

WELCOME TO ACE VALVE

THE BETTER FUNCTION, QUALITY, DELIVERY AND PRICE !!



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Introduction

ACE VALVE CO.,LTD.

Glance at Ace Valve

- Founded April 20 in the year of 2000 (20 years old company)
- No. of total employees : 85 persons
- No. of engineers : 24 persons
- Products : Ball(Including API-6DSS), Gate, Globe, Check, Butterfly, Cryogenic valves.
- Production capacity: 130,000 sets of valve in a year.
- Export to 57 countries, 328 contractors, 734 end-users worldwide.
- Having worked with Petronas, ARAMCO, SABIC, KNPC, KOC, ExxonMobil, Chevron, Petrofac, TechnipFMC, Saipem, Tecnicas Reunidas, JGC, Hyundai Heavy Industries, Samsung Heavy Industries, Daewoo Shipbuilding & Marine Engineering.
- Acquired SIL Certificate from TUV, UL Certificate for Post Indicator Valve, Lloyd's certificate for Cryogenic valve.
- Designated by Korean Government Authority as a Developer for Subsea valve (Sil 3 / 3000m sea Depth) Research and Development Project.
- Designated by Korean Government Authority as a Manufacturer for Floating Offshore LNG Bunkering System Project

General Information

ACE VALVE CO.,LTD.

HEAD OFFICE



MACHINING FACTORY #1~#3



MACHINING FACTORY #4



ASSEMBLY FACTORY



Company History



2000

APR. ESTABLISHED AS ACE VALVE COMPANY LIMITED

AUG. QUALIFIED BY BVQI FOR ISO 9001

REGISTERED ON AVL OF HYUNDAI HEAVY INDUSTRIES CO., LTD.

2001

AUG. REGISTERED ON AVL OF HITACHI ZOSEN CORPORATION IN JAPAN

SEP. REGISTERED ON AVL OF SAMSUNG HEAVY INDUSTRIES CO., LTD. IN KOREA

OCT. REGISTERED ON AVL OF DAEWOO SHIPBUILDING & MARINE ENGINEERING CO.,LTD IN KOREA

NOV. REGISTERED ON AVL OF STX SHIPBUILDING CO., LTD. IN KOREA

DEC. REGISTERED ON AVL OF GREAT MAN-MADE RIVER AUTHORITY IN LIBYA

OBTAIN FIRE SAFE TYPE APPROVAL CERTIFICATE FOR BUTTERFLY VALVE

2002

MAR. REGISTERED ON AVL OF UNIVERSALSHIPBUILDING CORPORATION IN JAPAN

JUN. DESIGNATED AS AN SUPERIOR EXPORTING FIRM BY KOREA AUTHORITY

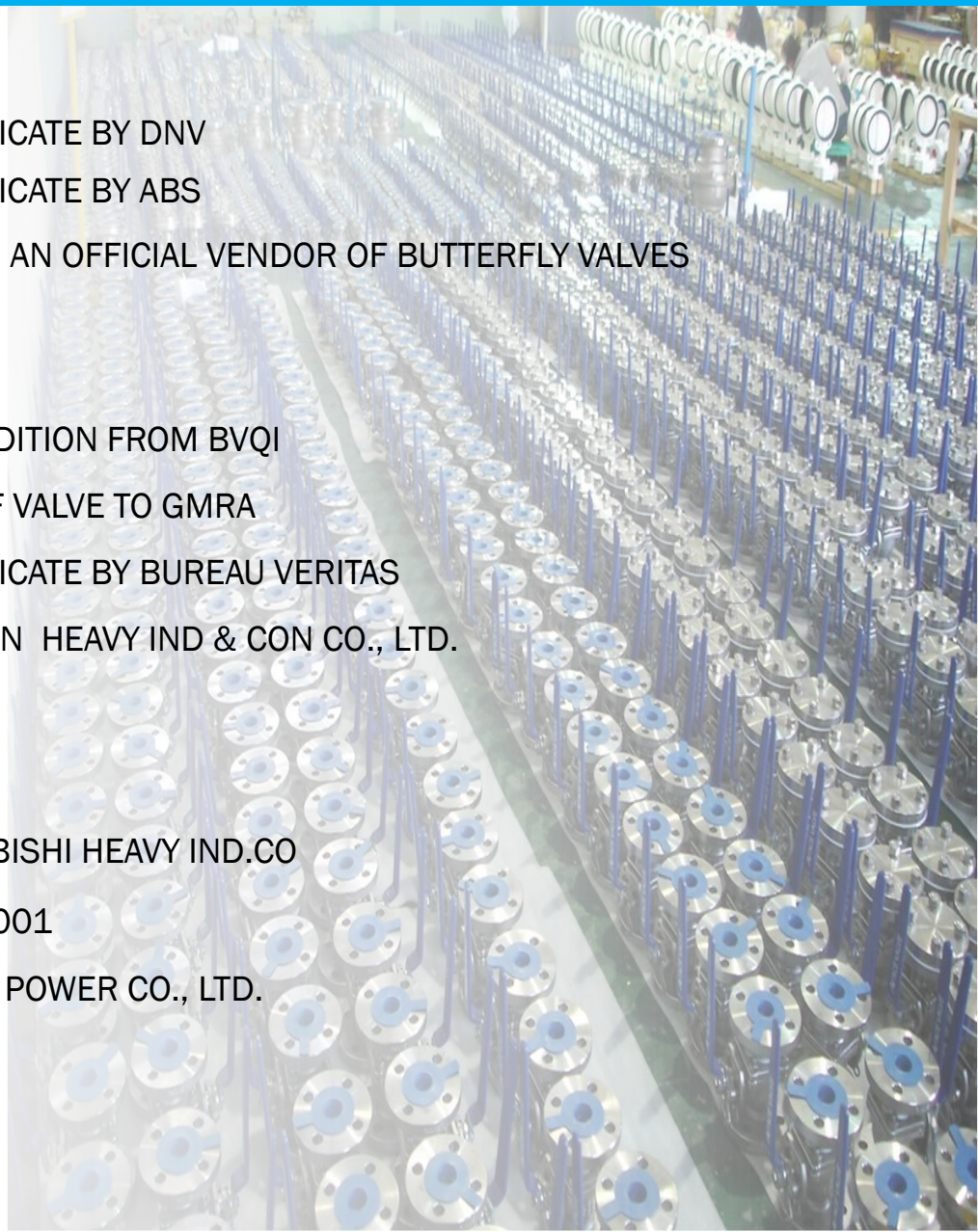
JUL. DELIVERED 2400MM 24BAR BUTTERFLY VALVE TO GMRA

DESIGNATED AS AN EXCELLENT INNO-BIZ FIRM BY KOREA AUTHORITY

DELIVERED LNG CRYOGENIC BUTTERFLY VALVE TO OSAKA VALVE

Company History

ACE VALVE CO.,LTD.



2003

FEB. OBTAIN TYPE APPROVAL CERTIFICATE BY DNV

MAY. OBTAIN TYPE APPROVAL CERTIFICATE BY ABS

APPROVED BY EXXON MOBIL AS AN OFFICIAL VENDOR OF BUTTERFLY VALVES

2004

FEB. OBTAIN ISO 9001 WITH 2000 EDITION FROM BVQI

MAR. DELIVERED AIR VACUUM RELIEF VALVE TO GMRA

JUL. OBTAIN TYPE APPROVAL CERTIFICATE BY BUREAU VERITAS

NOV. REGISTERED ON AVL OF DOOSAN HEAVY IND & CON CO., LTD.

2005

FEB. REGISTERED ON AVL OF MITSUBISHI HEAVY IND.CO

MAR. QUALIFIED BY BVQI FOR ISO 14001

OCT. REGISTERED ON AVL OF KOREA POWER CO., LTD.

Company History



2006

JAN. REGISTERED ON AVL OF MINISTRY OF ENERGY STATE OF KUWAIT (MEW)

MAR. REGISTERED ON AVL OF FISIA ITALIMPIANTI S.P.A

APR. OFFICIALLY CERTIFIED for RESEARCH & DEVELOPMENT INSTITUTE BY AUTHORITY

SEP. REGISTERED ON AVL OF SAUDI ARAMCO

DEC. DEVELOPED GLOBE VALVE FOR LPG

2007

MAY. DELIVERED TRIPLE ECCENTRIC METAL SEAT BUTTERFLY VALVE

DELIVERED MECHANICAL COUPLING PN25×2400MM FOR GMRA PROJECT

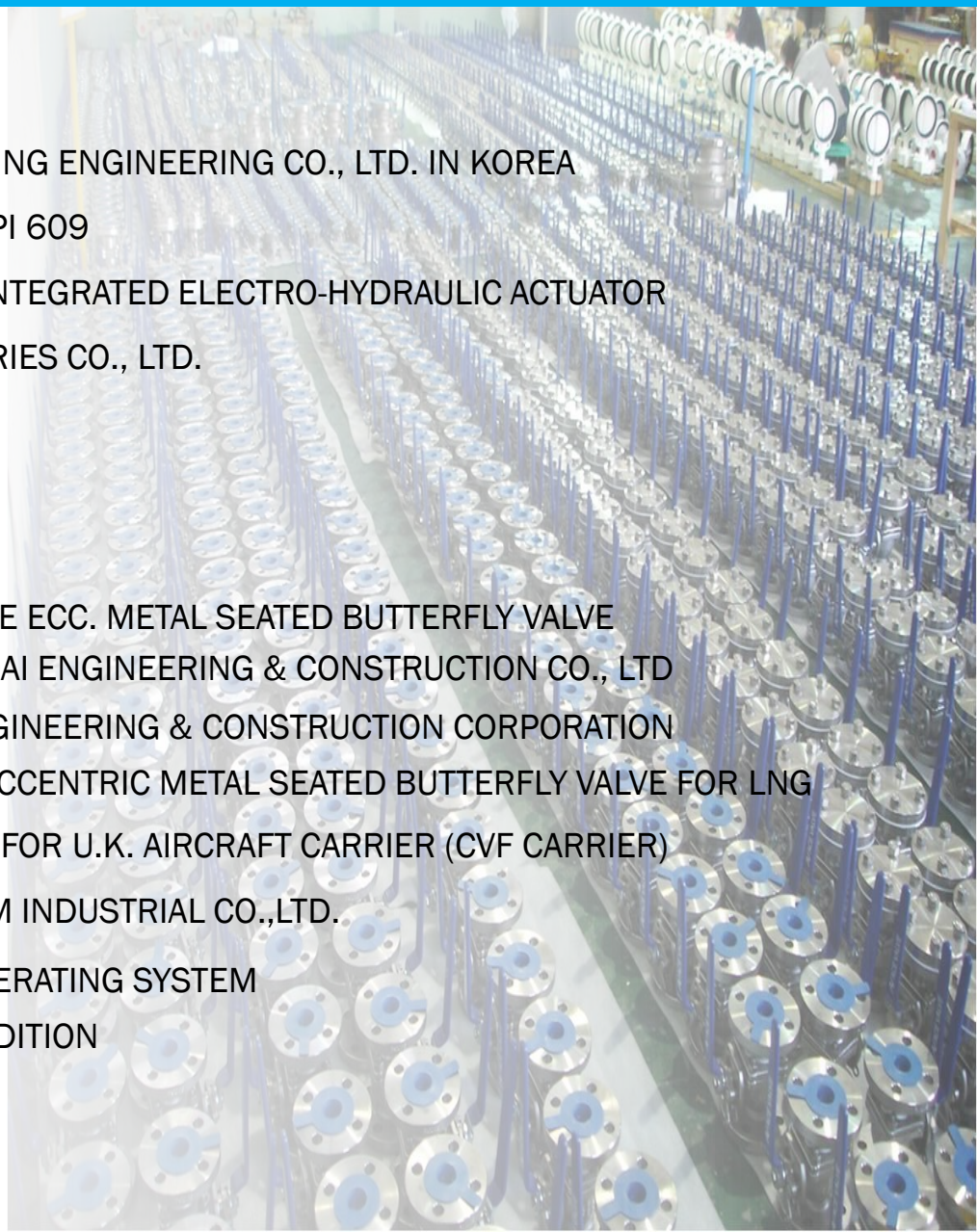
SEP. REGISTERED ON AVL OF KUWAIT OIL COMPANY

OCT. DESIGNATED DEVELOP OF CRYOGENIC GLOBE VALVE FOR LNG BY KOREA MINISTRY

NOV. APPROVED AS OFFICIAL VENDOR BY KUWAIT NATIONAL PETROLEUM COMPANY

REGISTERED ON AVL OF POSCO ENGINEERING & CONSTRUCTION CO., LTD.

Company History



2008

JAN. OBTAIN CE MARK CERTIFICATE

APR. REGISTERED ON AVL OF SAMSUNG ENGINEERING CO., LTD. IN KOREA

JUN. OBTAIN API MONOGRAM FOR API 609

JUL. TECHNOLOGY TRANSFER FOR INTEGRATED ELECTRO-HYDRAULIC ACTUATOR FROM HYUNDAI HEAVY INDUSTRIES CO., LTD.

2009

JAN. OBTAIN GOST-R CERTIFICATE

MAR. DEVELOPED CLASS 2500 TRIPLE ECC. METAL SEATED BUTTERFLY VALVE
REGISTERED ON AVL OF HYUNDAI ENGINEERING & CONSTRUCTION CO., LTD

APR. REGISTERED ON AVL OF GS ENGINEERING & CONSTRUCTION CORPORATION
DELIVERED 1050MM (TRIPLE ECCENTRIC METAL SEATED BUTTERFLY VALVE FOR LNG

JUN. DELIVERED BUTTERFLY VALVES FOR U.K. AIRCRAFT CARRIER (CVF CARRIER)

OCT. REGISTERED ON AVL OF DAERIM INDUSTRIAL CO.,LTD.

