Design Appraisal Document No. 01/10085(E3) and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 01/10085(E2) to which this extension should be attached.

Certificate No. 01/10085(E3)
Issue Date 12 April 2009
Expiry Date 11 April 2014
Sheet 1 of 1

N. Terashita
Yokohama Design Support Office
Lloyd's Register

Lloyd's Register, registered office:
71 Fenchurch Street, London EC3M 4BS

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Marine Design Appraisal Document

Document no. 01/10085(E3)
Issue number 0
Page 1 of 1

Lloyd's Register
Yokohama Design Support Office
Queen's Tower A, 10th Floor,
2-3-1, Minatomirai, Nishi-ku,
Yokohama, 220-6010 Japan
Tel: +81-(0)45-682-5273, Fax: +81-(0)45-682-5279

Date:
11 April 2009

Quote this reference on all future communications
YDS/T/NTE/94409 (M01-28)

LR TYPE APPROVAL SYSTEM, 2002
Issued to: CEPHAS PIPELINES CORP.
For: Firesafe wafer-type Butterfly Valve, Type SRS 924-TF
TYPE APPROVAL CERTIFICATE No. 01/10085(E3)

The undernoted documents have been reviewed for compliance with the requirements of the LR Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Request forms LR6606 & 2502 dated 23 March 2009

TEST REPORTS

Busan memorandum dated 8 May 2009 accompanying Inspection and Surveillance of Production Facilities report

Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.

N. Terashita

N. Terashita
Senior Surveyor & Group Leader
Machinery & Piping Group
Yokohama Design Support Office
Lloyd's Register
Tel: +81(0)45-682-5273, Fax: +81(0)45-682-5279
Email: nobuya.terashita@lr.org

FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPENDS ON SATISFACTORY SURVEY AND TESTING

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Form 643B/MAR (2008.02)





3. Certifications & Qualifications

► PED CERT. (CE MARK)

SGS Portugal, S.A.
Industrial Services
Polo de Serviços da Maia
Rua Padre António, 232 - Fração 4.4
4470-130 Maia, Portugal
T. (351) 22 999 45 00
F. (351) 22 999 45 90

SGS

QUALITY SYSTEM CONFORMITY CERTIFICATE ACC. TO PED MODULE H
CERTIFICADO DE CONFORMIDADE DO SISTEMA DA QUALIDADE PED modulo H

Certificate no.: **PTC12.02469.5200 rev.1**
Certificado numero

Date: **26.04.2012**
Data

Constructeur/Manufacturer: Construtor/Fabricante
Name: **CEPHAS PIPELINES CORPORATION**
Address: **592-2, Hwajeon-dong, Gangseo-gu, Busan, KOREA**

SGS Portugal SA
Notified Body for the scope of PED directive 97/23/CE
Organismo Notificado para o âmbito da Directiva de Equipamentos Sob Pressão 97/23/CE,
under the number **1155**,
sob numero 1155

CERTIFIES that the capabilities shown by this manufacturer and their quality system according with the demands of the PED (97/23/CE) regarding to the conformity evaluation module H

CERTIFICA que as capacidades evidenciadas pelo construtor e o seu sistema de gestão da qualidade se apresentam em conformidade com os requisitos da Directiva de Equipamentos Sob Pressão 97/23/CE, no que diz respeito ao modulo de avaliação de conformidade H.

for the scope of
para o âmbito:
Design and Manufacture of Butterfly Type Valves

Shop locations:
Locais de fabricação: **592-2, Hwajeon-dong, Gangseo-gu, Busan, KOREA**

This certificate is valid until **26th December 2014**.
Este certificado é válido até 2014-12-28

SGS
José Fábão
Technical Manager

IPAC
accredited
2009
Inmetro

SGSPAPER
11952272

This document is issued, on the Client's behalf, by the Company under its General Conditions of Service printed reverse.
The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any other holder of this document is advised that information contained herein reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not constitute parties to a transaction from exercising all their rights and obligations under the transaction documents.

► DNV Type Approval

DNV

DET NORSKE VERITAS
TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **P-13778**

This is to certify that the
Butterfly Valves
with type designation(s)
SRS 910 wafer type, SRS 911 lug type, SRS 912 flanged type, SRS 916 wafer type, SRS 917 lug type and SRS 918 flanged type, SRS 924 wafer type, SRS 925 lug type, SRS 926 flanged type

Manufactured by
Cephas Pipelines Corp.
Pusan, Republic of Korea

is found to comply with
Det Norske Veritas' Rules for Classification of Ships
Det Norske Veritas' Standards for Certification 2.9 No. 5-794.40

Application
The valves may be used for the following systems: Fuel and lub. oil transfer (see certificate), Cargo oil (see certificate), Water ballast, Fresh and Seawater, Sanitary and Bilge (in connection with a non-return valve).

Temperature range:	See certificate
Max. working press.:	PN 10, PN 16 and PN 25 (Class 125 lbs and 150 lbs).
Sizes:	DN40 to DN1200 metric or 1 1/2" to 48" imperial

Hovik, 2011-03-09
for Det Norske Veritas AS

DNV
Marianne Sparren
Head of Section

This Certificate is valid until
2014-12-31

DNV
Dnyvind Skåra
Surveyor

This Certificate is subject to terms and conditions printed. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.
If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

DET NORSKE VERITAS AS, Veritasveien 1, NO-1322 Hovik, Norway. Tel.: +47 67 57 99 00, Fax: +47 67 57 99 11, Org.No. NO 945 748 931 MVA
Form No.: TA 1411a Issue: October 2009
www.dnv.com
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3. Certifications & Qualifications

▶ DSME QUALITY CERTIFICATE

Quality Certificate



DAEWOO SHIPBUILDING & MARINE ENGINEERING CO.,LTD.
certifies that the company and items below have been
assessed and found to comply with the requirements
of Quality Certificate of DSME.

