SEOJEON VALMAC

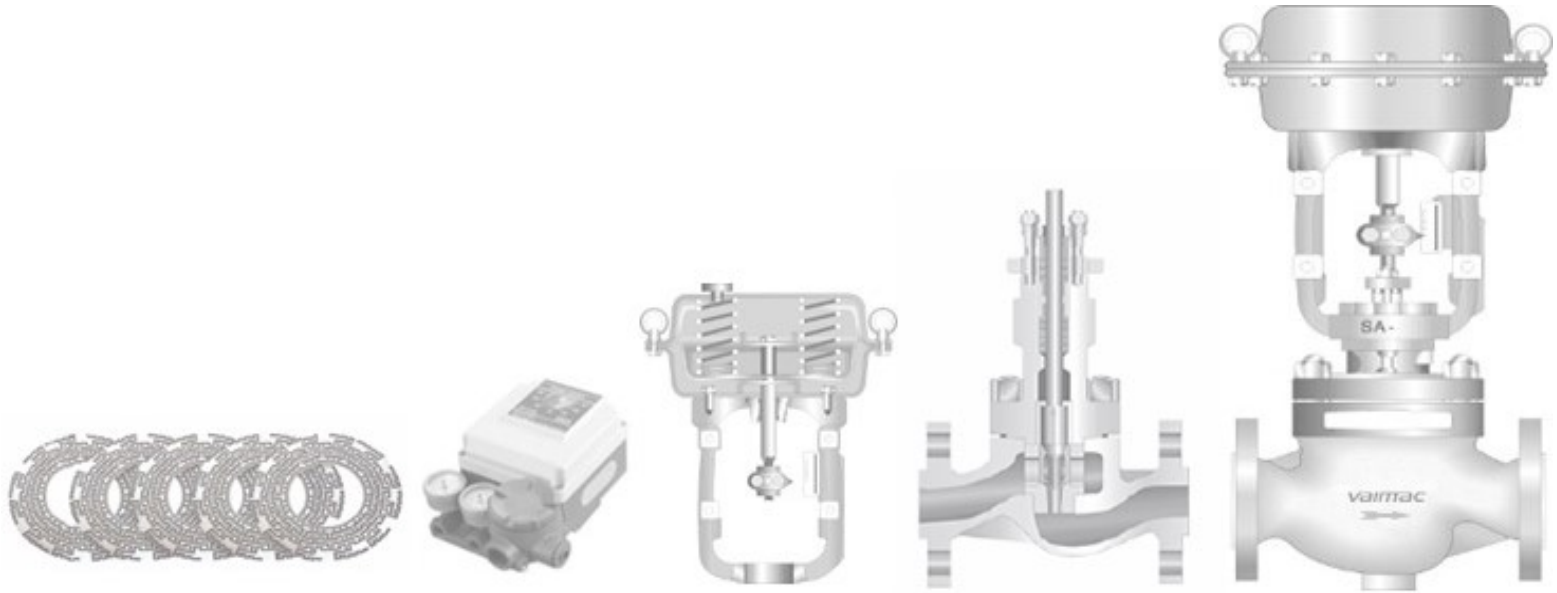
Control & On-Off Valve Manufacturer, Since 1981

Control Valves
Engineering Service
Research & Development
www.valmacs.com

SEOJEON VALMAC

Control & Special Valve Manufacturer. Since 1981

# Pre-Qualification Statement




*We will continuously challenge with innovative thinking and technology.*

**SEOJEON VALMAC CO., LTD**

**Head Off & Factory : #46 Daegotbuk-ro 158 Gil, Daegot-myeon, Gimpo-si, Korea**
**Tel + 82 31 981 3121. Fax +82 31 981 0365**
**China Branch : Baiqizen, Feng Cheng City, Liaoning Province, P.R China**
**Tel + 86 415 818 2571. Fax: + 86 415 818 257**
**Homepage : www.valmac.co.kr**

Registered ISO 19001,14001

K347/M10

# 1. Contents

*We will continuously challenge with innovative thinking and technology.*



# 1. Introduction

**SEOJEON VALMAC Co., Ltd** (SEOJEON VALMAC) was established in 1981 and engaged in supplying its quality products of Control & Special Valves for various industries such as Oil, Gas, Refinery, Petro-chemical, Steel, Pulp & Paper, Nuclear & Thermal Power plants ,. Etc

SEOJEON VALMAC is a leading company for its business products in South Korea with qualified equipment, manpower and technical capability to design, manufacture and experiment.