DEC. DEVELOPED VALVE REMOTE OPERATING SYSTEM
OBTAIN ISO 9001 WITH 2008 EDITION

Company History



2010

JAN. DELIVERED VALVE REMOTE OPERATING SYSTEM

REGISTERED ON AVL OF GASCO

JUN. APPROVED BY HYUNDAI HEAVY INDUSTRIES AS VALVE REMOTE CONTROL SYSTEM MANUFACTURER

AUG. DELIVERED GATE, BUTTERFLY AND SWING CHECK VALVE FOR GASCO RUWAIS FOR GASCO 5th NGL TRAIN PROJECT

DEC. DELIVERED BALL, GATE, CHECK, GLOBE, AND BUTTERFLY VALVE FOR TAKREER SEAWATER INTAKE-3 PROJECT

2011

JUN. OBTAIN ASME 'N' & 'NPT' STAMP

OBTAIN FIRE SAFE TYPE APPROVAL CERTIFICATE FOR BALL VALVE

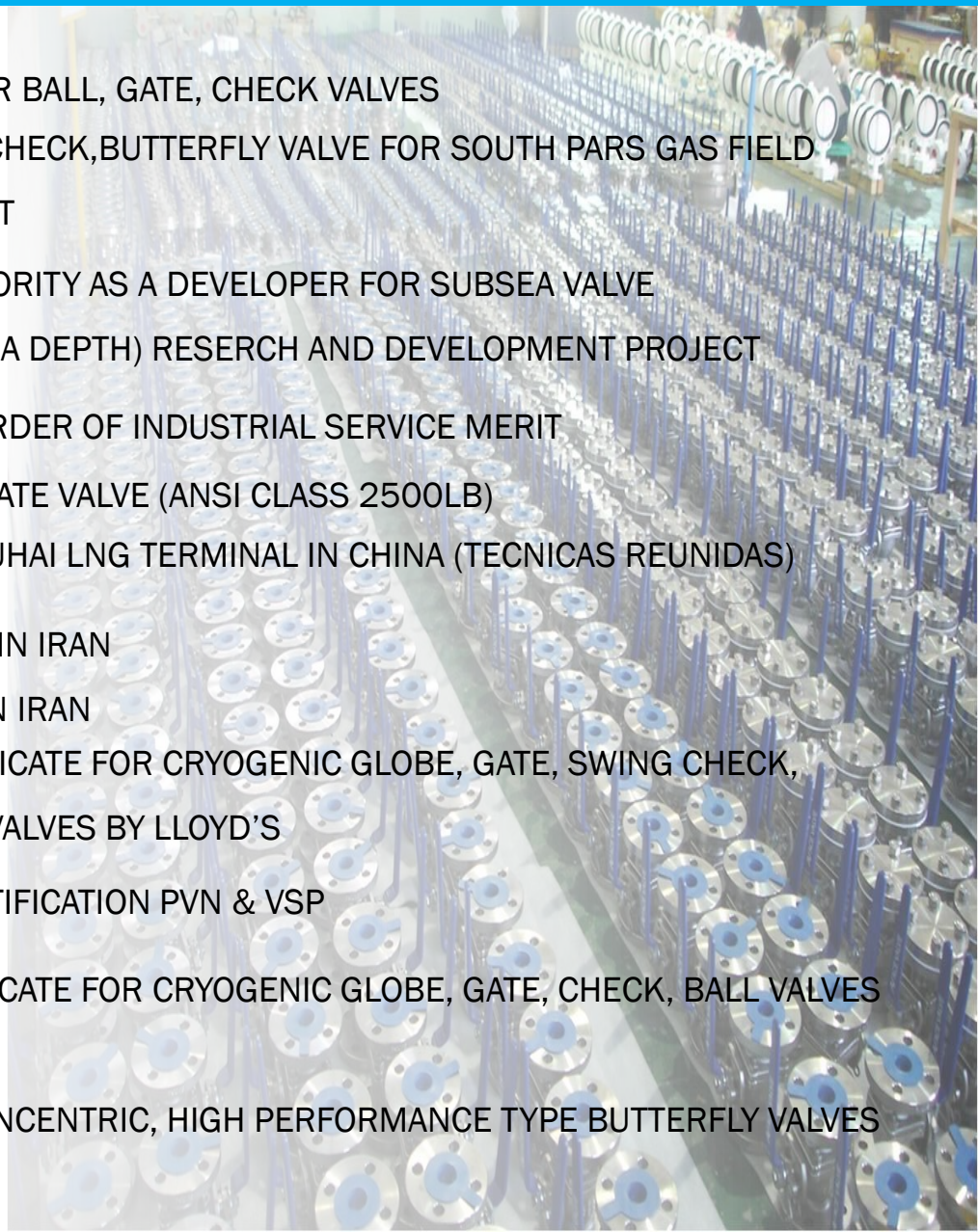
JUL. DELIVERED SHUTDOWN BALL VALVE (364PCS) FOR SOUTH PARS GAS FILED ON-SHORE PROJECT

SEP. DELIVERED MOTORIZED BALL VALVE (2,200PCS) FOR FOROOZAN OFFSHORE PROJECT

OCT. DELIVERED BUTTERFLY VALVE FOR RAS AL KHAIR POWER AND DESALINATION PLANT IN KSA (DOOSAN HEAVY INDUSTRIES)

DEC. DELIVERED LNG VALVES FOR MEJILONES LNG STORAGE TANK IN CHILE (TECNICAS REUNIDAS)

Company History



2012

MAY. OBTAIN API-6D MONOGRAM FOR BALL, GATE, CHECK VALVES

DELIVERED BALL,GATE,CLOBE,CHECK,BUTTERFLY VALVE FOR SOUTH PARS GAS FIELD ON-SHORE PROJECT

JUL. DESIGNATED BY KOREAN AUTHORITY AS A DEVELOPER FOR SUBSEA VALVE (SIL 3 / 3000M SEA DEPTH) RESERCH AND DEVELOPMENT PROJECT

DEC. AWARDED THE GOLD TOWER ORDER OF INDUSTRIAL SERVICE MERIT

DEVELOPED PRESSURE SEAL GATE VALVE (ANSI CLASS 2500LB)

DELIVERED LNG VALVES FOR ZUHAI LNG TERMINAL IN CHINA (TECNICAS REUNIDAS)

2013

JUN. REGISTERED ON AVL OF NIOEC IN IRAN

REGISTERED ON AVL OF IOOC IN IRAN

JUL. OBTAIN TYPE APPROVAL CERTIFICATE FOR CRYOGENIC GLOBE, GATE, SWING CHECK, BALL AND BUTTERFLY VALVES BY LLOYD'S

AUG. OBTAIN VENDOR APPROVAL NOTIFICATION PVN & VSP

NOV. OBTAIN TYPE APPROVAL CERTIFICATE FOR CRYOGENIC GLOBE, GATE, CHECK, BALL VALVES BY ABS

OBTAIN UL CERTIFICATE FOR CONCENTRIC, HIGH PERFORMANCE TYPE BUTTERFLY VALVES

Company History

2014

JAN. APPROVED AS OFFICIAL VENDOR BY ADMA-OPCO IN U.A.E.

FEB. REGISTERED ON AVL OF MA'ADEN IN KSA.

APR. APPROVED AS OFFICIAL VENDOR BY ZADCO IN U.A.E.

JUL. OBTAIN UL CERTIFICATE FOR POST INDICATOR VALVE.

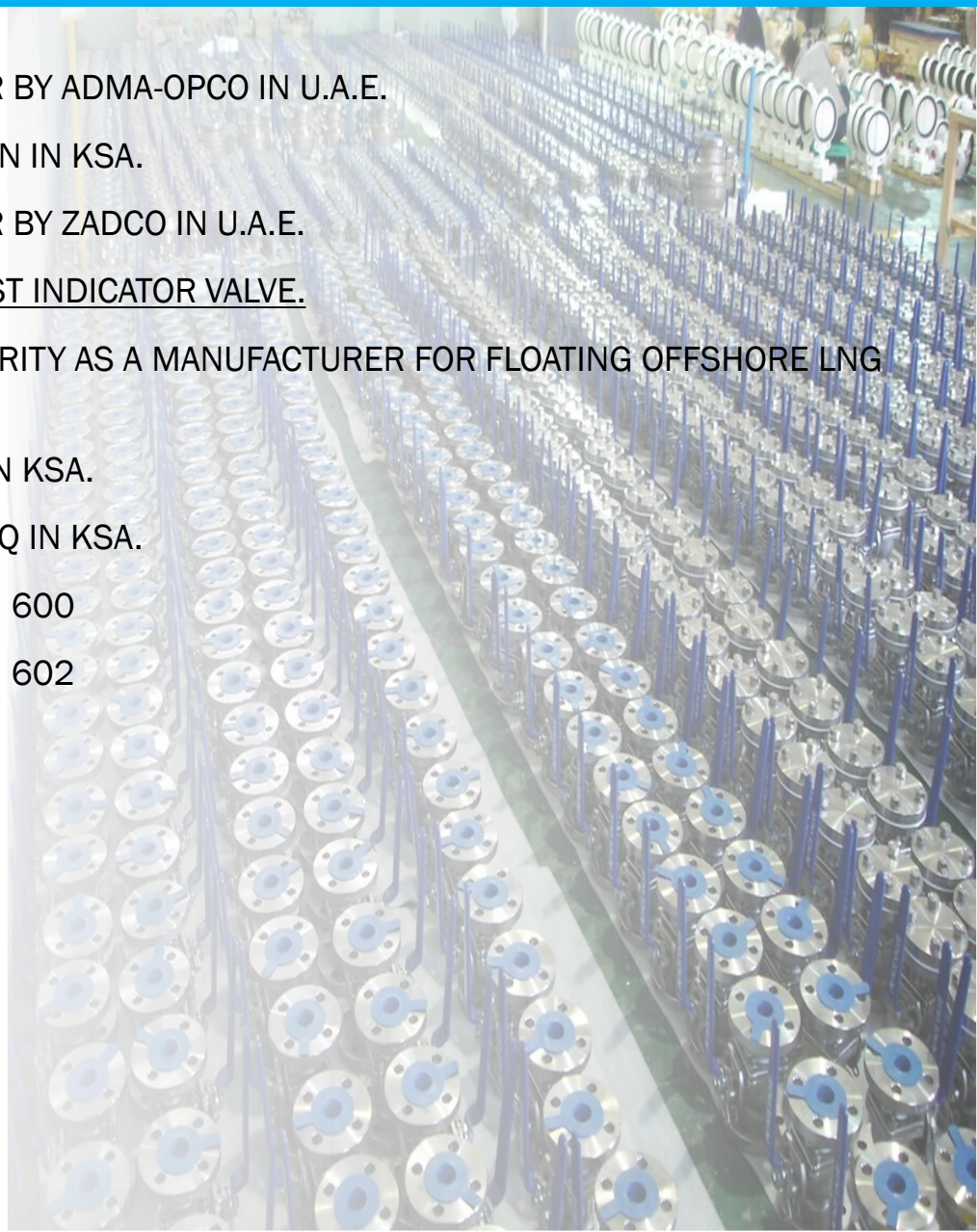
AUG. DESIGNATED BY KOREAN AUTHORITY AS A MANUFACTURER FOR FLOATING OFFSHORE LNG BUNKERING SYSTEM PROJECT.

REGISTERED ON AVL OF SABIC IN KSA.

DEC. REGISTERED ON AVL OF MARAFIQ IN KSA.

OBTAIN API MONOGRAM FOR API 600

OBTAIN API MONOGRAM FOR API 602



Company History

2015

JAN. REGISTERED ON AVL OF SEC IN KSA

AUG. APPROVED & REGISTERED ON AVL OF KOTC IN KUWIAT.

SEP. APPROVED & REGISTERED ON FLUOR IN USA.

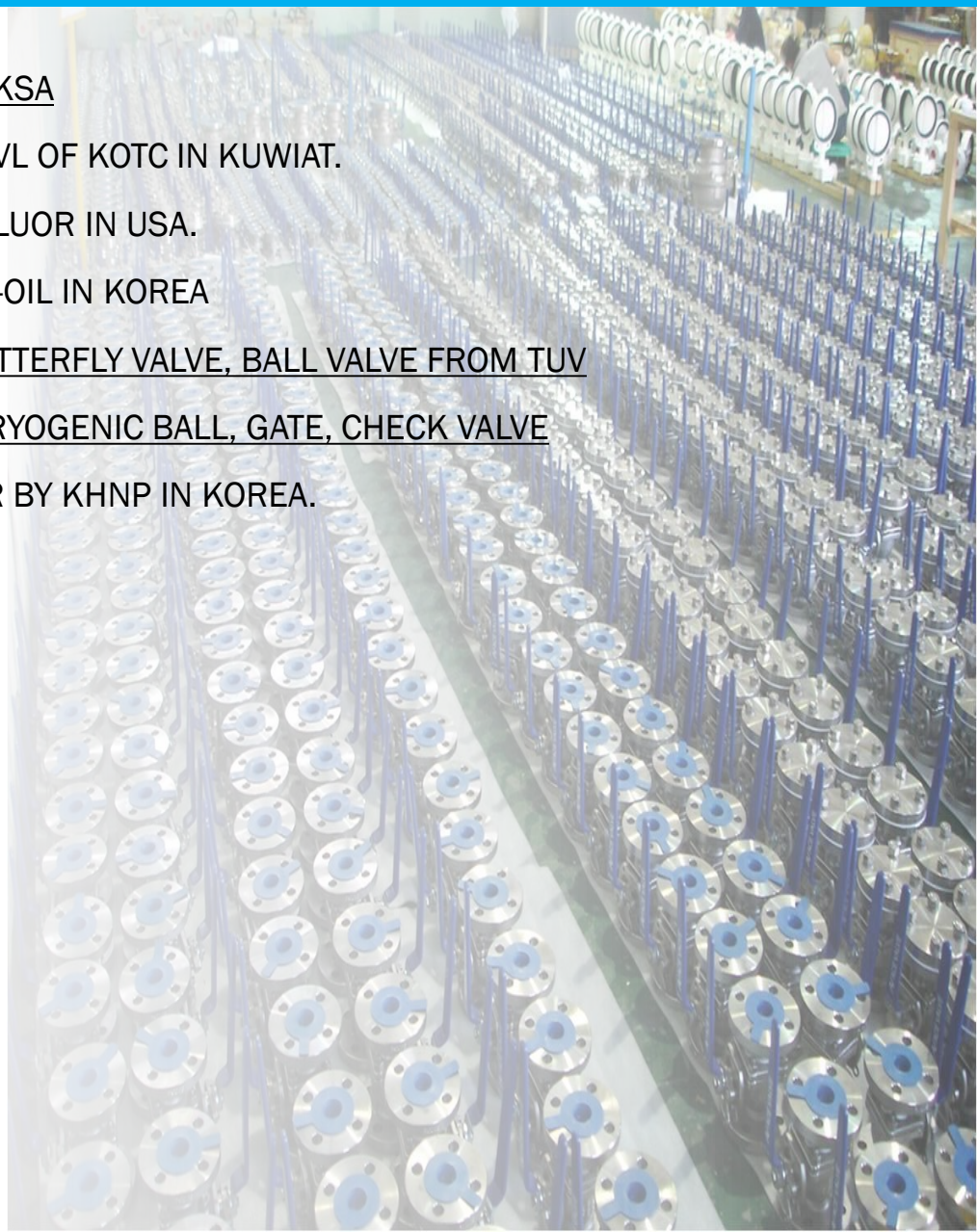
OCT. APPROVED & REGISTERED ON S-OIL IN KOREA

OBTAIN SIL CERTIFICATE FOR BUTTERFLY VALVE, BALL VALVE FROM TUV

DEC. OBATIN TSG CERTIFICATE FOR CRYOGENIC BALL, GATE, CHECK VALVE

APPROVED AS OFFICIAL VENDOR BY KHNP IN KOREA.