Company Name : CEPHAS PIPELINES CORP.
Address : #595-2, Hwajeon-dong, Gangseo-gu,
Busan-city, Korea

Items : BUTTERFLY VALVES

Certificate No. : DSME-QM-11-0144
Valid Date : Feb. 28th, 2012


Sang-Tae Nam
President & CEO
Daewoo Shipbuilding & Marine Engineering Co., LTD.

▶ KHNP CERTIFICATE OF REGISTRATION



공급업체 등록증 Certificate of Registration

등록번호: Certificate No.	N0905-052	대표자: Chief Executive officer	조영득
상호: Company Name	㈜시퍼스파이프라인	사업자등록번호	603-81-20269
공장주소: Factory Location	부산시 사하구 다대1동 1520-7		
품명: Item Description	Butterfly Valve		
운용분야: Field in KHNP	원자력	품질등급: Quality Class	A
규격: Purchase Spec. No.	J234		

상기 업체는 우리 회사의 공급자관리지침에 따라 심사한 결과
보조기기 기자재 공급업체로 등록되었음을 증명합니다.
This is to certify that According to KHNP's qualification procedure, this
company has been registered on KHNP's Qualified Supplier List for the
above Item

(후면 등록업체 유의사항 참조)
See the notice for registered supplier

5/19/2009

자격유효기간 : 5/19/2009 ~ 5/18/2012
Period of Validity

한국수력원자력주식회사 사장

KOREA HYDRO & NUCLEAR POWER CO., LTD





3. Certifications & Qualifications

3.2 End User Approval

END USER	Country	Remark
ARAMCO	K.S.A.	Manifa Gas, Karan Gas, Yanbu
S.E.C (Saudi Electricity Company)	K.S.A	RABIGH 2, QURRAYYAH
SWCC	K.S.A	Shuaibah IWPP, Ras Al Khair
Saudi Methanol Company	K.S.A.	Al Razi Project
SABIC	K.S.A	Saudi Kayan Project
Royal Commission	K.S.A.	RC C45, C31R, C46 Project
MARAFIQ	K.S.A.	MARAFIQ Project
SHUQAIQ Company	K.S.A	Shuqaiq Project
Qatar Petroleum	Qatar	Vendor Approved
QEWG (Qatar Electricity & Water Co.)	Qatar	Ras Laffan, Ras Abu Fontas
DEWA (Dubai Electricity & Water Authority)	U.A.E	Jebel Ali L1, L2, M Station
ADWEA (Abu Dhabi Water & Electricity Authority)	U.A.E	Um Al Nar, Taweelah A2
TAKREER	U.A.E	Seawater Intake II, III, RRE #4,#7





3. Certifications & Qualifications

3.2 End User Approval

END USER	Country	Remark
UAE Offsets Group	U.A.E	Fujairah
GASCO	U.A.E	IGD HABSHAN 5, Habshan Acid Gas Flare Recovery
K.N.P.C (Kuwait National Petroleum Company)	Kuwait	
MHEW (Ministry of Housing, Water and Electricity)	Oman	SOHAR
MEW (Ministry of Electricity & Water)	Kuwait	Az Zour, Sabiya Ph1, 2 & 3
E.ON	U.K	Grain Power Plant
P.U.B (Public Utilities Board)	Singapore	Mandai Hill 68 and NIPE
KHNP (Korea Hydro & Nuclear Power Co)	Korea	Shin-Kori #1~4 / Shin-Wolsung #1~2
KNOC (Korea National Oil Corporation)	Korea	Yosu Petroleum Stockpile PJT / Koje Petroleum Stockpile PJT
KOGAS (Korea Gas Corporation)	Korea	Pyong-taek LNG





3. Certifications & Qualifications

3.3 Major Client

CLIENT	Country	Remark
Doosan Heavy Ind.	KOREA	RABIGH 2, RAS AL KHAIR
Hyundai Heavy Ind. Co.		AL-DUR, SABIYA
Hyundai E&C		ALKHALI-J, IGD HABSHAN
Samsung E&C		JER #3
Samsung Corporation.		SERAYA POWER / GMR / QURRAYYAH
GS E&C		MANIFA / RRE #7
Daelim E&C		JER #2B / YANBU #4
SK E&C		JER #5B / YANBU #2
Daewoo E&C		RRE #4 / Misurata & Benghazi /JORF LASFAR
Hanwha E&C		MARAFIQ
DSME (Daewoo Shipbuilding and Marine Engineering Co. Ltd.)		H1158~60(BULK) /H2230~40(LNGC)
KHNP (Korea Hydro & Nuclear Power Co)		Shin-kori #1, 2, 3, 4 / Shin-wolsung #1, 2





3. Certifications & Qualifications

3.3 Major Client

CLIENT	Country	Remark
JGC Corporation	Japan	GASCO IGD HABSHAN-5 BIR SEBA
MES (Mitsui Engineering and Shipbuilding)		RABIGH PC-2
Toshiba Corporation.		EL ATF/SIDI KRIR
Toshiba Plant System & Service Corp.		TANJUNG JABI B
Fuji Electric System		KAWERAU /LAHENDONG 4
MHI (Mitsubishi Heavy Ind. Co. Ltd.)		SHUQUIQ/ PACIFICO/ LINKOU
Hitachi Zosen		CBU /RRE
Hitachi Ltd.		EL AIN EL SOKHNA/ YOUNGHEUNG
Kawasaki Heavy Ind. Co.		Philippines MINDANAO





3. Certifications & Qualifications

3.3 Major Client

CLIENT	Country	Remark
ALSTOM POWER	Swiss / France Malaysia / China	GRAIN / PEMBROK / KEPPEL / TUAS /AZ ZOUR SOUTH /BANYAN/ LINKOU / MANJUING / TALIN / TANJUNG BIN
Dodsai Engineering & Construction	India	RAS LAFFAN
ESSAR	india	ESSAR OIL REFINERY
FISIA ITALIMPIANTI	Italy	JBM / JBL1&2 / SHUAIBAH NORTH / RAS ABU FONTAS A1
ANSALDO	Italy	YANBU
TECNIMONT	Italy	GASCO IGD HABSHAN-5
TECHNIP	France	PMP
TECNICAS REUNIDAS	Spain	SAUDI KAYAN
PETROFAC	U.A.E	KARAN UTILITY/ TURKMENISTAN GAS
CCC (Consolidated Contractors Int'l Company)	Mideast	RAS LAFFAN
Flour Daniel	U.S.A	