These products are manufactured in our modern facilities where the quality is controlled in conformance to all applicable codes, standards and design criteria demanded by our licensors and clients.

We, SEOJEON VALMAC will continuously input our utmost efforts in order to maintain the best quality of products, satisfaction of costs and become a worldwide leader in the flow control valve and system industry.

# 2. Company History

1981. 03 Established **YOUNG Industrial Co**.(Repair & Retrofit)

1988. 07 Changed name to SEOJEON Total Control

1993. 05 Started the management to repair & Retrofit with KORI (Nuclear Power Plant )

1995. 11 Started the production to Metal seat Ball valve

1998. 08 Contracted to Repair center with ABB, Gadelius (Japan), K.K.

1999. 04 Development to Segment & Eccentric Ball valve

1999. 08 Registered vender to KEPCO (Korea Power Engineering Company)

1999. 11 Registered patent of the Metal seated Ball & Control Valve

1999. 12 Registered vender to POSCO

2000. 03 Contracted to OEM for Actuator with Copes-Vulcan(U.S.A)

2000. 12 Registered the vender to POSCO E&C

2001. 06 Changed the company name to **SEOJEON VALMAC Co., Ltd**

2001. 09 Contracted supply to POSCO FINEX Pilot Plant Valve for high-temperature Stand Pipe Valve (DN125-PN160/850℃)

2002. 08 Contracted supply to POSCO FINEX DEMO. Plant for Metallized Ball valve & cyclone valve(850 ℃)

2003. 07 Obtained the ”A small and medium enterprise of export” from small and medium enterprise

2003. 12 Contracted supply to Korean NAVY

2004. 12 Award to Citation for trade from Incheon ci

2004 . 08 Obtained Institute of Research and Development from Korea Industrial Technology Association

2004 . 12 Established to the **Sales Market Branch Office in Dandong, in China**

2005 . 12 Contracted supply to POSCO FINEX 1.5MT Project with Control & Shut-off Valves

2006 . 04 Registered Patent for Riser Ball Valve of the high temperature with power flow system

2007. 05 Registered to KEPCO for Control valve Manufacturer

# 2. Company History

2008. 10 Obtained the CE Mark for the Control Valves from TUV NORD

2007. 07 Moved factory to Kimpo from Incheon

2009. 10 Obtained the ISO 14001 from ICR (USA Management Association Registration)

2011. 09 Listed as Control Valve supplier of thermal & hydroelectric power plant at Korea Midland ,Korea Southern &East-West Power Co.,Ltd (R Class)

2011. 09 A ward to Small and Medium Business Federation from Kyungi-do

2011. 11 Listed a manufacturer for Repair of thermal &hydroelectric power plant at Korea Midland, East-West,Western & Southern Power Co., Ltd

2012. 04 Obtained the ISO 9001 from TUV (TUV-NORD)

2012. 04 Registered to BASF (The German Chemical Co) for Control valve Manufacture

2012. 06 Registered to NIGC (National Iranian Gas Co) for Control valve Manufacture

2012 07 Registered to T & C Gulf (Trouvay & Cauvin) for Control & Shut-off valve Manufacture

2012. 10 Registered to MAPNA Group for Control valve Manufacture

2012. 11 Obtained the API 602 & 608 Monogram from API (American Petroleum Institute)

2012.12 Obtained the OHSAS 18001 from ICR (USA Management Association Registration)

2013. 10 Registered to PETRONAS (Malaysia) for Control valve Manufacture

2013. 10 Obtained the 0425 ATEX 2583 (Ex II2 Gc IIC T6) from ICIM S.p.A in Italy

2013. 11 Obtained the API 6D-1397 Monogram from API (American Petroleum Institute)

2013. 12 Award to Citation for trade from Gyeonggi-do

2014. 03 Obtained the ISO 9001 from ICR (USA Management Association Registration)

# 3. General Information

## 3-1. Company Features

Company Name : **SEOJEON VALMAC Co., Ltd**
Established : In 1981 by Mr. Jong Sil, Lee / President
Homepage : www.valmac.co.kr
**VALMAC : VALves of the Mechatronics Auto flow Control**