OBTAIN TRCU CERTIFICATE



Company History

2016

JUN. OBTAIN FUGITIVE EMISSION TEST CERTIFICATE FOR BALL VALVE

OBTAIN KC CERTIFICATE FOR BUTTERFLY VALVE

JUL. APPROVED AS OFFICIAL VENDOR BY PETROLEUM DEVELOPMENT OMAN (PDO) IN OMAN

OBTAIN SIL CERTIFICATE FOR GATE VALVE FROM TUV

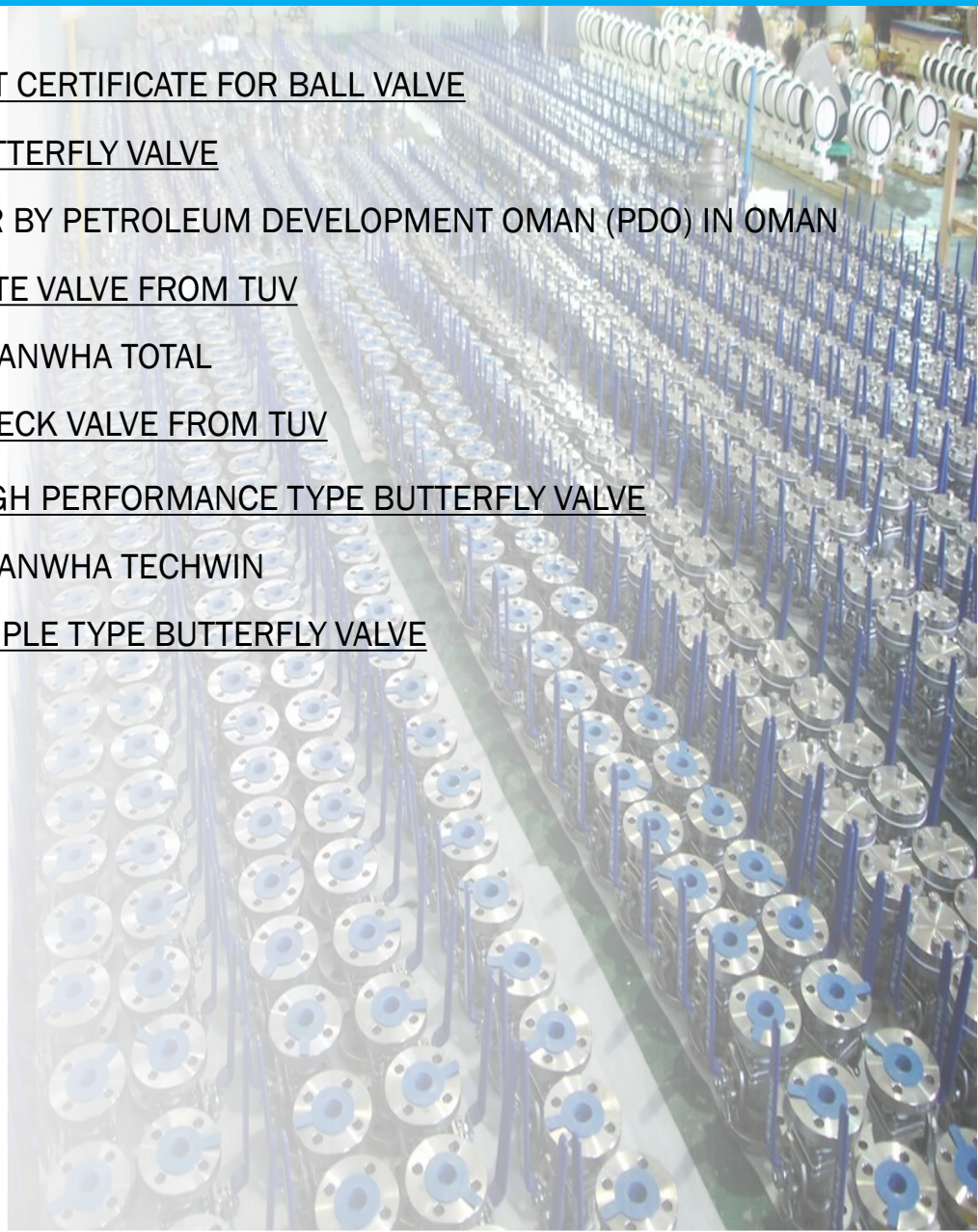
APPROVED & REGISTERED ON HANWHA TOTAL

AUG. OBTAIN SIL CERTIFICATE FOR CHECK VALVE FROM TUV

OBTAIN TAT CERTIFICATE FOR HIGH PERFORMANCE TYPE BUTTERFLY VALVE

APPROVED & REGISTERED ON HANWHA TECHWIN

SEP. OBTAIN TAT CERTIFICATE FOR TRIPLE TYPE BUTTERFLY VALVE



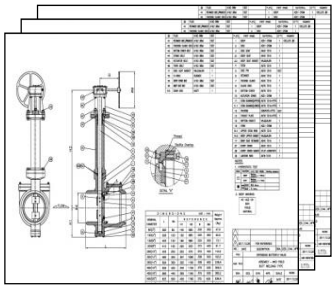
Manufacturing Process

ACE VALVE CO.,LTD.

CONTRACT → ENGINEERING → PROCUREMENT → MANUFACTURING



CONTRACT



DESIGN & DRAWING



MATERIAL ORDER



CASTING

MANUFACTURING



MACHINING



BODY HYDRO TEST



PAINTING



ASSEMBLY

Manufacturing Process

INSPECTION



VISUAL CHECK

↓

OPERATION TEST

↓

SEAT LEAKAGE TEST

DELIVERY



PACKING



DELIVERY



WELCOME TO ACE VALVE

THE BETTER FUNCTION, QUALITY, DELIVERY AND PRICE !!

Products

ACE VALVE CO.,LTD.



Material

- DUPLEX / SUPER DUPLEX (A890 GR 4A / 5A, 6A)
- CAST STAINLESS STEEL (ASTM A351CF8/CF8M/CF3M)
- CAST CARBON STEEL (ASTM A216WCB, A217 C5 / WC6)
- INCONEL (A494 CW6MC, B)
- HASTELLOY (A494 CW12MW)
- TITANIUM (B367 GR. C-3 / GR. C-3 / GR. C-5)
- AL-BRONZE / NI-AL-BRONZE (B148C95500/95800)
- DUCTILE CAST IRON (ASTM A395/536)
- CAST IRON (ASTM A126CLB)
- OTHER SPECIAL MATERIAL UPON REQUIREMENT

1 APPLICATION

- CRYOGENIC SERVICE (LNG, ETHYLENE, AMMONIA, PETROLEUM)
- CHEMICAL, PETRO-CHEMICAL AND OIL REFINERY
- WATER WORKS, DESALINATION PLANT & POWER PLANT
- OIL & GAS SYSTEM FOR ON-SHORE & OFF-SHORE
- SHIPYARD FOR MARINE SERVICE

2 PRODUCTION CAPACITY

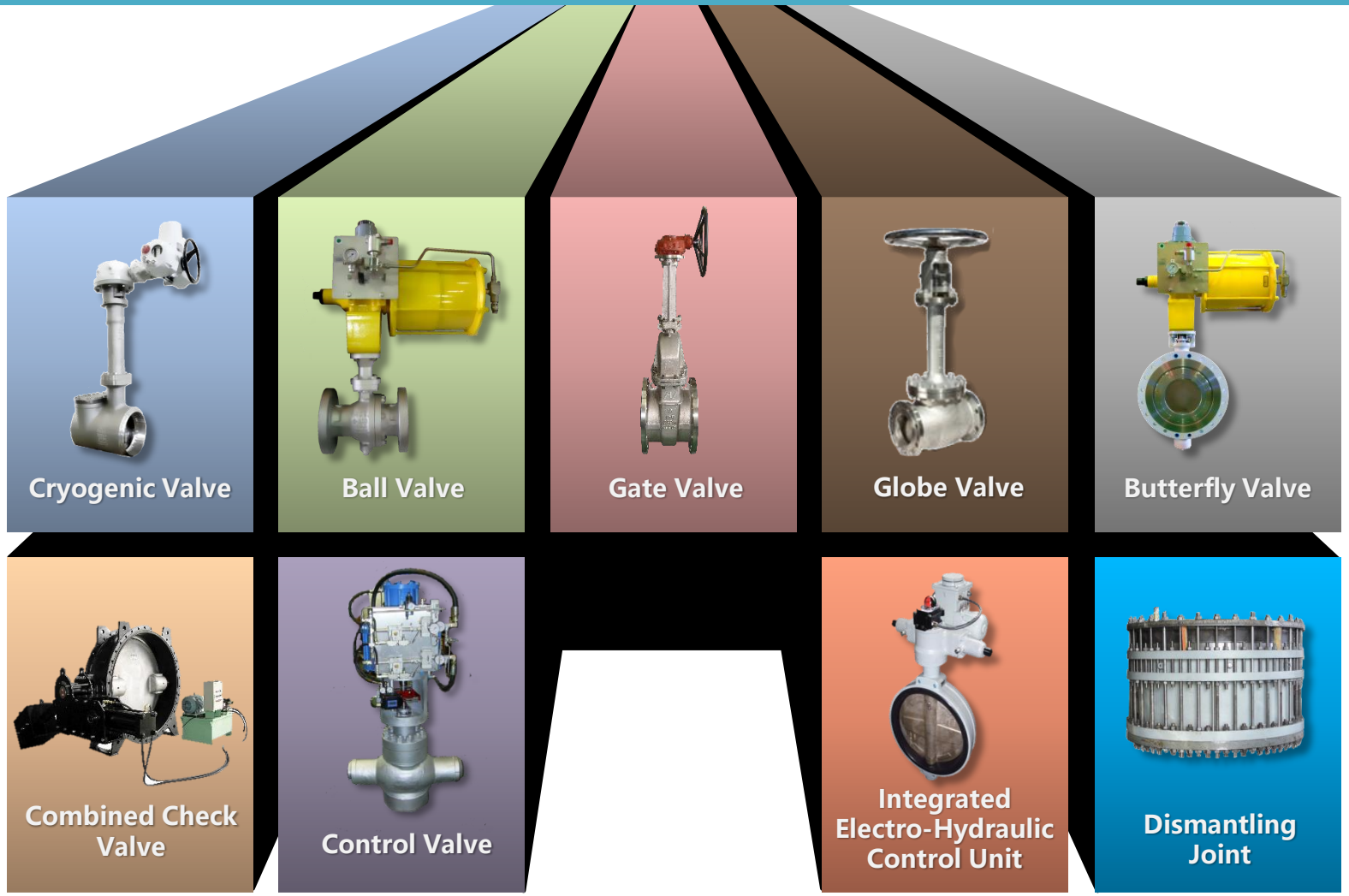
- WEIGHT – CAST CARBON STEEL 400Ton / Month
  CAST STAINLESS STEEL 150Ton / Month
  CAST IRON&DUCTILE IRON 250Ton / Month
  CAST ALUMINUM BRONZE 150Ton / Month
- QUANTITY – ABT. 10,000 units / Month

3 AVAILABLE STANDARD

- ASME / API / ASTM / AS / AWWA / BS / DIN / ISO / JIS / KS /
  AND OTHER INTERNATIONAL STANDARDS

Product Range

ACE VALVE CO.,LTD.



Butterfly Valve





Triple Eccentric Metal Seated Butterfly Valve

- DESIGN STANDARD : API 609 CATEGORY B
- END CONNECTION : DOUBLE FLANGED / (WAFER) LUGGED
- SIZE : DN80mm ~ DN5000mm (3” ~ 200”)
- PRESSURE : UP TO CLASS 2500
- TEMPERATURE : UP TO 815℃ (1,499℉)
- OPERATOR : MOTOR / PNEUMATIC / HYDRAULIC / MANUAL
- FLOW : UNI-DIRECTION / BI-DIRECTION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)

Butterfly Valve





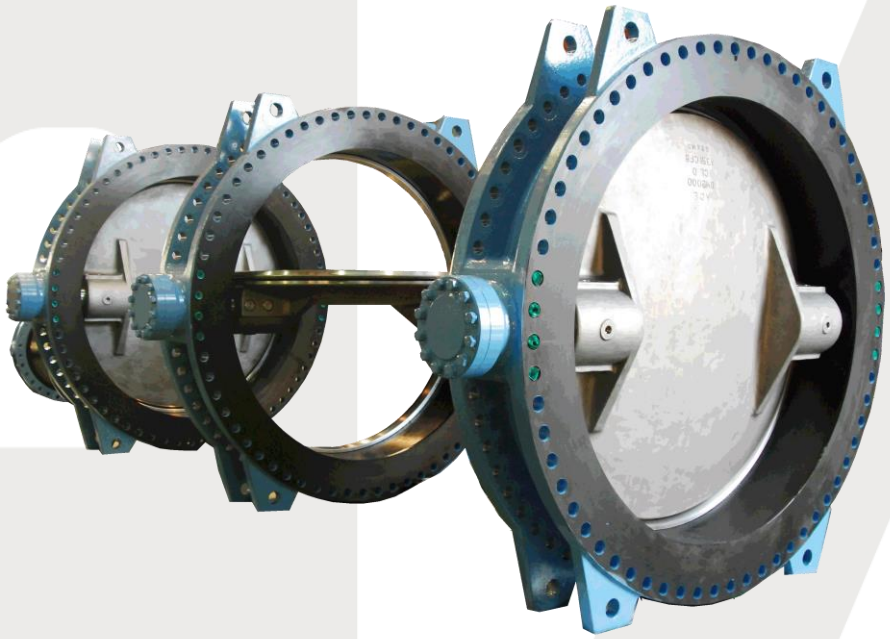
Double Eccentric High-Performance

SPECIFICATION

- DESIGN STANDARD : API 609, ISO 5752, KSV 7490, JIS F 7480, BS 5155 or MSS SP-68
- END CONNECTION : DOUBLE FLANGED / (WAFER) LUGGED
- SIZE : ~ 1500mm
- PRESSURE : UP TO 50 BAR (CLASS 300)
- TEMPERATURE : -55°C ~ +250°C (SOFT SEAT)
  -100°C ~ +400°C (METAL SEAT)
- OPERATOR : MOTOR / PNEUMATIC / HYDRAULIC / MANUAL
- FLOW : BI-DIRECTION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)