4. Major Job Reference

4.1 Power Plant Job Reference

POWER PLANT JOB REFERENCE

Date	Project Name	Engineering Company	End User	Item	Remark
Feb.-14	TAIWAN LIN-KOU PROJECT	ALSTOM POWER	Taiwan Power Company	NRV	Taiwan, DN1200
Dec.-13	NORTH BANGKOK PROJECT	ALSTOM POWER	ELECTRICITY GERNERATING AUTHORITY OF THAILAND	Concentric	Tailand, DN1500
Dec.-13	AZ ZOUR NORTH PROJECT	HYUNDAI HEAVY IND.	M.E.W. (MINISTRY OF ELECTRICITY & WATER)	Concentric / Eccentric / Triple / NRV	Kuwait, DN2800
Oct.-13	TAIWAN LIN-KOU PROJECT	ALSTOM POWER	Taiwan Power Company	NRV	Taiwan, DN1200
Sept.-13	SHOAIBA II CCPP PROJECT	DAELIM INDUSTRIAL CO., LTD.	SAUDI ELECTRICITY COMPANY(SEC)	Concentric / Eccentric / NRV	K.S.A, DN2250
May-13	TAIWAN LIN-KOU PROJECT	MITSUBISH HEAVY IND.	Taiwan Power Company	Concentric / Eccentric	TAIWAN, DN2250
Mar-13	Qurayyah Independent Power PJT	SAMSUNG C&T	SAUDI ELECTRICITY COMPANY(SEC)	Eccentric / Water Works/ Manual / MOV / NRV	K.S.A, DN1950
Oct-12	MANJUNG PROJECT	ALSTOM	TNB JANAMANJUNG	Concentric Type	Malaysia, DN900
Jul-12	RABIGH POWER PLANT NO.2 - FGD	DOOSAN HEAVY IND.	SAUDI ELECTRICITY COMPANY(SEC)	Concentric / Eccentric / Water Works/ NRV	K.S.A, DN1400
Jul-12	SHUWEIHAT S3 IPP	DEAWOO E&C	Shuweihat Asia Power Company	Concentric Type	U.A.E DN650
Jul-12	BANYAN PROJECT	ALSTOM POWER	SEMBCORP COGEN Pte. Ltd.	Concentric Type	Singapore, DN2000
Jun-12	SUR INDEPENDENT POWER PJT	DEAWOO E&C	PHOENIX POWER COMPANY (SAOC)	Concentric Type Eccentric Type	OMAN, DN2100





4. Major Job Reference

4.1 Power Plant Job Reference

POWER PLANT JOB REFERENCE

Date	Project Name	Engineering Company	End User	Item	Remark
May-12	JORF LASFAR THERMAL POWER 5&6	DEAWOO E&C	JORF LASFAR ENERGY COMPANY	NRV	Morocco, DN1950
May-12	RABIGH 2 PJT	DOOSAN HEAVY IND.	SAUDI ELCTRICITY COMPANY(SEC)	Concentric / Water works / NRV	K.S.A, DN3400
May-12	Gimcheon Community Energy Project	SK E&C	KOLON CORPORATION	Concentric Type	KOREA DN850
May-12	AZ ZOUR SOUTH CCGT-2 PJT	ALSTOM POWER	MEW	Concentric / Water works	Kuwait, DN1500
May-12	GMR Energy 2 x 400MW CCP PROJECT	SAMSUNG E&C	GMR GROUP	Waterworks type	Singapore, DN1950
Dec-11	TUAS PROJECT	ALSTOM POWER	TUAS POWER GENEATION	Concentric Type	Singapore, DN1350
Sep-11	KEPPEL II-A & II-B PJT	ALSTOM POWER	KEPPEL MERLIMAU COGEN Pte. Ltd.	Concentric Type	Singapore, DN2000
Jan-11	OMAN SHOAR & BARKA 2 & 3 PJT	GS E&C	OPWP	Concentric / Water works/ NRV	OMAN, DN1800
Apr-10	ALKHALIJ	HYUNDAI E&C	G.E.C.O.L	Concentric / water	LIBYA DN2800
Sep-10	SHIN-KORI NUCLEAR POWER PLANT #3,4	KOREA HUDRO & NEW CLEAR POWER ENG. CO.	KOREA HYDRO & NUCLEAR POWER	Waterworks type	Korea. DN2250
Sep-09	TANJUNG JATI B Project	TOSHIBA CORPORATION	P.T. CENTRAL JAVA POWER	Concentric Type	Indonesia. DN2400
Sep-09	Senboku N. G Power Plant	TOSHIBA CORPORATION	OSAKA GAS	Concentric Type	Japan, DN600
Aug-09	AL-DUR POWER PROJECT	HYUNDAI HEAVY IND	SUEZ and GULF INVESTMENT INC	Waterworks Type	Bahrain, DN1800
Feb-09	EL ATF Project	TOSHIBA PLANT SYS. & SER. CORP.	MIDDLE DELTA ELECTRICITY PRODUCTON COMPANY	Concentric Type	Egypt, DN1800
Feb-09	SIDI KRIR Project	TOSHIBA PLANT SYS. & SER. CORP.	WEST DELTA ELECTRICITY PRODUCTON COMPANY	Concentric Type	Egypt, DN1800