## 3-2. Head Office & Factory

Address : # 46 158 Gil Daegotbuk-ro, Daegot-myeon, Gimpo-ci Korea
Telephone : + 82 31 981 3121. Facsimile : +82 31 981 0365
Contact Point : Mr. Kwon Joo , Lee / Managing Director, E- mail : valmac@valmac.co.kr

## 3-3. China Sales Market Branch Office

Address : Baiqizen, Feng Cheng City, Liaoning Province, P.R China
Telephone : + 86 415 818 2571. Facsimile : + 86 415 818 2570
Contact Point : Mr. Dong Myung, Jung / executive Director, E- mail : dm5233@naver. com

## 3-4.

Capital : USD 300,000 $
Annual Sales Amount : USD 15,000,000 $
Full Production Capacity : USD 30,000,000$

## 3-5. Company Management Policy

**Continuously challenge with innovative thinking and technology**

# 3. General Information

## 3-6. Manpower

| Description | Sales | Design | Production | Administration | QA/QC | Total |
|---|---|---|---|---|---|---|
| No of People | 6 | 5 | 19 | 5 | 5 | 40 |

## 3-7. Experience of Technicians

Experience (Years)

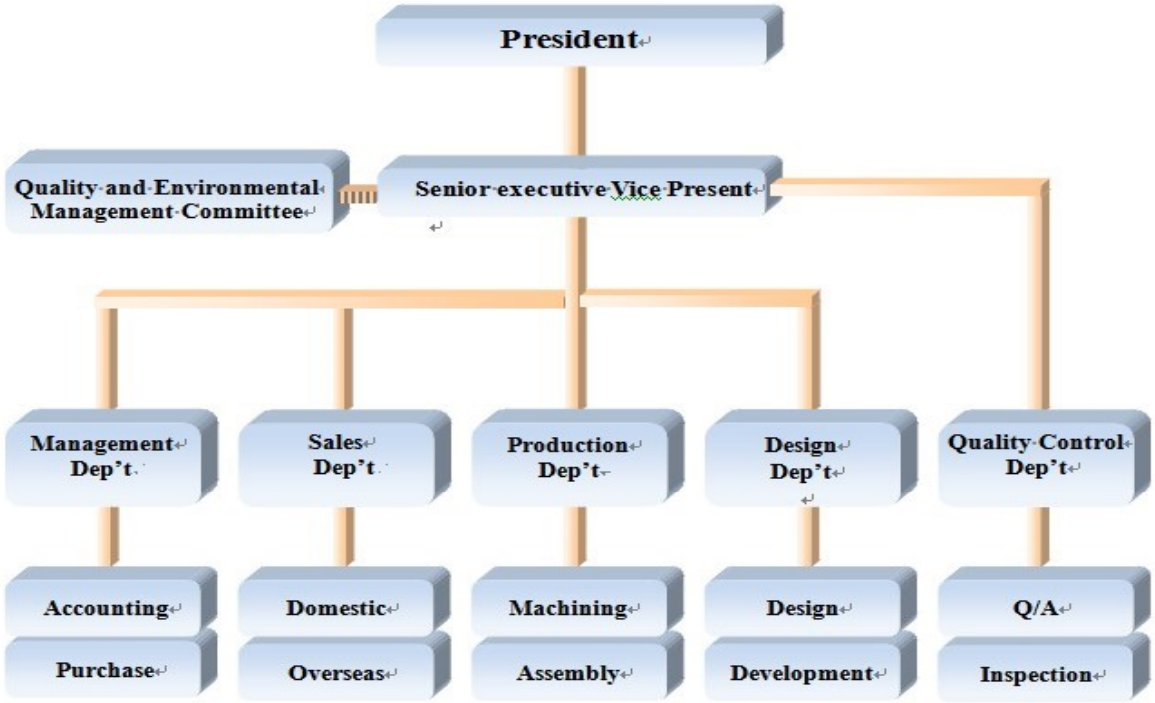
| Discipline | Y<5 | 5<Y<10 | 10<Y | Total |
|---|---|---|---|---|
| Metallurgical | 1 | 2 | 6 | 9 |
| Mechanical | 1 | 4 | 9 | 14 |
| Electrical | | 1 | 1 | 2 |
| QA/QC | 1 | 2 | 2 | 5 |
| Total | 3 | 9 | 18 | 30 |