Butterfly Valve

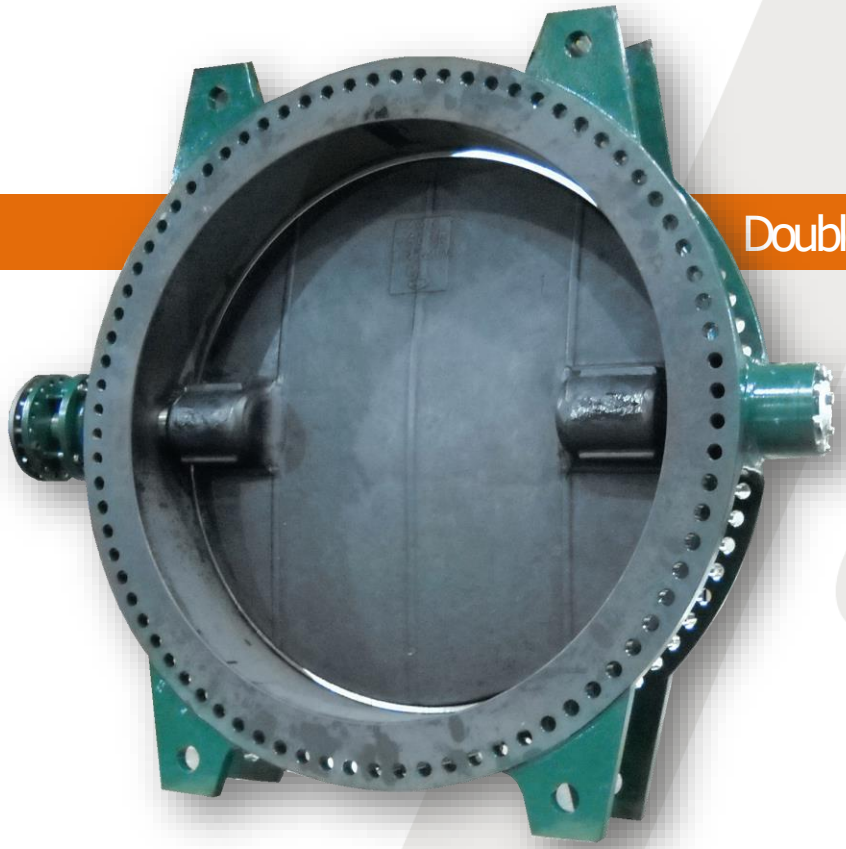




Double Eccentric Disc Seated Flange type Butterfly Valve

- SPECIFICATION
- DESIGN STANDARD : API, AWWA, KS/JIS, BS, ISO
- END CONNECTION : DOUBLE FLANGED / (WAFER) LUGGED
- SIZE : UP TO DN4000mm (160”)
- PRESSURE : UP TO 40BAR
- MATERIAL : DUCTILE IRON / CARBON STEEL / NI-AL- BRONZE / STAINLESS STEEL
- FLOW : BI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)

Butterfly Valve



Double Eccentric Flange type Butterfly Valve - Reference

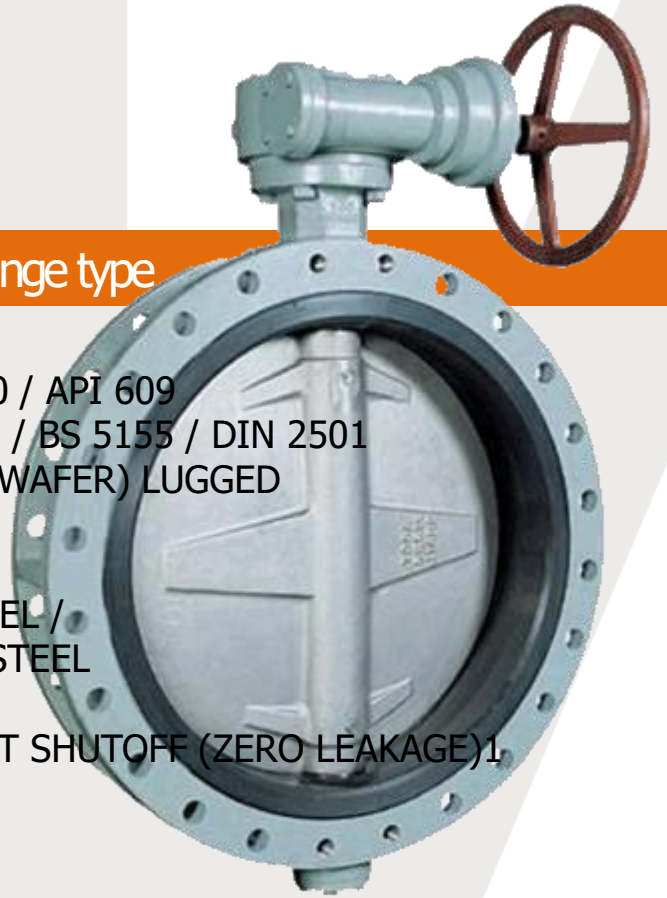
- PROJECT : GECHO-ONE BOILER PROJECT
- MATERIAL : DUCTILE IRON + UNS S31803
- DESIGN STANDARD : AWWA C504
- SIZE : DN3200mm (128”)
- PRESSURE : 150LB
- EPC : DOOSAN HEAVY INDUSTRIES & CONSTRUCTION CO.,LTD.

Butterfly Valve



Cocentric Wafer type

Cocentric Flange type



SPECIFICATION

- DESIGN STANDARD : ISO 5752 / JIS F7480 / API 609
  KSV7490/ JIS B 2032 / BS 5155 / DIN 2501
- END CONNECTION : DOUBLE FLANGED / (WAFER) LUGGED
- SIZE : UP TO DN4000mm (160”)
- PRESSURE : UP TO 16 BAR
- MATERIAL : DUCTILE IRON / CARBON STEEL /
- NI-AL- BRONZE / STAINLESS STEEL
- FLOW : BI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)1

Butterfly Valve



Concentric Flange type Butterfly Valve - Reference

: DOCK-GATE FOR HYUNDAI HEAVY INDUSTRIES

- MATERIAL : DUCTILE IRON
- DESIGN STANDARD : ISO 5752
- SIZE : DN3000mm (120")
- PRESSURE : PN 10
- OPERATOR : HYDRAULIC OPERATOR
- EPC : HYUNDAI HEAVY INDUSTRIES CO.,LTD.

Check Valve

Dual Plate Check Valve



Non Slame Check Valve



SPECIFICATION

- DESIGN STANDARD : API 594
- END CONNECTION : DOUBLE FLANGED / (WAFER) LUGGED
- SIZE : UP TO DN1500mm (60”)
- PRESSURE : UP TO CLASS 2500
- MATERIAL : DUCTILE IRON / CARBON STEEL / NI-AL- BRONZE / STAINLESS STEEL
- FLOW : UNI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)

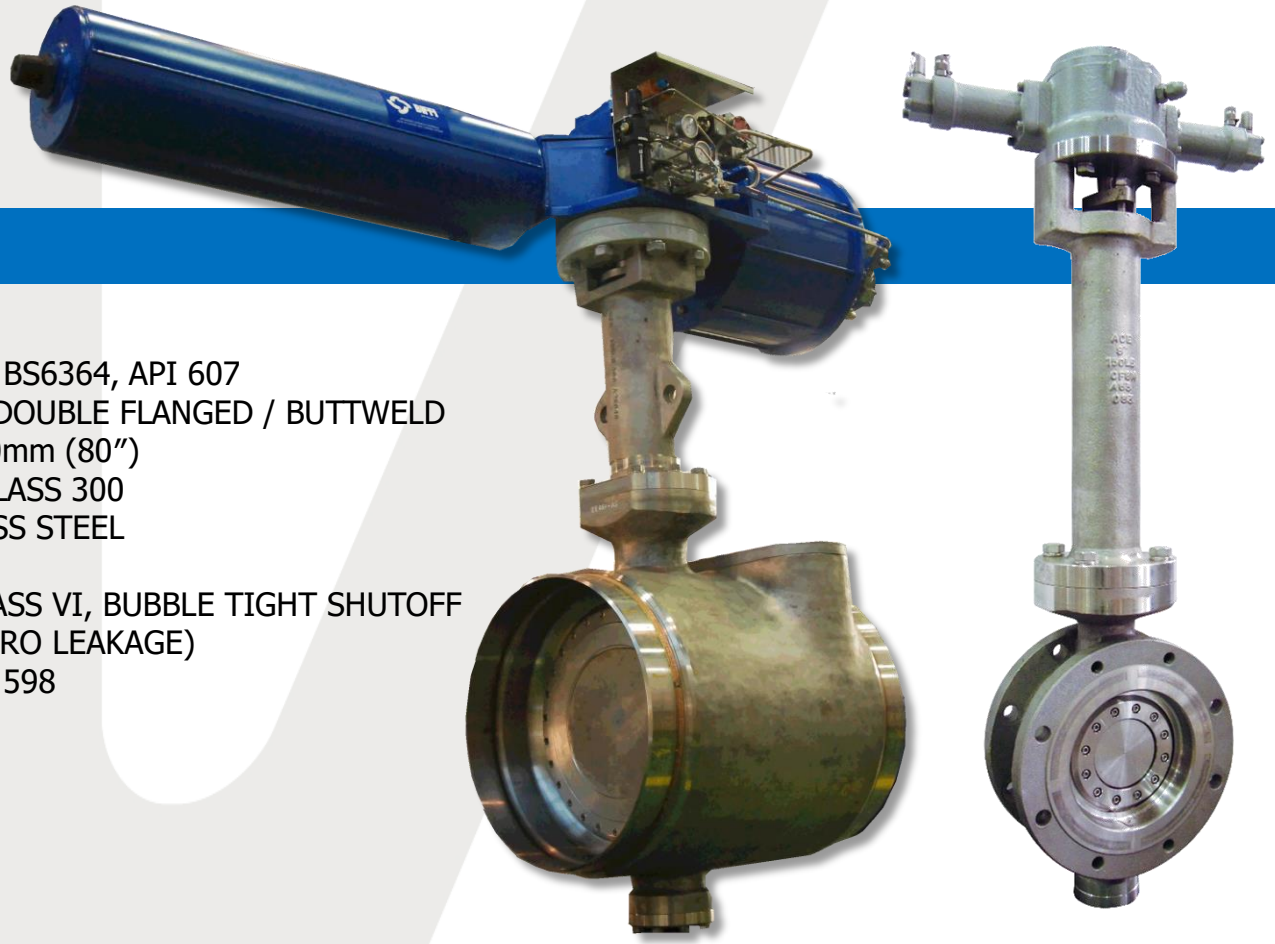
Check Valve



Combined Butterfly Check Valve - Reference

- PROJECT : DAELIM INDUSTRY - OMON 2 PROJECT
- MATERIAL : A536+RL
- DESIGN STANDARD : AWWA C504
- SIZE : DN1800mm (72″)
- Q'TY : 2EA
- PRESSURE : AWWA CLASS D
- OPERATOR : HPU

Cryogenic Valve



Butterfly Valve

SPECIFICATION

- DESIGN STANDARD : BS6364, API 607
- END CONNECTION : DOUBLE FLANGED / BUTTWELD
- SIZE : UP TO DN2000mm (80”)
- PRESSURE : UP TO CLASS 300
- MATERIAL : STAINLESS STEEL
- FLOW : BI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)
- TEST : BS6364 & API 598

Cryogenic Valve



Ball Valve

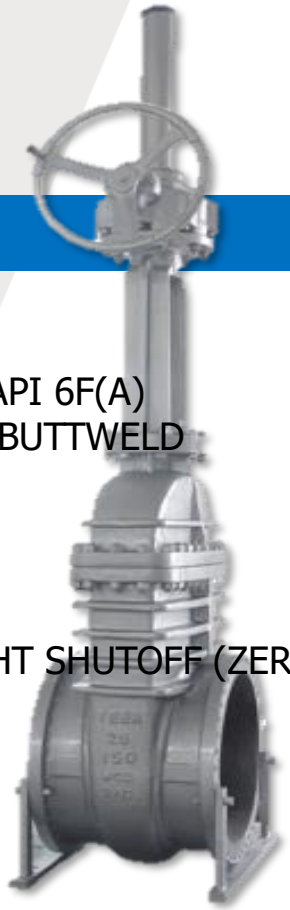
SPECIFICATION

- DESIGN STANDARD : API 6D
- END CONNECTION : DOUBLE FLANGED / BUTTWELD
- SIZE : UP TO DN1500mm (60”)
- PRESSURE : UP TO 258.6bar
- MATERIAL : STAINLESS STEEL
- FLOW : BI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)
- TEST : BS6364 & API 598

Cryogenic Valve



Gate Valve



SPECIFICATION

- DESIGN STANDARD : BS 6364, BS 6755, API 6F(A)
- END CONNECTION : DOUBLE FLANGED / BUTTWELD
- SIZE : UP TO DN1200mm (48")
- PRESSURE : UP TO 250BAR
- MATERIAL : STAINLESS STEEL
- FLOW : BI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)
- TEST : BS6364 & API 598

Cryogenic Valve



Globe Valve



Check Valve

SPECIFICATION

- DESIGN STANDARD : BS 6364, BS 6755, API 6F(A)
- END CONNECTION : DOUBLE FLANGED / BUTTWELD
- SIZE : UP TO DN600mm (24”)
- PRESSURE : UP TO 250BAR
- MATERIAL : STAINLESS STEEL
- FLOW : UNI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)
- TEST : BS6364 & API 598

Cryogenic Valve



Cryogenic Valve - Reference

- PROJECT : MEJILONES LNG STORAGE TANK
- MATERIAL : A351 CF3 STAINLESS STEEL
- DESIGN STANDARD : API 6D, API 609
- SIZE : DN40mm ~ DN800mm (1.5″ ~ 32″)
- Q'TY : 42sets
- PRESSURE : 150LB
- OPERATOR : PNEUMATIC ACTUATOR
- EPC : TECNICAS REUNIDAS

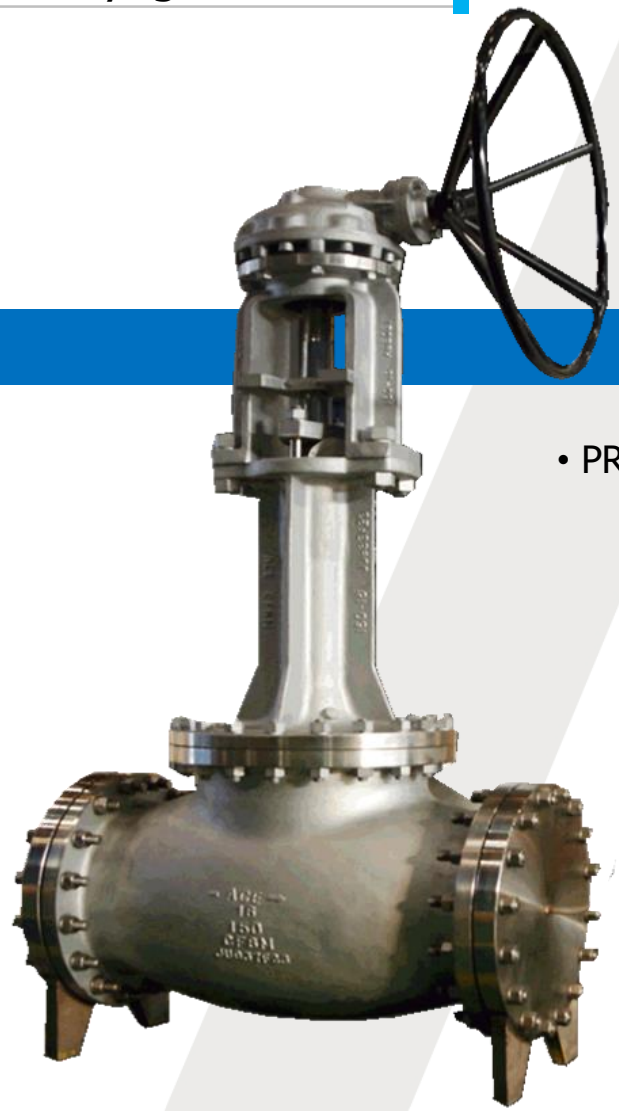
Cryogenic Valve



Cryogenic Valve - Reference

- PROJECT : GUANGDONG ZUHAI LNG TERMINAL PROJECT
- MATERIAL : A351 CF3 STAINLESS STEEL
- DESIGN STANDARD : API 609
- SIZE : DN200mm ~ DN600mm (8” ~ 24”)
- Q’TY : 39sets
- PRESSURE : 150LB
- OPERATOR : MANUAL & ELECTRIC MOTOR ACTUATOR
- EPC : TECNICAS REUNIDAS