4. Major Job Reference

4.1 Power Plant Job Reference

POWER PLANT JOB REFERENCE					
Date	Project Name	Engineering Company	End User	Item	Remark
Mar-09	RAS LAFFAN C Project	HYUNDAI E&C	Q-POWER	Concentric Type	Qatar, DN3600
Feb-09	SHIN-WOLSUNG NUCLEAR POWER PLANT #1,2	KOREA POWER ENG CO	KOREA SOUTH POWER CO.	Waterworks Type	KOREA DN1800/2100
Feb-09	POWER SERAYA Project	SAMSUNG CORPORATION	POWERSERAYA LTD.	Combined Check	Singapore, DN2000
Apr-08	PACIFICO Project	MHI, NAKASAKI	COMMISSION FEDERAL DE ELECTRICIDAD	Waterworks type	Maxico. DN2400
Feb-08	MARAFIQ PROJECT	HYUNDAI HEAVY INDUSTRIES	MARAFIQ	Combined check	MARAFIQ DN2100
Jun-08	SHUQAIQ PROJECT	MHI	SHUQAIQ COMPANY (K.S.A)	Concentric Type	K.S.A , DN1800
Jul-08	GRAIN Project	ALSTOM POWER	EOn	Concentric Type	U.K. DN2200
Jun-08	AMBATOVY Power Plant	HYUNDAI E&C	AMBATOVY	Concentric Type	Madagascar DN1000
Sep-07	Kawerau Power Plant	FUJI ELECTRIC SYSTEM	MIGHT RIVER POWER	Concentric Type	Newzealand DN2250
May-07	TUANKU JAFAR POWER STATION	TOSHIAB CORP	TENAGA NASIONAL BERHAD (TNB)	Concentric Type	Malaysia DN800
Nov-06	JIMAH Power Plant	TOSHIBA CORPORATION	TOS Energy	Concentric Type	Malaysia DN1600
Jun-07	Tallawarra Power Plant	ALSTOM POWER	TRUenergy Tallawarra Pty Ltd.	Concentric Type	Australia. DN2400
Jun-05	Nam Jeju #3, 4 Desulfurization	DOOSAN HEAVY INDUSTRIES	KOREA SOUTH POWER CO.LTD	Waterworks type	Korea. DN1200
Jan-05	Hanwha E&C Dangjin Desulfurization	HANWHA E&C/STX ENGINEERING	KOREA SOUTH POWER CO.LTD	Concentric Type	Korea. DN400
Oct-05	ZAWIA CCPP PROJECT	HYUNDAI E&C	ZORCo.	Waterworks type	Libya. DN2200
Sep-05	Misurata Benghazi CCPP	DAEWOO E&C CO.LTD	G.E.C.O.L	Waterworks type	Libya. DN2100





4. Major Job Reference

4.1 Power Plant Job Reference

POWER PLANT JOB REFERENCE					
Date	Project Name	Engineering Company	End User	Item	Remark
Apr-05	Valladolid III Energy Center Mexico	TOSHIBA CORPORATION	BURNS & ROE ENTERPRISES.INC	Waterworks type	Mexico. DN1500
Mar-05	Mindanao 210MW Coal-Fired Power Plant	KAWASAKI HEAVY INDUSTRIES.LTD	STATE POWER DEVELOPMENT CORP	Waterworks type & Combined Check	Philippines. DN1500
Feb-05	Sohar Power Plant	DOOSAN HEAVY INDUSTRIES	MHEW	Waterworks Type	Oman. DN1800
Dec-04	3X700MW Coal-Fired Tanjung Bin	TOSHIBA CORPORATION	TANJUNG BIN POWER SDN.BHD	Waterworks type	Malaysia. DN1600
Jan-04	Shin-Wolsung Nuclear Power Plant #1.2	KOREA POWER ENGINEERING CO	KOREA ELECTRIC POWER CORP	Waterworks type	Korea. DN2100
Jan-04	Shin-Kori Nuclear Power Plant #1.2	KOREA POWER ENGINEERING CO	KOREA ELECTRIC POWER CORP	Waterworks type	Korea. DN2250
Jan-04	Pyong Taek Desulfurization Plant	HYUNDAI ENGINEERING	KOREA SOUTH POWER CO.LTD	Concentric Type	Korea. DN900
Oct-03	Ha Dong Power Plant	DAEWOO E&C CO.LTD	KOREA SOUTH POWER CO.LTD	Knife Gate Valve	Korea. DN400
Nov-03	Young Gwang Nuclear Power Plant	KOREA HYDRO&NUCLEAR POWER CO.LTD	KOREA HYDRO&NUCLEAR POWER CO.LTD	Concentric Type	Korea. DN600
Jul-03	Dangjin Power Plant #5 & #6	KOREA EAST-WEST POWER CO.LTD	KOREA EAST-WEST POWER CO.LTD	Waterworks type	Korea. DN1800
Jan-03	Young Heung Power Plant 3 & 4	DOOSAN HEAVY INDUSTRIES	KOREA ELECTRIC POWER CORP	Waterworks type	Korea. DN2250
Feb-03	Pusan Complex Thermal Power Plant	DOOSAN HEAVY INDUSTRIES	KOREA ELECTRIC POWER CORP	Waterworks type	Korea. DN1950
Feb-02	Lumut Power Plant	ALSTOM POWER	-	Concentric Type	Malaysia. DN750
May-01	Inchon Complex Termal Power Plant	DOOSAN HEAVY INDUSTRIES	KOREA ELECTRIC POWER CORP	Waterworks type	Korea. DN1800
Jan-01	Wolsung Nuclear Power Plant	DOOSAN HEAVY INDUSTRIES	KOREA ELECTRIC POWER CORP	Waterworks type	Korea. DN1200