## 3-8. Building & Acreage ($m^2$)

| Building | Ground | Building | Total |
|---|---|---|---|
| Factory (Korea) | 9,000 $m^2$ | 3,3 00 $m^2$ | 12,300 $m^2$ |
| Branch Office(China) | 3,000 $m^2$ | 3,500 $m^2$ | 6,500 $m^2$ |

# 3. General Information

### 3-9. Organization Structure




### 3-10. Service Capability

SEOJEON VALMAC has expertise on designing, erecting, commissioning and training of personnel in the field of reducing and metering stations and of components for the Mechatronics Auto Control & System.

SEOJEON VALMAC is capable of providing technical advice & service, as well as several field assistance domestically and overseas.

# 4. Production Control

## 4-1. Production Activities

SEOJEON VALMAC specializes in design, manufacturing and service of Control & Special Valves that are used for flow pipelines on Water, Gas, Oil, Steel & Iron and Power plants.

## 4-2. Main scope of application

- Oil & Gas Plant, Chemical and Refinery, Petrochemical Plant
- Nuclear and Thermal Power plant, Offshore and Shipbuilding
- Steel and Iron Industry plant, Cooling and heating water (conditioning) System
- Waste and Water treatment System, Pulp & Paper Industry Plant,

## 4-3. Main products range

SEOJEON VALMAC incorporates all aspects of Control & Specials Valves to engineer and manufacture

| No | Type | Item Description | Size | Rating |
|---|---|---|---|---|
| 1 | **Control & Special Valve** | 1. Globe Valve (2 & 3 Way, Piston, Pressure Reducing & Safety Type)<br>2. Ball Valve (Side/Top Entry/ Metal / Eccentric/"V" Cut Type)<br>3. Butterfly Valve (Rubber/Metal/ Hi-Performance/Triple offset<br>4. Micro Flow Control Valve (Cv 0.00008 ~ 0.1)<br>5. Desuper heater Station Valve<br>6. High Temperature & Cryogenic Valves ( 1,100℃ / -194℃ ) | 1/2" ~ 78"<br>15~2,000 mm | 150 ~ 4,500 Lbs<br>PN10 ~ 250 |
| 2 | **Actuator** | 1. Pneumatic Diaphragm & Cylinder (Multi & Single Type)<br>2. Hydraulic Cylinder, 3. Electric Actuator (Rotary & Liner Type) | 40~550 mm | 5 ~ 9 kgf/cm2<br>Hydraulic 250 Bar |
| 3 | **Controller** | 1. I(E)& P(P/P) Positioner 2. I(E) Transducer 3. Filter & Regulator | 4~ 20mA | 5 ~ 9 kgf/cm2 |

# 4. Production Control

## 4-4. Manufacturing Process

The latest software programs are in line with CNC machining through a complete Network of data communication connecting all the activities of the factory. All valve parts are machined under the control of a comprehensive ISO 9001 and API Q1 quality assurance system.

SEOJEON VALMAC has several machine tools for fine and precise machining, sophisticated and high technological facilities for valves, parts production, lapping tools, customized machine work equipment, and testing and inspection of equipment. These facilities are used to manufacture over 100 different kinds of products as per service fields.