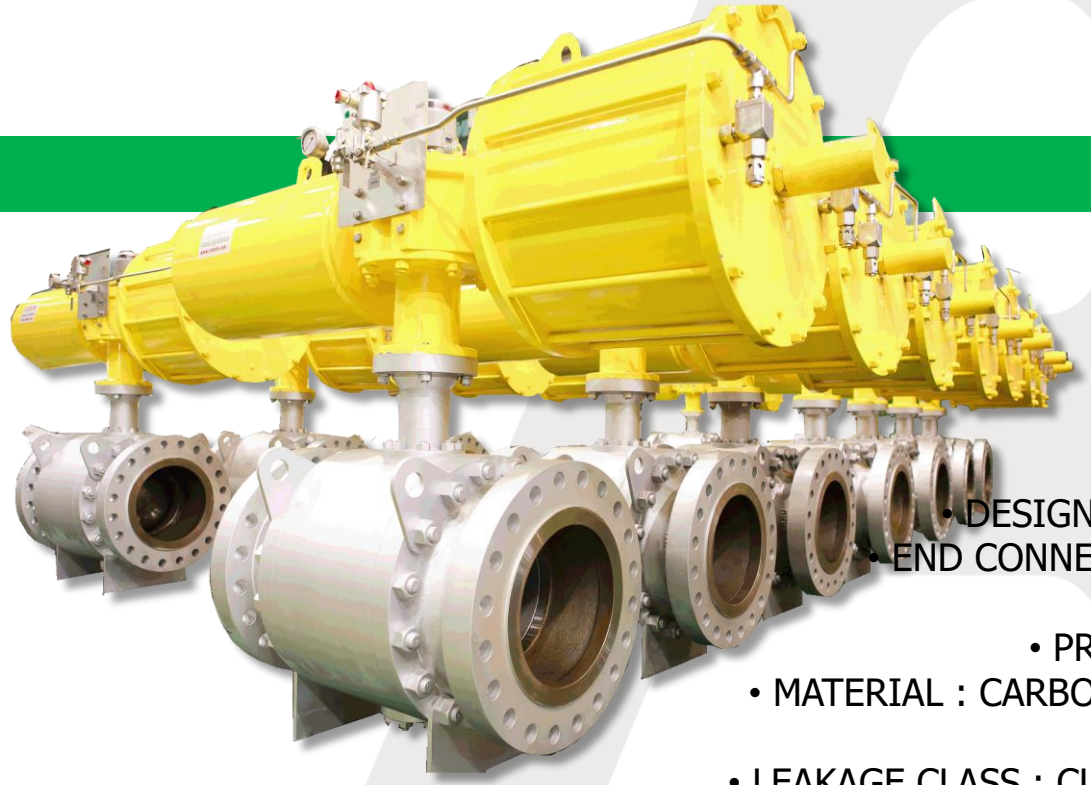
Cryogenic Valve



Cryogenic Valve - Reference

- PROJECT : CRYOGENIC INDUSTRY CENTER IN GIMHAE
- MATERIAL : A351 CF8M STAINLESS STEEL
- DESIGN STANDARD : ASME B16.34
- SIZE : DN200mm ~ DN800mm (8″ ~ 32″)
- Q'TY : 21sets
- PRESSURE : ANSI 300LB
- OPERATOR : MANUAL GEAR
- EPC : HYUNDAI ENGINEERING

Ball Valve

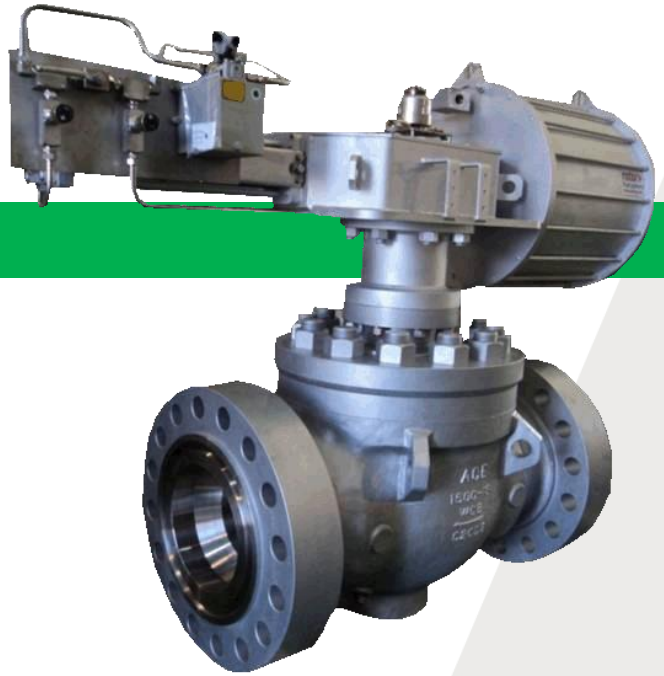


Ball Valve

SPECIFICATION

- DESIGN STANDARD : API 6D, API 6D SS, API 6A
- END CONNECTION : DOUBLE FLANGED / BUTTWELS
- SIZE : UP TO DN1500mm (60”)
- PRESSURE : UP TO 20000psi (1406kg/cm^2)
- MATERIAL : CARBON STEEL / STAINLESS STEEL / NI-ALLOY
- FLOW : BI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)

Ball Valve



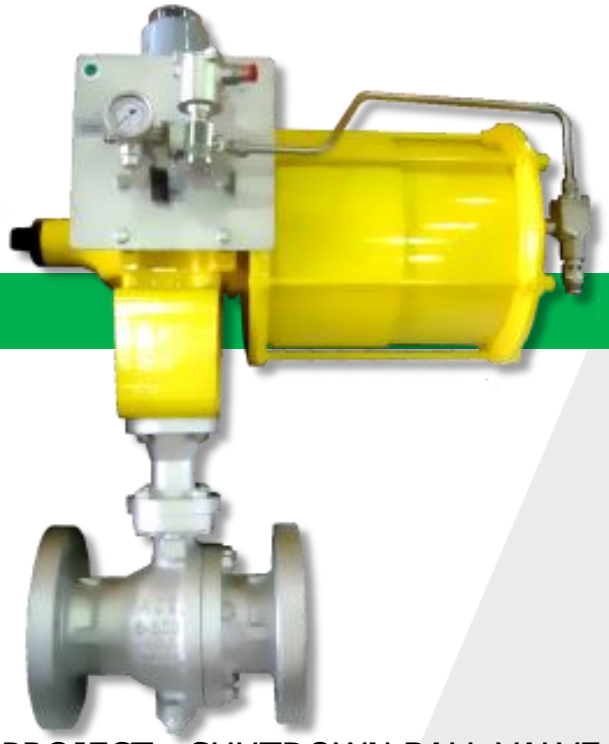
Ball Valve - Reference



- PROJECT : SOUTH PARS GAS FIELD REFINERY PROJECT
- MATERIAL : A216 WCB CARBON STEEL
- DESIGN STANDARD : API 6D
- SIZE : DN15mm ~ DN800mm (1/2" ~ 32")
- Q'TY : 364sets
- PRESSURE : ANSI 1500LB
- OPERATOR : PNEUMATIC & HYDRAULIC ACTUATOR
- EPC : KIPCO

- PROJECT : SHUTDOWN BALL VALVE FOR LNG PROJECT
- MATERIAL : A351 LCC CARBON STEEL
- DESIGN STANDARD : API 6D
- SIZE : DN15mm ~ DN500mm (1" ~ 20")
- Q'TY : 359sets
- PRESSURE : ANSI 1500LB
- OPERATOR : PNEUMATIC ACTUATOR
- EPC : NARDIS

Ball Valve



Ball Valve - Reference



- PROJECT : SHUTDOWN BALL VALVE FOR LNG PROJECT
- MATERIAL : A351 LCC CARBON STEEL
- DESIGN STANDARD : API 6D
- SIZE : DN15mm ~ DN500mm (1" ~ 20")
- Q'TY : 359sets
- PRESSURE : ANSI 1500LB
- OPERATOR : PNEUMATIC ACTUATOR
- EPC : NARDIS

- TRUNNION TYPE BALL VALVE
- MATERIAL : A351 CF8M
- DESIGN STANDARD : API 6D
- SIZE : DN600mm (24")
- PRESSURE : 150LB
- OPERATOR : MANUAL GEAR

Ball Valve



Manual Operated Ball Valve - Reference

- PROJECT : FOROOZAN OFFSHORE PROJECT
- MATERIAL : A105N / A182 F316L
- DESIGN STANDARD : API 6D
- SIZE : DN15mm ~ DN500mm (1/2” ~ 20”)
- Q’TY : 2246sets
- PRESSURE : UP TO ANSI 800LB
- OPERATOR : MANUAL GEAR
- EPC : NARDIS

Ball Valve



Pneumatic Operated Ball Valve - Reference

- PROJECT : SHUTDOWN BALL VALVE FOR LNG PROJECT
- MATERIAL : A351 LCC CARBON STEEL
- DESIGN STANDARD : API 6D
- SIZE : DN15mm ~ DN500mm (1" ~ 20")
- Q'TY : 359sets
- PRESSURE : ANSI 1500LB
- OPERATOR : PNEUMATIC ACTUATOR
- EPC : NARDIS

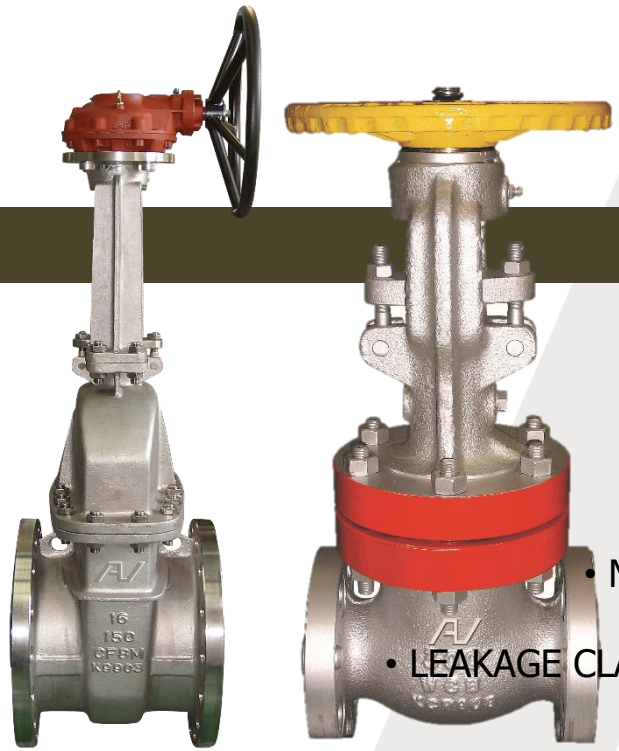
Ball Valve



Emergency Shutdown Valve - Reference

- PROJECT : SHUTDOWN BALL VALVE FOR LNG PROJECT
- MATERIAL : A351 LCC CARBON STEEL
- DESIGN STANDARD : API 6D
- SIZE : DN15mm ~ DN500mm (1" ~ 20")
- Q'TY : 359sets
- PRESSURE : ANSI 1500LB
- OPERATOR : PNEUMATIC ACTUATOR
- EPC : NARDIS

Gate Valve



Gate Valve

SPECIFICATION

- DESIGN STANDARD : ASME 16.34, API 600, BS 1873
- END CONNECTION : DOUBLE FLANGED / BUTTWELD
- SIZE : DN50mm ~ DN1500mm (2” ~ 60”)
- PRESSURE : UP TO 430.9BAR
- MATERIAL : CARBON STEEL / STAINLESS STEEL / NI-ALLOY
- FLOW : BI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)

Gate Valve



Pressure Seal Gate Valve

SPECIFICATION

- DESIGN STANDARD : ASME B16.34, API 600
- END CONNECTION : BUTTWELD
- SIZE : DN100mm ~ DN600mm (4,” ~ 24”)
- PRESSURE : UP TO CLASS 2500
- MATERIAL : A216 WCB
- FLOW : BI-DIRETION

GE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)

- DESCRIPTION : OS&Y/ FULL STELLITE
- OPERATOR : MANUAL GEAR

Globe Valve



Globe Valve

SPECIFICATION

- DESIGN STANDARD : ASME 16.10, ASME B16.34, API 600, BS 1873
- END CONNECTION : DOUBLE FLANGED / BUTTWELD
- SIZE : DN50mm ~ DN1500mm (2” ~ 60”)
- PRESSURE : UP TO 430.9BAR
- MATERIAL : CARBON STEEL / STAINLESS STEEL / NI-ALLOY
- FLOW : UNI-DIRETION
- LEAKAGE CLASS : CLASS VI, BUBBLE TIGHT SHUTOFF (ZERO LEAKAGE)





WELCOME TO ACE VALVE
THE BETTER FUNCTION, QUALITY, DELIVERY AND PRICE !!

Machineries

ACE VALVE CO.,LTD.