4. Major Job Reference

4.2 Industrial Project (Oil & Gas, Offshore, etc) Job Reference

INDUSTRIAL PROJECT (Oil & Gas, Offshore, Etc)					
Date	Project Name	Engineering Company	End User	Item	Remark
Oct-12	HABSHAN ACID GAS FLARE RECOVERY PROJECT	DESCON ENG	GASCO	Triple Off-set	U.A.E, DN1200
Sept-12	Qatar Laffan Refinery DHT PJT	SAMSUNG ENGINEERING	LAFFAN REFINERY COMPANY LIMITED	Concentric /Double Eccentric	U.A.E, DN350
Jul-12	CALAMARL PH3/ WEST PORT TERMINAL EXPANSION PROJECT	MOTT MACDONALD	SHELL MALAYSIA	Triple Off-set	Malaysia, DN400
Jun-12	#2 BTX PROJECT	HYUNDAI HEAVY INDUSTRIES	HC PETROCHEM CO. LTD	Concentric /Double Eccentric/Triple Off Set	KOREA DN 900
Mar -12	DAESAN MMA/PMMA 2D PROJECT	HYUNDAI ENGINEERING CO. LTD	DAESAN MMA CORPORATION	Concentric /Double Eccentric	KOREA DN1100
Mar -12	Inter Refineries Pipelines - II Project	GS E&C	Takreer (Abu Dhabi Oil Refining)	Concentric Type	U.A.E. DN 600
Mar -12	YANBU #2 / #3 / #4	SK E&C, DAERIM E&C	ARAMCO	Double Eccentric	K.S.A DN1200
Mar.-12	Turkmenistan Gas Project	PETROFAC	Turkmenistan Gas	Double Eccentric	Turkmenistan DN900
Mar.-12	RUWAIS REFINERY EXPANSION #4 Project	DAEWOO E&C	TAKREER	Concentric Type	U.A.E. DN 900
Oct -11	PMP Project	TECHNIP	QATAR GAS	Double Eccentric & Triple	QATAR DN1150
Sept -11	KARAN UTILITES AND CO GENERATION Project	PETROFAC	ARAMCO	Double Eccentric	K.S.A. DN500
Sept -11	Sea Water Intake III Project	TARGET	ADNOC (TAKREER)	Double Eccentric & Combined.	U.A.E. DN1600
Jan-11	RUWAIS REFINERY EXPANSION #7 Project	GS E&C	TAKREER	Triple Off-set	U.A.E. DN 900
Jun-10	IGD HABSHAN-5 Project	Hyundai E&C, JGC, Tecnimont	GASCO	Concentric & Triple	U.A.E. DN1200
May-10	JUBAIL #2 & 3 & 5 Project	DAELIM, SK, SAMSUNG E&C	ARAMCO	Double Eccentric	K.S.A. DN1500





4. Major Job Reference

4.2 Industrial Project (Oil & Gas, Offshore, etc) Job Reference

INDUSTRIAL PROJECT (Oil & Gas, Offshore, Etc)					
Date	Project Name	Engineering Company	End User	Item	Remark
Dec-09	MANIFA Project	GS E&C	ARAMCO	Double Eccentric	K.S.A. DN1400
Sep-09	MA'ADEN Project	LITWIN Switzerland Ltd.	Saudi Arabian Mining Co.	Concentric Type	K.S.A. DN1000
Mar-09	RAS LAFFAN COMMON COOLING SEA WATER SYSTEM PH 2	CONSOLIDATED CONTRACTORS GROUP (CCC)	QATAR PETROLEUM	Concentric Type	QATAR, DN500
Feb-09	EMAL Project	SNC LAVIN	EMIRATE ALUMIUM	Concentric & Triple	U.A.E. DN900
Feb-09	SAUDI KAYAN Project	TECNICAS REUNIDAS	SAUDI KAYAN / SABIC	Double Eccentric & Concentric	K.S.A. DN1350
Dec-08	Sea Water Intake II Project	Galfar E&C	ADNOC (TAKREER)	Double Eccentric & Concentric, Combined.	U.A.E. DN2200
Jul-06	RABIGH PC-2	Mitsui Engineering & Shipbuilding	Rabigh Refining & Petrochemical	Triple Off-set	K.S.A. DN900
Apr-06	AR-RAZI V	MITSUBISHI HEAVY INDUSTRY	SAUDI METHANOL COMPANY	Concentric Type	K.S.A. DN1500
Mar-06	OMAN SOHAR FERTILIER	MITSUBISHI HEAVY INDUSTRY	SIUCI	Concentric Type	OMAN DN2000
Jun-05	YOSU Petroleum Stockpile	KNOC	KNOC	Eccentric Type	Korea DN1000
Apr-05	KOJE Petroleum Stockpile	KNOC	KNOC	Eccentric Type	Korea DN700
Dec-05	C-PTA	MITSUBISHI HEAVY INDUSTRY	NINGBO MITSUBISHI CHEMICAL CORP	Concentric Type	China. DN1400
Dec-03	YANACocha	FLUOR DANIEL	YANACocha	Eccentric Type	Peru. DN750





4. Major Job Reference

4.2 Industrial Project (Oil & Gas, Offshore, etc) Job Reference

INDUSTRIAL PROJECT (Oil & Gas, Offshore, Etc)					
Date	Project Name	Engineering Company	End User	Item	Remark
Feb-03	POSCO	POSCO	POSCO	Concentric Type	Korea DN600
Dec-03	Kellogg Brown & Root	KELLOGG BROWN&ROOT	US ARMY	Eccentric Type	U.S.A DN400
Sep-03	BP / Thunderhorse Offshore	WLH	BRITISH PETROLEUM	Concentric Type	U.K DN1050
Mar-03	Technip/Kerr-McGee Thunderhose Offshore	WLH	TECHNIP/Kerr-McGee	Concentric Type	U.K DN1050
Mar-03	Technip Thunderhorse Offshore	WLH	TECHNIP	Concentric Type	U.K DN1050
Feb-03	Technip Rauma Offshore	WLH	TECHNIP	Concentric Type	DN1050
Jul-02	K4	SAMNAM PETROCHEMICAL	-	Concentric Type	Korea. DN1200
Mar-00	MADERO PROJECT	SK E&C	-	Concentric Type	Maxco, DN900
Sep-99	British Petroleum Offshore	WLH	BRITISH PETROLEUM	Concentric Type	U.K DN950
Jul-99	EGYPT SUGAR PLANT PJT	TECOFI	-	Concentric Type	Egypt, DN1200