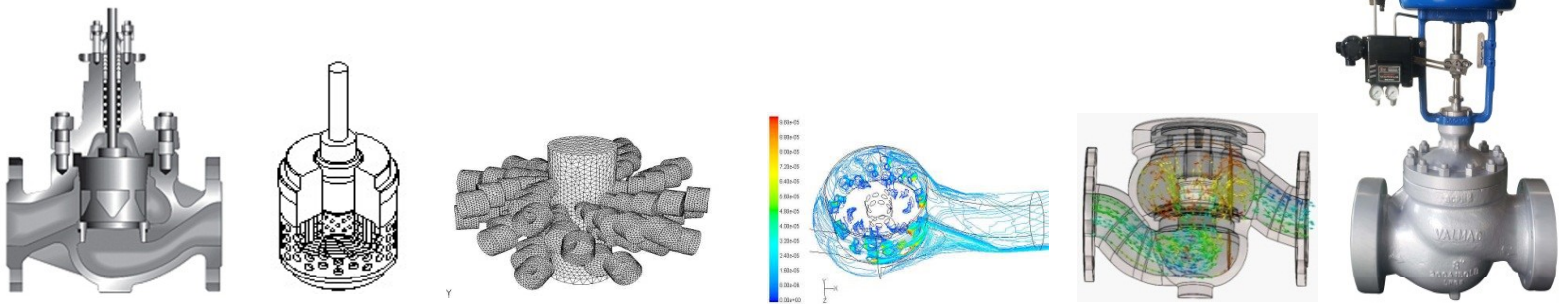
## 4-5. Manufacturing Facilities List

| No | Description | Model | Q'ty | No | Description | Model | Q'ty |
|---|---|---|---|---|---|---|---|
| 1 | CNC Lathe | KT 28 | 3 | 10 | Precision Lathe | 200 x 2,000 | 2 |
| 2 | M. C.T | 1200 x 1200 | 1 | 11 | Milling M/C | Hwa Cheon | 2 |
| 3 | Lathe | 300 x 1800 | 6 | 12 | Radial M/C | 1,500 | 1 |
| 4 | Compressor | 15 Hp | 4 | 13 | Shooting Machine | 300 x 500 | 1 |
| 5 | Welding M/C | Argon, 5.0kw | 1 | 14 | Polishing M/C | 1,000 | 1 |
| 6 | Welding M/C | Arc | 1 | 15 | Thermal Spray Coating M/C | Tungsten, Nickel | 2 |
| 7 | Marking M/C | 100 x 300 | 1 | 16 | Hoist | 10 Tons | 4 |
| 8 | Cutting M/C | 1000 mm | 1 | 17 | Paint Booth | 2.0 x 2.4 | 1 |
| 9 | Tapping M/C<br>Drilling M/C | 1~50mm | 3 | 18 | Electric Power Generator | 220 V | 1 |

# 5. Technical Control

## 5-1. Design Data

SEOJEON VALMAC design engineers combine proven engineering expertise with state-of the art technology, including computer aided design (Auto CAD &Solid work soft program) and finite element analysis (structure, thermal, fluid and mobile), to refine existing designs and help develop new products.



## 5-2. General Design

The pressure / temperature rating for the valve is in accordance with the appropriate class **ANSI B 16.5 or B 16.34.** The temperatures and dimensions for the face to face is in accordance with **ANSI B 16.10**
The minimum wall thickness of valve bodies and other pressure containing parts such as stem, trim, and extension plates are in accordance **with ANSI B 16.34 Table 3.**

All products are designed to be manufactured under the conditions in accordance with the following codes:

ISO-EN-ANSI-ASTM-ASME-API-BSI-DIN-MSS-SSPC-FCI-ISA-NACE -AWS-AWWA-JIS-KS

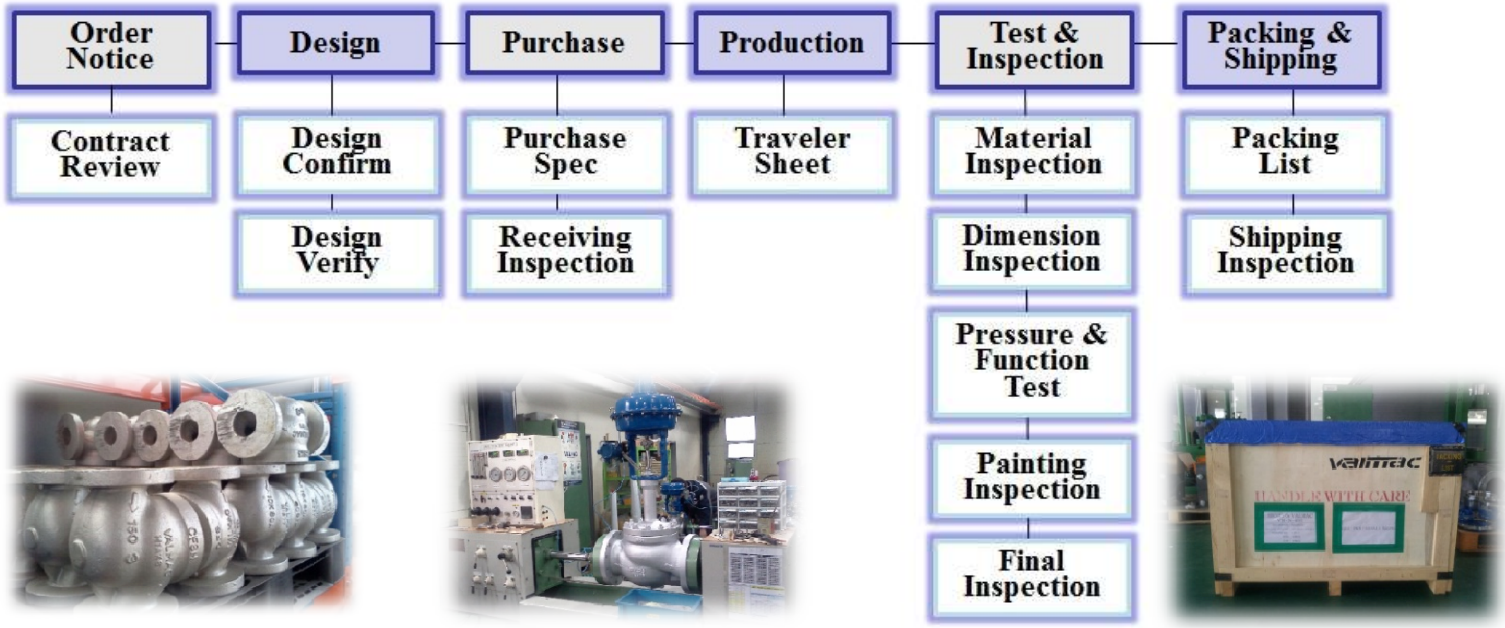
# 6. Quality Control

**6-1.**

SEOJEON VALMAC quality system designs, procurement, manufacturing administration, and clients service functions are conducted within a comprehensive ISO 9001 and API Q1quality assurance system.

As a result, SEOJEON VALMAC manufacturing facilities and procedure manuals meet or surpass one or more of the quality standards.

The goal of SEOJEON VALMAC is 100% conformance to agreed specification and quality requirements, such as the requirements of material certificate, where testing, drawing and other essential data are clearly identified and provided on time. International quality standards include **ISO 9001, API Q1, CE** as follows ;



# 6. Quality Control

## 6-2. Inspection & Test

SEOJEON VALMAC all manufacturing plants are fully equipped with facilities to carry out inspections & test on each valve before shipment according to the customer's specific requirement and special testing. For example, for valves requiring capabilities to withstand lower temperatures can be specially designed. Our inspection and test capabilities include but are not limited to,

- Receiving Inspection for the Raw materials
- Visual, Dimensional, Painting and Packing Inspection
- Pressure Test (pneumatic or hydrostatic)
- Nondestructive Test of PT/RT/UT/MT as per customer specification
- Reviewing for the Certificate of Material Test Report (CMTR)
- Certificate of Conformity (c of c) to the specified code and standards
- High temperature and Cryogenic Test

## 6-3. Inspection & Test Equipment List

| No | Type | Description | Q'ty | No | Type | Description | Q'ty |
|---|---|---|---|---|---|---|---|
| 1 | Pressure Tester | 50 ~ 2,000 mm | 6 | 9 | Actuator tester | 50 ~ 550 mm | 2 |
| 2 | Leakage Tester | 50 ~ 1,000 mm | 4 | 10 | Cryogenic Tester | ~ 1200mm | 1 |
| 3 | Repetition Tester | 15 ~ 250 mm | 2 | 11 | Flow Capacity Tester | ~ 300mm | 2 |
| 4 | Dial Gauge | 0-10 mm | 2 | 12 | Micrometer | 25 ~75 mm | 8 |
| 5 | Venire Calipers | 0 ~ 1,000 mm | 36 | 13 | RPM Tester | 30V.3A | 1 |
| 6 | Thickness Gauge | 0.1 ~ 50 mm | 1 | 14 | Torque Wrench | ~ 100 kg/m | 3 |
| 7 | Hardness Tester | 100 HRC | 1 | 15 | High Temperature Tester | ~ 1200°C | 1 |
| 8 | Spring Tension Tester | 500 ~1,000 | 1 | 16 | Pitch Gauge | 2P ~ 20P | 2 |