Manufacturing Equipment

1 TURNING MACHINE



- 2set
- CAPACITY : up to 2200mm
- FACTORY NO.1 2sets

2 BORING MACHINE



- 3set
- CAPACITY : up to 4000mm
- FACTORY NO.1 2sets, FACTORY NO. 4 1set

Manufacturing Equipment

3 MACHINING CENTER



- 6sets
- FACTORY NO. 1 1set, FACTORY NO.2 2sets, FACTORY NO. 4 3sets

4 MILLING MACHINE



- 1set
- FACTORY NO.4 1set

Manufacturing Equipment

5 UP-RIGHT DRILLING MACHINE



- 15set
- ASSEMBLY FACTORY 14sets, FACTORY NO.4 1set

6 CNC LATHE



- 6sets
- FACTORY NO.4 5sets

Manufacturing Equipment

7 HIGH SPEED LATHE



- 15sets
- ASSEMBLY FACTORY 1set
  FACTORY NO.2 4sets, FACTORY NO.4 10sets

8 RADIAL DRILLING MACHINE



- 13sets
- ASSEMBLY FACTORY 11sets, FACTORY NO.4 2sets

Manufacturing Equipment

9 HYDRO-TEST BED



- 7sets
- CAPACITY : up to DN2200mm
- ASSEMBLY FACTORY 7sets

10 CRANE



- 24sets
- ASSEMBLY FACTORY 15sets, STORAGE 1set
- FACTORY NO. 1 2sets, FACTORY NO. 2 2sets, FACTORY NO. 3 2sets, FACTORY NO. 4 2sets,

Inspection & Measuring Device

1 PMI



- GNR 1set

2 VACUUM TESTER



- ULVAC 1set

3 DIGITAL PRESSURE RECORD



Inspection & Measuring Device

4 OVERLAY (CLADDING)



- THICKNESS GAUGE 1set
- KAWATERSU ADVANTECK 1set

5 TOROQUE WRENCH



- TOHNICHI 5set

6 HELIUM LEAK TESTER



- ULVAC 1set

Inspection & Measuring Device

7 COATING THICKNESS GAUGE



- ELCOMETER 1set
- EASTONG 2sets

8 PAINT ADHENSION TESTER



- ELCOMETER 1set

9 DC HOLIDAY DETECTOR



- ELCOMETER 1set



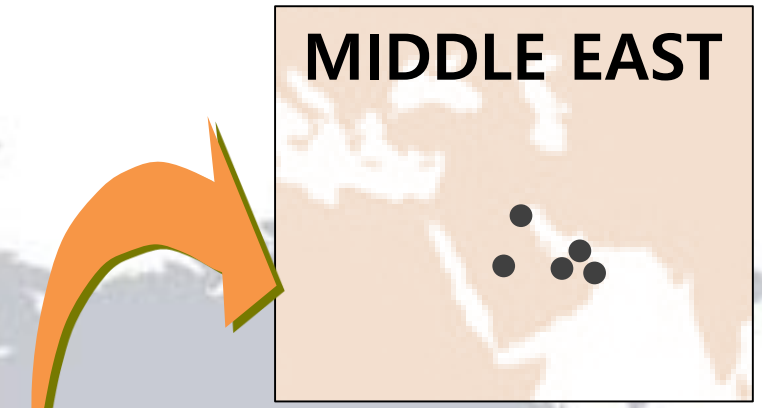
WELCOME TO ACE VALVE
THE BETTER FUNCTION, QUALITY, DELIVERY AND PRICE !!

Network

ACE VALVE CO.,LTD.

Network – Major Clients

ACE VALVE CO.,LTD.



KUWAIT

- KNPC
- KOC
- MEW

SAUDI ARABIA

- SAUDI ARAMCO
- SEC
- SWCC
- MARAFIQ
- ROYAL COMMISSION
- SABIC
- SAUDI CHEVRON
- PETRO RABIGH
- MA'ADEN
- SATORP
- SADARA
- YASREF
- SEPCO
- KAUST UNIVERSITY

UAE

- ADNOC
- ADGAS
- ADMA OPCO
- DEWA
- GASCO
- TAKREER
- TAPCO
- ZADCO

QATAR

- KAHRAMAA
- ASHGAL

Network – Major Clients

ACE VALVE CO.,LTD.



BRITISH

- ITHACA ENERGY
- ROYAL BRITISH NAVY

DENMARK

- A.P.MOLLER / MAERSK

FRANCE

- TOTAL
- TECHNIP FRANCE
- FMC TECHNOLOGIES

ITALY

- AB PROGETTI SRL
- ENEL
- SAIPEM
- TECHNIMONT

NETHERLANDS

- SBM

ROMANIA

- SANTIERUL NAVAL CONSTANTA

SPAIN

- TECNICAS REUNIDAS

Network – Major Clients



ALGERIA

- SONATRACH, SONELGAZ, CAMEG-GRTG
- GROUPMENT BERKINE

NIGERIA

- TOTAL
- NIGERIAN NATIONAL PETROLEUM CORPORATION

EGYPT

- ORASCOM CONSTRUCTION

LIBYA

- GMRA
- GMRWUA
- ANC

Network – Major Clients

ACE VALVE CO.,LTD.

CANADA

- TAIM
- TRANSCANADA PIPELINES LIMITED
- TUNDRA PROCESS SOLUTIONS LTD

U.S.A

- FLOUR
- BECTEL
- DOOSAN HYDROTECHNOLOGY
- EXXONMOBIL
- FMC TECHNOLOGIES
- KO-BI GROUP
- N.E.I
- TECHTRON INTERNATIONAL

PERU

- BERMAD
- GRUPO ABSISA
- SAFI GLOBAL

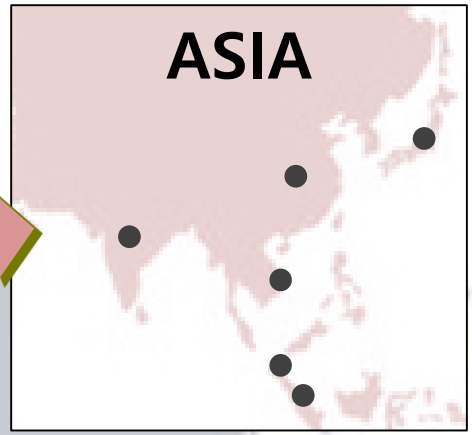
BRAZIL

- PETROBRAS



Network – Major Clients

ACE VALVE CO.,LTD.



CHINA

- SWS
- DALIAN SHIPYARD
- NTS SHIPBUILDING
- RONSHENG HEAVY INDUSTRIES

INDIA

- SCI
- EBRO
- HINDUSTAN SHIPYARD

JAPAN

- JGC CORPORATION
- JAPAN GAS CORP.
- MITSUBISHI
- MODEC
- SASAKURA ENGINEERING
- KAWASAKI HEAVY INDUSTRIES

SINGAPORE

- MODEC
- BW OFFSHORE

MALAYSIA

- PETRONAS
- TECHNIP
- DANCOMECH
- ALIOGAZ

VIETNAM

- PETROVIETNAM
- VSP (VIETSOVPETRO)
- M&E
- VINASHIN
- TECHMACH
- VIET DAN CO.,LTD

INDONESIA

- PT-TRACON
- MMHE

Network – Major Clients



KOREA(EPC)

- DOOSAN
- DAELIM INDUSTRIES
- GS E&C
- HDEC
- HEC
- HHI
- HANWHA E&C
- KEPCO
- KOGAS
- POSCO E&C
- POSCO ENG
- SAMSUNG E&C
- SAMSUNG C&T
- SK E&C
- HANWHA

KOREA(SHIPYARD)

- DSEC
- DHSI
- DSME
- HHI
- HHIC
- HSHI
- HMD
- SHI
- SPP
- SUNGDONG
- STX

Network – World Wide Network

ACE VALVE CO.,LTD.

AGENT

RUSSIA	APKOHA
GREECE	SSE
ITALY	BEAL S.A.S
SPAIN	CUNADO
TURKEY	ADMAR VALVES
MALAYSIA	WTF BORNEO
CANADA	ALL MARINE SPARE
EGYPT	SIERRA ENGINEERING
ALGERIA	STI (SOLUTION TECHNOLOGIES INDUSTRIELLES)
NIGERIA	POTENT WORLD
UAE(Dubai)	DUTCO TENANT
UAE(Abu Dhabi)	GASOS
KUWAIT	ARABIAN DARB
OMAN	PTECH (PTROLEUM & POWER TECHNOLOGY COMPANY)
QATAR	OITC GROUP
KSA	GABAS



WELCOME TO ACE VALVE
THE BETTER FUNCTION, QUALITY, DELIVERY AND PRICE !!

Documents

ACE VALVE CO.,LTD.

Documents

CERTIFICATE

ISO 9001


BUREAU VERITAS Certification

ACE VALVE Co. Ltd.

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO 9001:2008 / KS Q ISO 9001:2009

Scope of certification

DESIGN/DEVELOPMENT, PRODUCTION AND SERVICING OF VALVES FOR SHIPS, PETROCHEMICAL PLANT, OIL REFINERY PLANT, WATER WORKS AND POWER PLANT

Certification cycle start date: 02 January 2013

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: 01 January 2016

Original certification date: 31 August 2000

ISO 14001


BUREAU VERITAS Certification

ACE VALVE Co. Ltd.

Bureau Veritas Certification certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

Standards

ISO 14001:2004 / KS I ISO 14001:2009

Scope of certification

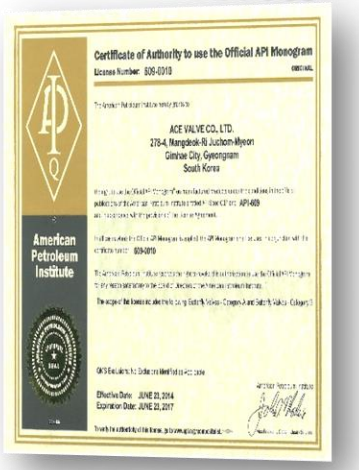
DESIGN/DEVELOPMENT, MANUFACTURING AND SERVICING OF VALVES FOR SHIPS, PETROCHEMICAL PLANT, OIL REFINERY PLANT, WATER WORKS AND POWER PLANT

Certification Cycle Start Date: 11 January 2014

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: 10 January 2017

Original certification date: 11 January 2011

API 609


Certificate of Authority to use the Official API Monogram

License Number: 609-0010

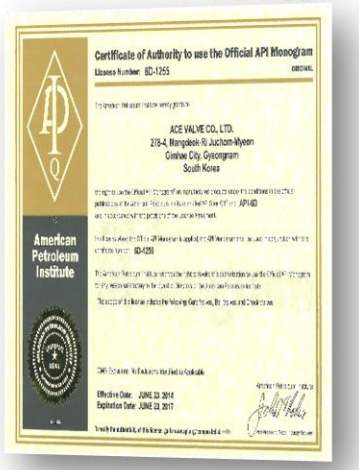
ORIGINAL

ACE VALVE CO., LTD.
278-4, Mangdeok-Ri Juchon-Myeon
Gimhae City, Gyeongnam
South Korea

American Petroleum Institute

Effective Date: JUNE 23, 2014
Expiration Date: JUNE 23, 2017

API 6D


Certificate of Authority to use the Official API Monogram

License Number: 6D-1255

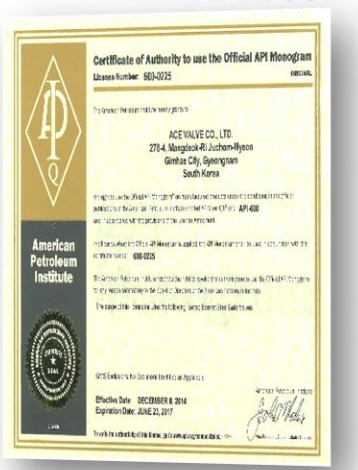
ORIGINAL

ACE VALVE CO., LTD.
278-4, Mangdeok-Ri Juchon-Myeon
Gimhae City, Gyeongnam
South Korea

American Petroleum Institute

Effective Date: JUNE 23, 2014
Expiration Date: JUNE 23, 2017

API 600


Certificate of Authority to use the Official API Monogram

License Number: 600-0225

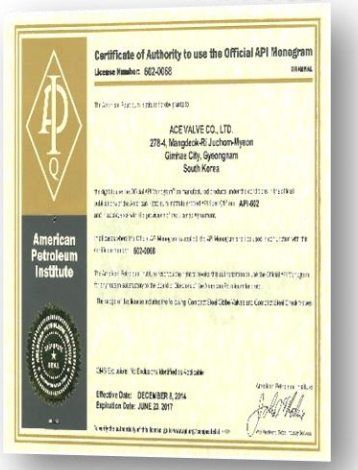
ORIGINAL

ACE VALVE CO., LTD.
278-4, Mangdeok-Ri Juchon-Myeon
Gimhae City, Gyeongnam
South Korea

American Petroleum Institute

Effective Date: DECEMBER 8, 2014
Expiration Date: JUNE 23, 2017

API 602


Certificate of Authority to use the Official API Monogram

License Number: 602-0068

ORIGINAL

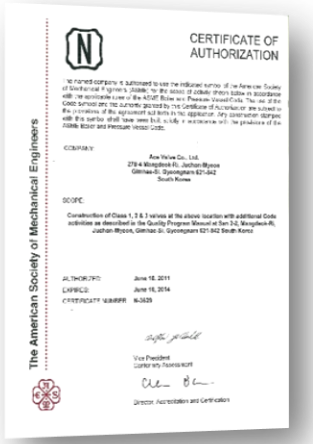
ACE VALVE CO., LTD.
278-4, Mangdeok-Ri Juchon-Myeon
Gimhae City, Gyeongnam
South Korea

American Petroleum Institute

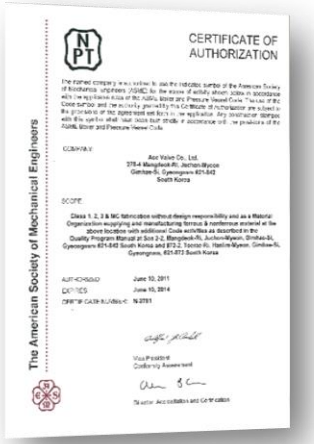
Effective Date: DECEMBER 8, 2014
Expiration Date: JUNE 23, 2017

CERTIFICATE

ASME N



ASME NPT



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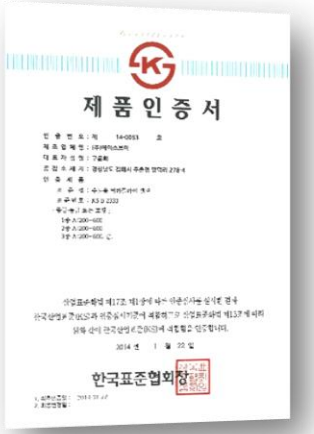
KS



UL



GOST-R



RMRS



ABS



Documents

CERTIFICATE

BV


TYPE APPROVAL CERTIFICATE

ACE VALVE CO., LTD.

BUTTERFLY VALVES

CCS

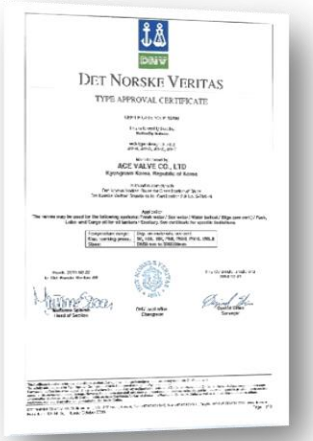

CHINA CLASSIFICATION SOCIETY

型式认可证书

CERTIFICATE OF TYPE APPROVAL

ACE VALVE CO., LTD.