4. Major Job Reference

4.3 Desalination Job Reference

DESALINATION PROJECT JOB REFERENCE					
Date	Project Name	Engineering Company	End User	Item	Remark
May-12	RAS AL KHAIR	DOOSAN HEAVY IND	S.W.C.C	Waterworks Type Combined Check	K.S.A DN1900
Aug-09	AL DUR PROJECT	HYUNDAI HEAVY IND.	AL DUR POWER AND WATER CO.	Waterworks Type Combined Check	BAHRAIN, DN1800
Oct-08	Shuaibah North Project	FISIA ITALIMPIANTI	M.E.W	Waterworks Type Combined Check	KUWAIT, DN2600
Jul-08	JEBEL ALI "M" Station	FISIA ITALIMPIANTI	D.E.W.A	Waterworks Type Combined Check	U.A.E. DN2400
Jan-08	Shuqaiq (RO) Project	MHI, NAKASAKI	SHUQAIQ COMPANY	Concentric Type	K.S.A. DN1800
Jan-08	RAS ABU FONTAS A1 Blending	FISIA ITALIMPIANTI	Q.E.W.C	Concentric Type	QATAR DN1300
Dec-07	RAS ABU FONTAS A1	FISIA ITALIMPIANTI	Q.E.W.C	Waterworks Type Combined Check	QATAR, DN2200
Oct-07	MARAFIQ	HYUNDAI HEAVY IND.	MARAFIQ	Waterworks Type Combined Check	K.S.A., DN2000
Aug-06	Shuaibah IWPP Ph.3	DOOSAN HEAVY INDUSTRIES	SALINE WATER CONVERSION CORP	Waterworks Type	K.S.A. DN1800
Mar-06	Jebel Ali "L" Desalination Phase II	FISIA ITALIMPIANTI	D.E.W.A	Waterworks Type	Dubai. DN2200
Apr-06	Ras Abu Fontas B2(Blending)	FISIA ITALIMPIANTI	QATAR ELECTRICITY&WATER CORP	Concentric Type	Qatar. DN1200
Feb-06	Ras Abu Fontas B2 Desalination	FISIA ITALIMPIANTI	QATAR ELECTRICITY&WATER CORP	Waterworks Type	Qatar. DN2500





4. Major Job Reference

4.3 Desalination Job Reference

DESALINATION PROJECT JOB REFERENCE					
Date	Project Name	Engineering Company	End User	Item	Remark
Feb-06	Sabiya Ph.3	DOOSAN HEAVY INDUSTRIES	MINISTRY OF ENERGY(KUWAIT)	Combined Check	KUWAIT. DN2400
Feb-05	Sohar Desalination	DOOSAN HEAVY INDUSTRIES	MHEW	Waterworks Type	Oman. DN1800
Feb-05	Ras Laffan Desalination	DOOSAN HEAVY INDUSTRIES	QATAR ELECTRICITY&WATER CORP	Waterworks Type	Qatar. DN2500
Dec-04	Um Al Nar Extension	HITACHI ZOSEN	D.E.W.A	Concentric Type	U.A.E. DN600
Feb-04	Sabiya Desalination	DOOSAN HEAVY INDUSTRIES	MINISTRY OF ENERGY(KUWAIT)	Waterworks Type	KUWAIT. DN2400
Feb-04	Jebel Ali "L" (Blending)	FISIA ITANLIMPIANTI	D.E.W.A	Waterworks Type	Dubai. DN1400
Feb-04	Jebel Ali "L" Phase I	FISIA ITANLIMPIANTI	D.E.W.A	Waterworks Type	Dubai. DN2400
Jan-03	Shuweihat	FISIA ITANLIMPIANTI	CMS	Waterworks Type	U.A.E. DN1000
May-02	Fujairah (Plant)	DOOSAN HEAVY INDUSTRIES	UAE OFFSETS GROUP	Concentric Type	U.A.E. DN850
Apr-02	Fujairah	DOOSAN HEAVY INDUSTRIES	UAE OFFSETS GROUP	Waterworks Type	U.A.E. DN2400
Jan-01	Umm Al Nar	DOOSAN HEAVY INDUSTRIES	ADWEA	Waterworks Type	U.A.E. DN2400
May-00	Az-Zour	KOREA HEAVY INDUSTRIES	MEW	Concentric Type	KUWAIT. DN1400
Mar-00	Al-Taweelah A2	KOREA HEAVY INDUSTRIES	ADWEA	Waterworks Type	U.A.E. DN2400





4. Major Job Reference

4.4 Water Treatment Project Job Reference

WATER TREATMENT PROJECT

Date	Project Name	Engineering Company	End User	Item	Remark
Aug-10	MARAFIQ STG UNIT 5 & 6 PJT	HAN-WHA E&C	MARAFIQ	Waterworks(MOV)	K.S.A DN3400
Jun-10	RC 065 C46R Project	SAUDI BINLADIN	ROYAL COMMISSION	Waterworks	K.S.A DN3000
Jun-09	MANDAI HILL 68 Project	JURONG PRIMEWIDE PTE LTD.	PUBLIC UTILITY BOARD(P.U.B)	Concentric Type	Singapore, DN2200
Dec-08	RC 065 C45 Project	AZMEEL	ROYAL COMMISSION	Concentric Type	K.S.A DN3000
Nov-07	RC 072 C31R Project	AL-HARBI	ROYAL COMMISSION	Concentric Type	K.S.A DN2800
Apr-04	P&E Infrastructure, RC	SAUDI BINLADIN	ROYAL COMMISSION	Concentric Type	K.S.A DN1800
Sep-03	Raw Water Supply System Stage 2	VALVECO	GALDSTONE AREA WATER BOARD	Waterworks	Australia. DN900
Aug-03	Shatin Sewage Treat Works	JUMBO RICH	-	Concentric Type	Hong Kong. DN1000
Jul-03	East Pump Station Expansion	AL-SUWADI	ROYAL COMMISSION	Waterworks	K.S.A DN1400
Aug-98	Kruzen	PACE	NORTHERN PROVINCE WATER AUTHORITY	Waterworks	South Africa. DN1500
Jan-98	North South Carrier Water	PACE	NORTHERN PROVINCE WATER AUTHORITY	Waterworks	South Africa. DN1200
Dec-93	Pub Johorbaru 2nd Pipeline scheme	SEMBAWANG	PUBLIC UTILITY BOARD SINGAPORE	Waterworks	Malaysia. DN2100