DNV


DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

ACE VALVE CO., LTD

LLOYD


Lloyd's Register

Type Approval Certificate

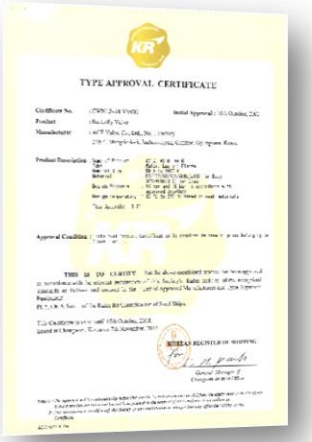
GL


Approval Certificate

GL

Germanischer Lloyd

KR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CERTIFICATE

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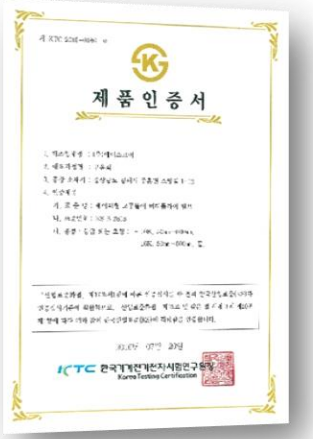
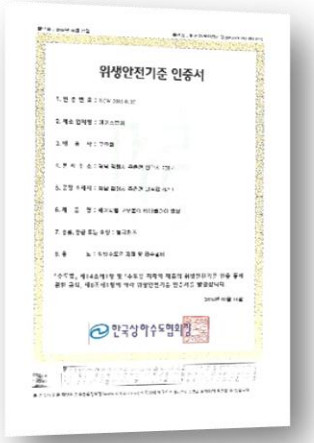


KC



SIL



TAT



FIRE SAFE - ABS



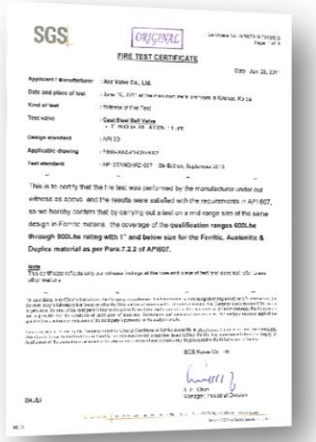
FIRE SAFE - DNV



FIRE SAFE - B'fly



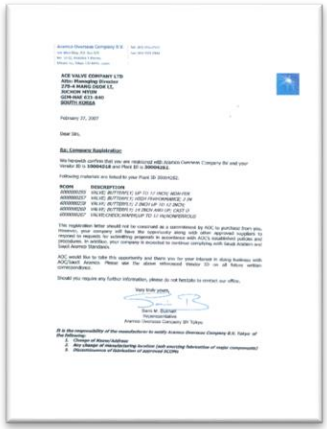
FIRE SAFE - Ball v/v



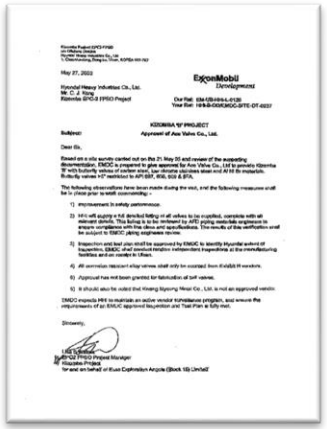
Documents

APPROVAL LETTER

SAUDI ARAMCO



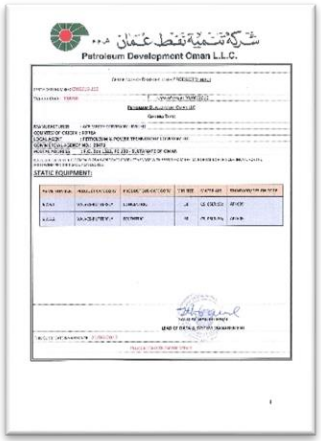
EXXON MOBIL



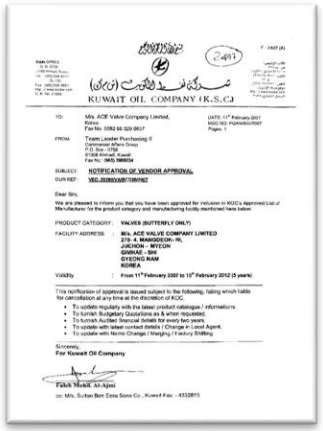
KNPC



PDO



KOC



APPROVAL LETTER

KOREA HYDRO & NUCLEAR POWER



KHNP

유자격공급자 등록증

Certificate of Registration

등록번호 (Certificate No.) : 201500634

상 호 (Company Name) : ACE VALVE COMPANY LIMITED

공장주소 (Factory Location) : 682-1, Naesam-ri, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, Korea

대 표 자 (Chief Executive officer) : Y. H. KOO

[당기 업체는 우리 회사의 공급자관리지침에 따라 심사한 결과 보증기기 [기]자재 공급업체로 등록되었음을 증빙합니다.

This is to certify that according to KHNP's qualification procedure, this company has been registered on KHNP's approved NQP Vendor List for the below items.

NO	품목 코드 Item Code	품 명 Item Description	품질 등급 Quality Class	공종 분야 Field	유효기간 Authorized Period
1	P700	ASME B31.1 Manual Steel Gate, Globe & Check V/V 2.5" & Larger	A	원자력	2015.12.10~2018.12.09
2	P700B	ASME B31.1 Steel Gate &,Globe V/V With Actuator	A	원자력	2015.12.10~2018.12.09
3	J734	Butterfly Valve	A	원자력	2015.12.10~2018.12.09
4	J735	Butterfly Valve for General Service	A	원자력	2015.12.10~2018.12.09

2015.12.10

한국수력원자력(주)

KOREA HYDRO & NUCLEAR POWER CO., LTD

1/1

KOREA HYDRO & NUCLEAR POWER



KHNP

유자격공급자 등록증

Certificate of Registration

등록번호 (Certificate No.) : 201500634

상 호 (Company Name) : (주)에이스브이

공장주소 (Factory Location) : 경상남도 김해시 주촌면 서부로 1548-44 (주촌면 내삼리 682-1번지)

대 표 자 (Chief Executive officer) : 구우회

[당기 업체는 우리 회사의 공급자관리지침에 따라 심사한 결과 보증기기 [기]자재 공급업체로 등록되었음을 증빙합니다.

This is to certify that according to KHNP's qualification procedure, this company has been registered on KHNP's approved NQP Vendor List for the below items.

NO	품목 코드 Item Code	품 명 Item Description	품질 등급 Quality Class	공종 분야 Field	유효기간 Authorized Period
1	P700	ASME B31.1 Manual Steel Gate, Globe & Check V/V 2.5" & Larger	A	원자력	2015.12.10~2018.12.09
2	P700B	ASME B31.1 Steel Gate &,Globe V/V With Actuator	A	원자력	2015.12.10~2018.12.09
3	J734	Butterfly Valve	A	원자력	2015.12.10~2018.12.09
4	J735	Butterfly Valve for General Service	A	원자력	2015.12.10~2018.12.09

2015.12.10

한국수력원자력(주)

KOREA HYDRO & NUCLEAR POWER CO., LTD

1/1



기자재 공급 유자격 등록증

등 록 번 호 : EASYU2016-02291
업 체 명 : (주)에이스브이
공 장 주 소 : 김해시 주촌면 서부로 1548-44
품 명 : 접형 밸브
운 영 구 분 : 건설(기계)
유 효 기 간 : 2016-02-03 ~ 2019-02-02
비 고 :

EASY-U

2016. 02. 03

한국남부발전㈜ 한국동서발전㈜ 한국중부발전㈜ 한국서부발전㈜ KOEN 한국남동발전

Documents

ACE VALVE CO.,LTD.

APPROVAL LETTER

KHARAMAA



Kharamaa 21/07/2000 09:22:51 [1VUK 2/003 Fax Server

Qatar General Electricity & Water Corporation

WTS-3103(P-L/ 998 /2000
3840/5450
3840/5090

M/s. Global Electric Company
P. O. Box 4044
Doha, Qatar.

Dear Sir,

Subject: Butterfly Valves
M/s. Ace Valve Company, South Korea.

With reference to the above subject and after going through the documents and testing results of the subject valve, please be informed that Butterfly Valves Manufactured by M/s. Ace Valve Company Company, South Korea complies with the latest KAHRAMAA Technical Specification, hence it is Approved to the State of Qatar. The approval model is: AV-CTF- up to 900mmH only.

Note: In case of any changes in the design or material (wherever is done) of the above materials, Water Planning Department must be notified for further evaluation.

This Approval is valid up to 30/07/2003

With best regards.

ENG. IBRAHIM MOHAMMED A. AL EAJU
MANAGER, WATER PLANNING DEPARTMENT

Water Planning Department - Water Networks Affairs P.O. Box 41, Doha-Qatar.
Tel: (974) 4845050/5056 Fax: (974) 4845514

ENEL



Enel

Messrs.
ACE VALVE COMPANY LIMITED
278-4,MANGDEOK LI, JUCHON MYON
621-843 KIMHAE (11)
Corea Del Sud

RE: Qualification of Suppliers and Contractors.

Further to your application for qualification, we would advise you that the consequent qualification procedures carried out in respect of your company have proved successful.
Your Company has been recognised as being "suitable" for the performance of contracts relating to:

- 28VA03 - Butterfly valves for thermal plants
which may be invoiced for annual orders to a value of 6.000.000 Euro.
Has been recognised Busan (Korea) factory's production.

So that this business can be carried on, your company is, therefore, being entered in the appropriate Register of ENEL approved Companies.

We would also advise you, that within the meaning of ENEL's current Regulations on the qualification procedures for Companies, the suitability is valid for a three-year period effective from 09/30/2000 and that the entering of your company in the Register of ENEL approved Companies does not commit ENEL in respect of any orders.

On the expiry of the intended validity period, qualification can be renewed, for a further three years by means of the appropriate renewal procedures.

We would, moreover, point out that suitability and, therefore, the entering of your company in the Register of approved Companies as specified above may be suspended or revoked should (by way of example and not limited to these) there be any of the following:
substantial changes in the types and/or technologies of the productions, work and/or services;

MITSUBISHI



MITSUBISHI HEAVY INDUSTRIES, LTD.
POWER SYSTEMS HEADQUARTERS
TAKASAGO MACHINERY WORKS

Certificate for Authorization and Registration

To Messrs. ACE VALVE COMPANY LIMITED

This is to certify and notify that Messrs. ACE VALVE COMPANY LIMITED have successfully passed the evaluation on their quality assurance ability performed by Mitsubishi Heavy Industries, Ltd. Takasago Machinery Works (MHI) on the basis of MHI's quality assurance requirements and have been approved by MHI to satisfactorily possess the ability of the required quality assurance and been registered as such.

Address : 3-9 MANGDEOK-RI, JUCHON-MYON, JUCHON-MYON, GIMHAE-CITY, KOREA

Scope : Control Valve

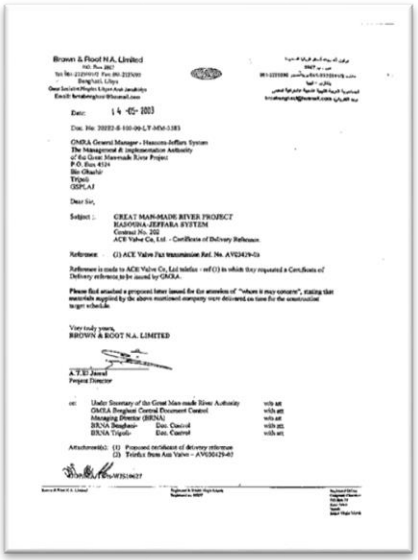
Date of Validity : From 1 February 2010 to 31 January 2013

Date of Authorization : 2 July 2010

Authorized by :

KINOUE General Manager,
Quality Assurance Department
Takasago Machinery Works
Power Systems Headquarters
Mitsubishi Heavy Industries, Ltd.

GMRA



Brown & Root N.A. Limited

Ref.:

Date: 14 OCT 2003

Doc. No. 20202-S-310-00-L/T-0454-5383

GMRA General Manager - Hassoun Jeffara System
The Management & Implementation Authority
of the Great Manmade River Project
P.O. Box 4154
Bin Ghashir
Tripoli
GSPLAJ

Dear Sir,

Subject : GREAT MAN-MADE RIVER PROJECT
RADUMA-JEFFARA SYSTEM
Contract No. 202
ACE Valve Co, Ltd - Certificate of Delivery Reference.

Reference: (1) ACE Valve Fax transmission Ref. No. AV02429-Gr

Reference is made to ACE Valve Co, Ltd telefax - ref (1) in which they requested a Certificate of Delivery reference to be issued by GMRA.

Please find attached a proposed letter issued for the attention of "whom it may concern", stating that materials supplied by the above mentioned company were delivered on time for the construction target schedule.

Very truly yours,
BROWN & ROOT N.A. LIMITED

A.T.El Jawad
Project Director

cc: Under Secretary of the Great Man-made River Authority w/o att
GMRA Benghazi Central Document Control w/o att
Managing Director (BRNA) w/o att
BRNA Benghazi Doc. Control w/o att
BRNA Tripoli Doc. Control w/o att

Attachment(s): (1) Proposed certificate of delivery reference
(2) Telefax from Ace Valve - AV02429-Gr

Documents

ACE VALVE CO.,LTD.

CLIENT'S LETTER

HYUNDAI HEAVY INDUSTRIES CO., LTD.,



現代重工業株式會社

Hyundai Heavy Industry Co., Ltd.
General Manager Jung-Bok Kim
+82-52-202-0135
jkim@ko.bk.hhi.co.kr
1000, BANG RO 3N Suitbeam dom, dong-ga, ULSAN,

TO WHOM MAY CONCERN

Dear Sir,

We would like to confirm that ACE Valve Co. Ltd. (Korea) is an approved vendor of the Hyundai Heavy Industry Co., Ltd. and has supplied the following materials for Project P123

Triple Eccentric Metal Sealed Butterfly Valves

------Purchase Order PD123K2045, PL 123K2049

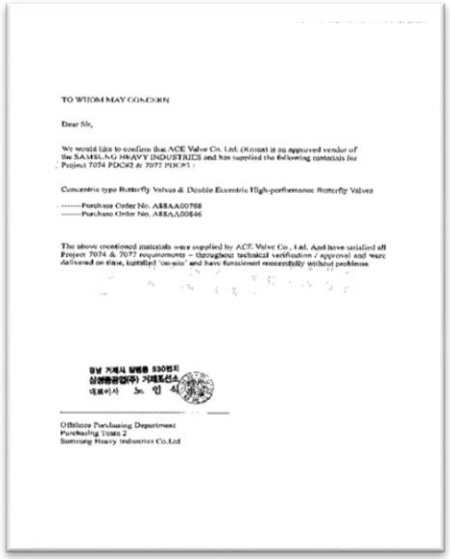
The above mentioned materials were supplied by ACE Valve Co., Ltd. And have satisfied all Project P123 requirements – throughout technical verification / approval and were delivered on time, installed "on-site" and have functioned successfully without problems.

Kim Jung Bok

Jung-Bok Kim

General Manager
Material Purchasing Dep't / Special & Naval Shipbuilding Division

SAMSUNG HEAVY INDUSTRIES CO., LTD.,



TO WHOM MAY CONCERN

Dear Sir,

We would like to confirm that ACE Valve Co. Ltd. (Korea) is an approved vendor of the SAMSUNG HEAVY INDUSTRIES and has supplied the following materials for Project 7074 PDC#2 & 7077 PDC#3 :

Concentric type Butterfly Valves & Double Eccentric High-performance Butterfly Valves

------Purchase Order No. A88AA00788
------Purchase Order No. A88AA00846

The above mentioned materials were supplied by ACE Valve Co., Ltd. And have satisfied all Project 7074 & 7077 requirements – throughout technical verification / approval and were delivered on time, installed "on-site" and have functioned successfully without problems.

Offshore Purchasing Department
Purchasing Team 2
Samsung Heavy Industries Co.Ltd

SAMSUNG ENGINEERING CO.,LTD.



SAMSUNG ENGINEERING

< PERFORMANCE CERTIFICATE >

TO WHOM IT MAY CONCERN

Dear Sir,

We would like to confirm that **ACE VALVE Company Limited having its business address at 278-4 Mangdeok-Ri, Juchon-Myun, Gim-Hae City, Gyung-nam, Korea**, is an approved vendor of the **Samsung Engineering Co., Ltd, having its business address at 500 Samsung GEC, Sangil-dong, Gangdong-gu, Seoul, Korea**, and has supplied the various valves for particular project as below.

1. *Ras Tanura Refinery DHT Project, Saudi Aramco (Purchase Order No. 450004487-1)*
2. *Aramco CO2 Capture & Injection Project (Purchase Order No. 4500098369-00/01)*
3. *Shaybah NGL#2 Recovery & Utilities (Purchase Order No. 4500099909-3)*
4. *Shaybah NGL Package #1 Inlet & Gas Treatment Project (Purchase order No. 4500102307)*

The above mentioned project valves were supplied by ACE VALVE Company Limited, and have satisfied all above project requirement – throughout technical verification / approval and were delivered on time, installed "on-site" and have functioned successfully without any problems.

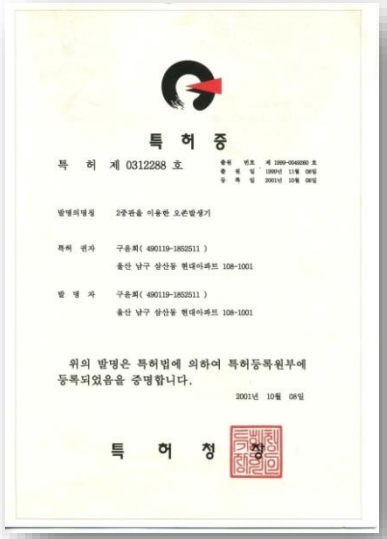
Your faithfully,

(KH Kwak / Manager)
Samsung Engineering

Documents

ACE VALVE CO.,LTD.

PATENT REGISTRATION CERTIFICATE



특 허 증

특 허 제 0312288 호

출원 번호 제 1999-0040280 호
출 원 일 1999년 11월 08일
등 록 일 2001년 10월 08일

발명의명칭 2중관을 이용한 오존발생기

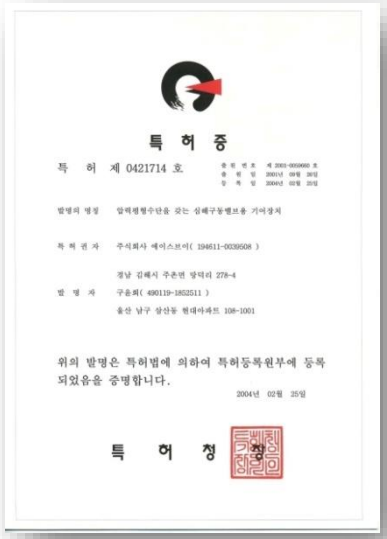
특허 권자 구윤회(490119-1852511)
울산 남구 삼산동 현대아파트 108-1001

발 명 자 구윤회(490119-1852511)
울산 남구 삼산동 현대아파트 108-1001

위의 발명은 특허법에 의하여 특허등록원부에 등록되었음을 증명합니다.

2001년 10월 08일

특 허 청 장



특 허 증

특 허 제 0421714 호

출원 번호 제 2003-0039660 호
출 원 일 2001년 09월 26일
등 록 일 2004년 02월 25일

발명의 명칭 압력평형수단을 갖는 심해구동밸브용 기어장치

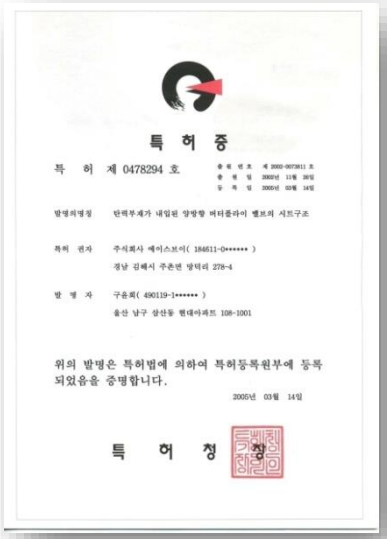
특 허 권 자 주식회사 에이스브이(194611-0039508)
경남 김해시 주촌면 당덕리 278-4

발 명 자 구윤회(490119-1852511)
울산 남구 삼산동 현대아파트 108-1001

위의 발명은 특허법에 의하여 특허등록원부에 등록되었음을 증명합니다.

2004년 02월 25일

특 허 청 장



특 허 증

특 허 제 0478294 호

출원 번호 제 2002-0073811 호
출 원 일 2002년 11월 26일
등 록 일 2005년 03월 14일

발명의명칭 탄력부재가 내입된 양방향 버터플라이 밸브의 시트구조

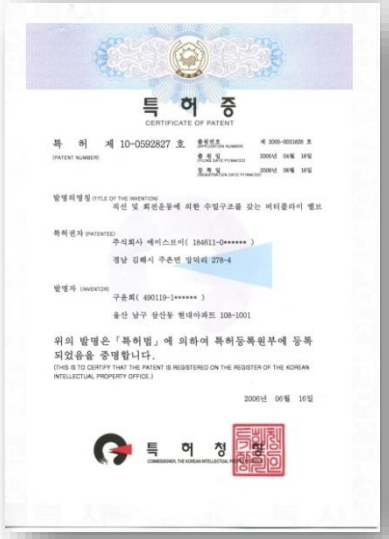
특허 권자 주식회사 에이스브이(184611-0******)
경남 김해시 주촌면 당덕리 278-4

발 명 자 구윤회(490119-1******)
울산 남구 삼산동 현대아파트 108-1001

위의 발명은 특허법에 의하여 특허등록원부에 등록되었음을 증명합니다.

2005년 03월 14일

특 허 청 장



특 허 증

CERTIFICATE OF PATENT

특 허 제 10-0592827 호

(PATENT NUMBER)

출원번호 제 2005-0031636 호
출 원 일 2005년 04월 18일
등 록 일 2006년 06월 16일

발명의명칭 (TITLE OF THE INVENTION)
직선 및 회전운동에 의한 수밀구조를 갖는 버터플라이 밸브

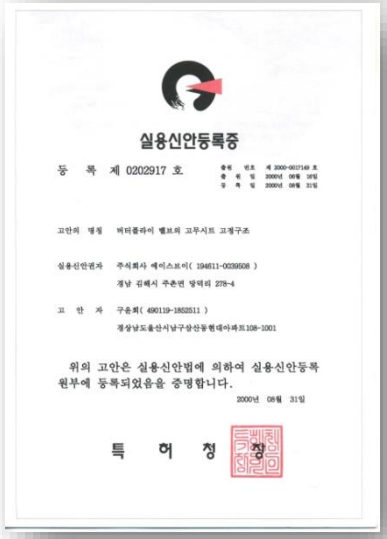
특허권자 (PATENTEE)
주식회사 에이스브이(184611-0******)
경남 김해시 주촌면 당덕리 278-4

발명자 (INVENTOR)
구윤회(490119-1******)
울산 남구 삼산동 현대아파트 108-1001

위의 발명은 「특허법」에 의하여 특허등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE PATENT IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2006년 06월 16일

특 허 청 장



실용신안등록증

등 록 제 0202917 호

출원 번호 제 2000-0017149 호
출 원 일 2000년 06월 16일
등 록 일 2000년 08월 31일

고안의 명칭 버터플라이 밸브의 고무시트 고정구조

실용신안권자 주식회사 에이스브이(194611-0039508)
경남 김해시 주촌면 당덕리 278-4

고 안 자 구윤회(490119-1852511)
경상남도울산시남구삼산동현대아파트108-1001

위의 고안은 실용신안법에 의하여 실용신안등록원부에 등록되었음을 증명합니다.

2000년 08월 31일

특 허 청 장



특 허 증

CERTIFICATE OF PATENT

특 허 제 10-0757489 호

(PATENT NUMBER)

출원번호 제 2006-0020913 호
출 원 일 2006년 03월 06일
등 록 일 2007년 09월 04일

발명의명칭 (TITLE OF THE INVENTION)
컬지선으로부터 외곽 편심된 시트트를 갖는 버터플라이밸브

특허권자 (PATENTEE)
주식회사 에이스브이(184611-0******)
경남 김해시 주촌면 당덕리 278-4

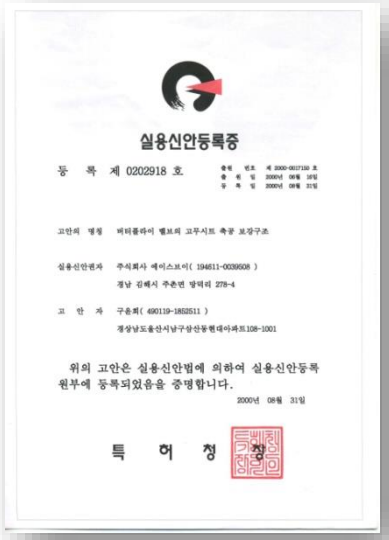
발명자 (INVENTOR)
구윤회(490119-1******)
울산 남구 삼산동 현대아파트 108-1001

위의 발명은 「특허법」에 의하여 특허등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE PATENT IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2007년 09월 04일

특 허 청 장

PATENT REGISTRATION CERTIFICATE



실용신안등록증

등 록 제 0202918 호

고안의 명칭 비터플라이 밸브의 고무시트 측공 보강구조

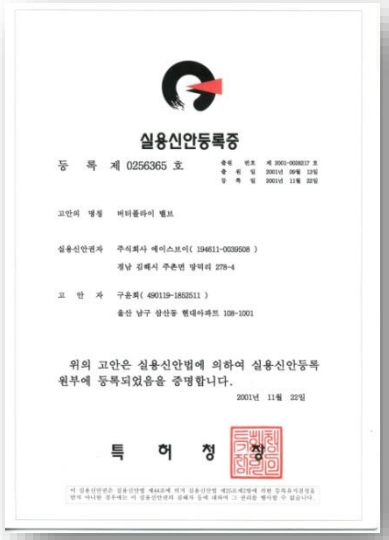
실용신안권자 주식회사 에이스브이(194611-0039508)
경남 김해시 주촌면 당덕리 278-4

고 안 자 구윤희(490119-1852511)
경상남도울산시남구삼산동현대아파트108-1001

위의 고안은 실용신안법에 의하여 실용신안등록 원부에 등록되었음을 증명합니다.

2000년 08월 31일

특 허 청



실용신안등록증

등 록 제 0256365 호

고안의 명칭 비터플라이 밸브

실용신안권자 주식회사 에이스브이(194611-0039508)
경남 김해시 주촌면 당덕리 278-4

고 안 자 구윤희(490119-1852511)
울산 남구 삼산동 현대아파트 108-1001

위의 고안은 실용신안법에 의하여 실용신안등록 원부에 등록되었음을 증명합니다.

2001년 11월 22일

특 허 청



실용신안등록증

등 록 제 0258365 호

고안의 명칭 압력평형수단을 갖는 심해구동밸브용 기어장치

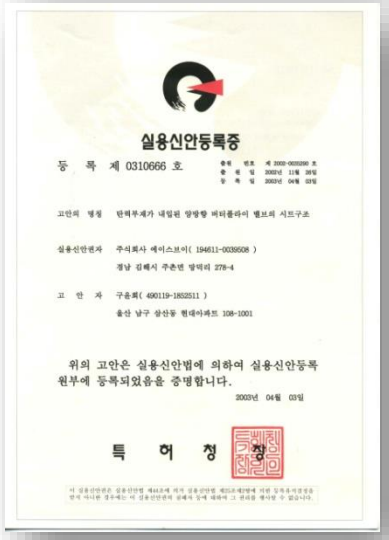
실용신안권자 주식회사 에이스브이(194611-0039508)
경남 김해시 주촌면 당덕리 278-4

고 안 자 구윤희(490119-1852511)
울산 남구 삼산동 현대아파트 108-1001

위의 고안은 실용신안법에 의하여 실용신안등록 원부에 등록되었음을 증명합니다.

2001년 12월 10일

특 허 청



실용신안등록증

등 록 제 0310666 호

고안의 명칭 탄력부재가 내입된 양방향 버터플라이 밸브의 시트구조

실용신안권자 주식회사 에이스브이(194611-0039508)
경남 김해시 주촌면 당덕리 278-4

고 안 자 구윤희(490119-1852511)
울산 남구 삼산동 현대아파트 108-1001

위의 고안은 실용신안법에 의하여 실용신안등록 원부에 등록되었음을 증명합니다.

2003년 04월 03일

특 허 청



실용신안등록증

CERTIFICATE OF UTILITY MODEL REGISTRATION

등 록 제 20-0416480 호

고안의 명칭 (TITLE OF THE DEVICE)
접지링으로부터의 최적 편심된 사프트를 갖는 버터플라이밸브

실용신안권자 (OWNER OF THE UTILITY MODEL RIGHT)
주식회사 에이스브이(194611-0******)
경남 김해시 주촌면 당덕리 278-4

고안자 (DEVISER)
구윤희(490119-1******)
울산 남구 삼산동 현대아파트 108-1001

위의 고안은 「실용신안법」에 의하여 실용신안등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE DEVICE IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2006년 05월 09일

특 허 청



실용신안등록증

CERTIFICATE OF UTILITY MODEL REGISTRATION

등 록 제 0388306 호

고안의 명칭 (TITLE OF THE DEVICE)
저선 및 최편운동에 의한 수밀구조를 갖는 버터플라이 밸브

실용신안권자 (OWNER OF THE UTILITY MODEL RIGHT)
주식회사 에이스브이(194611-0******)
경남 김해시 주촌면 당덕리 278-4

고안자 (DEVISER)
구윤희(490119-1******)
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위의 고안은 「실용신안법」에 의하여 실용신안등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE DEVICE IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)

2005년 06월 30일

특 허 청



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