4. Major Job Reference

4.5 Triple offset Butterfly valve Job Reference

Triple offset Butterfly valve Job Reference

Date	Project Name	Engineering Company	End User	Item	Remark
Oct-12	HABSHAN ACID GAS FLARE RECOVERY PROJECT	DESCON ENG	GASCO	TRIPLE OFFSET	U.A.E, DN1200
Jul-12	CALAMARL PH3/ WEST PORT TERMINAL EXPANSION PROJECT	MOTT MACDONALD	SHELL MALAYSIA	TRIPLE OFFSET	Malaysia, DN400
Jun-11	Turkmenistan Gas Desulfurization Plant	HYUNDAI ENGINEERERENG	TURKMENGAS	TRIPLE OFFSET	Turkmenistan DN900
Jan-11	RUWAIS REFINERY EXPANSION #7 Project	GS E&C	TAKREER	TRIPLE OFFSET	U.A.E. DN 900
Jun-10	IGD HABSHAN-5 Project	Hyundai E&C, JGC, Tecnimont	GASCO	TRIPLE OFFSET	U.A.E. DN1050
May-10	E-MAL PROJECT		EMIRATES ALUMIMUM CO.LTD	TRIPLE OFFSET	U.A.E DN300
Dec-09	YANBU PROJECT	ANSALDO	SWCC	TRIPLE OFFSET	K.S.A DN1600
May-09	E-MAL PROJECT		EMIRATES ALUMIMUM CO.LTD	TRIPLE OFFSET	U.A.E DN600
Oct-08	RUSSIA PROJECT	IBC PRAHA	-	TRIPLE OFFSET	RUSSIA, DN1000
Apr-07	RABIGH PC2 PROJECT	MES	ARAMCO	TRIPLE OFFSET	K.S.A. DN900
Sep-06	JEBEL ALI "L" STATION	FISIA ITALIMPIANTI	DEWA	TRIPLE OFFSET	U.A.E. DN1400
Aug-05	JEBEL ALI L1 POWER STATION	TOSHIBA CORP	DEWA	TRIPLE OFFSET	U.A.E. DN900
Aug-04	DRAGON SPECIAL RESIN (XIAMEN) PLANT	DRAGON SPICAL RESIN CO.LTD	-	TRIPLE OFFSET	CHINA, DN300
Mar-03	-	MERIDIAN	-	TRIPLE OFFSET	CANADA, DN400





5. Facilities

5.1 Body & Seat Leakage Test



- ▶ Size : DN100 ~ DN1000
test Pressure : Up to 200 Kg/cm²
(For High Pressure)



- ▶ Size : DN1050 ~ DN2550
test pressure : Up to 50 Kg/cm²

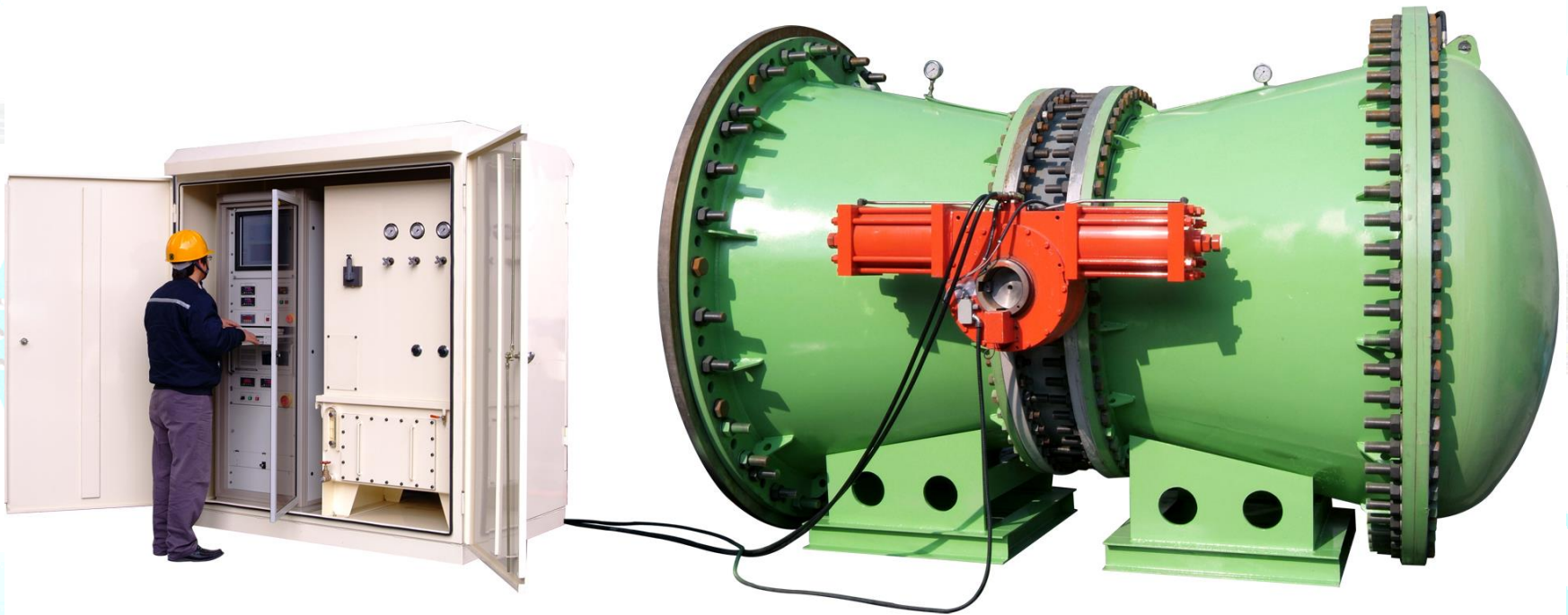




5. Facilities

5.2 Cycling Test

► Size : DN1800 and DN2400



5. Facilities

5.3 Small Size Operated 10,000 times for Cycling Test

► Durability test according to AWWA C 504

Test pressure : 23 bar / Operated 10,000 times for Cycling Test



TEST REPORT

Test Order No. 00000000000000000000
Test Name: 00000000000000000000
Customer Name: 00000000000000000000
Tester Name: 00000000000000000000

Item No.	Test Date	Cycling Test		Bat Capacity - 1		Bat Capacity - 2		Temperature (°C)		Remarks
		Pass/Fail	Time of Measurement	Absolute Time min	Time min	Operating Time min	Charge min	Discharge min	Charge min	
1	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
2	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
3	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
4	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
5	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
6	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
7	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
8	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
9	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
10	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
11	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
12	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
13	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
14	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
15	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
16	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
17	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
18	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
19	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
20	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
21	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
22	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
23	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
24	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
25	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
26	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
27	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
28	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
29	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	
30	01/11	Pass	01/11	01/11	01/11	01/11	01/11	01/11	01/11	

[illegible][illegible]



5. Facilities

5.4 Flow Rate Tester

- ▶ **Applicable Test Size : DN 100A ~600A**
- ▶ **Data Acquisition : A various data is automatically saved in the computer as per the pressure, temperature, flow velocity, flow rate.**
 - CV Value
 - Torque Data



CEPHAS PIPELINES CORP. CEPHAS PIPELINES CORP. CEPHAS PIPELINES CORP. CEPHAS PIPELINES CORP.



6. Sub-Vendor list

NO	Subsupplier	Location	Work Scope	Certificate	Certificate No & Date	Material	Remark
1	HWA SUNG METAL IND. CO	365-4,NamYang-Dong,JinHae, KyungNam, Korea	VALVE BODY & DISC	ISO 9001	EQAICC-Q-R533 2001.12.19	Ductile Iron & Cast IRON	Foundry
2	MA CHUN CAST CO. LTD	360-5,NamYang-Dong,JinHae, KyungNam,Korea	VALVE BODY & DISC	KS	00-4274 2000.12.15	Ductile Iron & Cast IRON	Foundry
3	WOOIL FOUNDRY CO.	365-5,NamYang-Dong,JinHae, KyungNam,Korea	VALVE BODY & DISC	DNV, GL, BV, Lloyd, KR	AMM-2959	Ductile Iron & Cast IRON	Foundry
4	SAMJUNG SUPERALLOYS CO.,LTD.	254-15, bukok-ri, jangyu-myeon, kimhae-si, KyungNam, Korea	VALVE BODY & DISC	ISO 9001	K01-2050	Cast Steel & Stainless Steel	Foundry
5	DAE SHIN METAL CO., LTD	956-8,GamJeun-Dong, SaSang-Gu, Busan, Korea	VALVE BODY & DISC	KR, Lloyd's, DNV	BSN80018-SC001 MD00/2943/0001/2 AMM-1784	Cast Steel & Stainless Steel	Foundry
6	SERON CASTECH	416, UiJeon-ri, JinYeong-eup, kimhae-si, KyungNam, Korea	VALVE BODY & DISC			Cast Steel & Stainless Steel	Foundry
7	DAERIM METAL CO., LTD	1174-3, Jisa-Dong, Gangseo-gu, Busan, Korea	VALVE BODY & DISC	ISO 9001		Cast Steel & Stainless Steel	Foundry
8	S Y METAL CO.LTD.	1000-7,Gomo-Ri,Jille-Myeon, Gimhae, KyungNam, Korea	VALVE BODY & DISC	ISO 9001	QMS-0959 2001.3.23	Copper Alloy	Foundry
9	SHIN DAE RYUCK METAL CO.	170-11, Gamjeon-Dong, Sasang-Gu, Busan, Korea	VALVE BODY & DISC	ISO 9001	QI5885/08	Copper Alloy	Foundry
10	SAM WOO METAL CO.,LTD	25-4, SanBon-ri, Jille-Myeon, Gimhae, KyungNam, Korea	VALVE BODY & DISC	ISO 9001	QMS-1343, 2011-08-09	Copper Alloy	Foundry





6. Sub-Vendor list

NO	Subsupplier	Location	Work Scope	Certificate	Certificate No & Date	Material	Remark
11	MYUNG JIN TSR CO., LTD.	1274-6,SongJung-Dong, KangSeo-Gu, Busan,Korea	SEAT & Rubber Lining	QS 9000	QS 7006	Rubber	
12	VISER CO.,LTD.	432-1, Shincheon-ri, Hallim-myeon, kimhae-si, KyungNam, Korea	SEAT	ISO 9001 ISO 14001	SEO 0041018, 20 Nov 2004 SEO 6006746 , 6 April 2009	Rubber	
13	SHIN HAN RUBBER	1034-2,Gomo-Ri, Gimhae-Si, Kyungnam, Korea	SEAT	ISO 9001	QSC043706 , JUN. 25, 2004	Rubber	
14	POSCO SPECIAL STEEL	65, Shinchon-Dong, Changwon-City, Kyungnam	SHAFT	ISO 9001		Round Bar	
15	KPCM	115, Dukchon-ri, Wachon-myeon, Kyeongsan-si, Kyeongbuk, Korea	SHAFT	ISO 9001		Round Bar	MONEL and Special Material
16	MAHER	ENGLAND	SHAFT			Round Bar	MONEL and Special Material
17	TMG KOREA CO.LTD.	#5171-1, Daejeo2-Dong, Gangseo-Gu, Busan, Korea	GEAR BOX			Gear box	
18	SAMBO INDUSTRIAL CO.,LTD	561-9, KwaeBupDong, SaSang-Gu, Busan, Korea	GEAR BOX	ISO 9001 Lloyd's		Gear box	
19	AUMA	GERMANY	ACTUATOR			-	
20	ROTORK	ENGLAND	ACTUATOR			-	
21	KNDE CO., LTD	1274-6,HaDan-Dong,SaHa-Gu, Busan,Korea	NDE	ISO 9001	FS 74549	-	