# 7. Quality & Technical Conditions

| No | Process | Apply Standard & Specification | VALMAC Quality &Technical Procedure |
|---|---|---|---|
| 1 | QA/QC | - ISO 9001 / 14001, OHSAS 18001, API Q1<br>- PED (97/23/EC) | - Quality Assurance Manual (SJM-QEM -001)<br>- Procedure for Quality Assurance and Control (QP-Q-203) |
| 2 | Material | - EN 10204 Type 3.1<br>- NACE MR 0175<br>- ASTM/ASME/ANSI Materials Spec | - Procedure for Material Identification(QP-M-505)<br>- Procedure for Supplier Control(QP-P-402)<br>- Procedure for Corrosion Environment Control (QP-E-701)<br>- Working Std of Material Purchase (QP-PS-05)<br>- Working Std of Heat Treatment (QP-WI—HT-01) |
| 3 | Design | - API 6A / 6D / 602 / 608, ISA S75-01/ FCI 70-2<br>- ASME/ANSI B 16.5 / 16.10 / 16.34<br>- BS 6755 Part 2 / ISO 10947 (Fire safety test) | - Procedure for Design and Development(QP-D-601)<br>- Procedure for Drawing Control (QP-D-602)<br>- Working Std of Fire Safety Test (QP-WI-FT-01) |
| 4 | By Pass | - ASME/ANSI B 1.1 / 1.20/ 16.34<br>- ISO 228-1/2<br>- API 6A / 6D / 600 / 602 / 608 | - Procedure for Design and Development(QP-D-601)<br>- Procedure for Production Controls (QP-M-506)<br>- Working Std of Material Purchase (QP-WI-PS-01) |
| 5 | Actuation<br>Kind of | - ISO 5211<br>-Type : Electric, Pneumatic, Hydraulic | - Procedure for Inspection and Testing(QP-Q-206)<br>- Procedure for Measuring and Testing Equipment (QP-Q-204)<br>- Working Std of Maintenance (QP-WI-MT-01) |
| 6 | Visual | - ASME / ANSI B 16.34 , 16.5<br>- MSS-SP-25,44, 55<br>- BS 1868 | - Procedure for Material Identification(QP-M-505)<br>- Procedure for Inspection and Testing(QP-Q-206)<br>- Working Std of Marking (QP-WI-MK-01)<br>- Working Std of Coating (QP-WI-CO-01) |
| 7 | Surface | - SSPC-SP-10<br>- BS 1868(Coating) | - Procedure for Production Controls(QP-M-506)<br>- Working Std of Surface Treatment and Painting Work (QP-WI-SF-01) |

# 7. Quality & Technical Conditions

| No | Process | Apply Standard & Specification | VALMAC Quality & Technical Procedure |
|---|---|---|---|
| 8 | Dimension | - ASME/ANSI B16.34 / 16.10<br>- API 6A / 6D / 602 / 608 | - Procedure for Inspection and Testing (QP-Q-206)<br>- Working Std of Machine Work (QP-WI—MC-01) |
| 9 | Testing (Pressure) | - ISO 5208 / EN 1626 / BS 6364/ / KS B2821<br>- API 598 / 6A / 6D / 602 / 608<br>- ASME/ANSI B16.34 / B16.37 / B16.104<br>- FCI 70.2 / ISA S75.19 / IEC 60534-4 | - Procedure for Inspection and Testing(QP-Q-206)<br>- Working Std of Installation (QP-WI-IS-01)<br>- Working Std of Pressure Test (QP-WI-PT-01)<br>- Working Std of Cryogenic Test (QP-WI-CT-01) |
| 10 | Welding | - AWS<br>- ASME Sec IX(WPS / PQR / WPQ)<br>- ASME/ANSI B16.34 | - Procedure for Process Controls(QP-M-501)<br>- Procedure for Production Controls(QP-M-506)<br>- Working Std of Welding Work (QP-WI-WD-01) |
| 11 | NDE | - ASME Sec V/ VIII Div 1<br>- ASME/ANSI B16.34<br>- ASTM E10 / 18 / 94 / 142 / 709 | - Procedure for Production Controls(QP-M-506)<br>- Procedure for Inspection and Testing(QP-Q-206)<br>- Working Std of NDE Work (QP-WI-NDE-01) |
| 12 | Certificate | - ISO 9001 / 14000<br>- OHSAS 18001<br>- API Q1<br>- PED (97/23/EC) | - Procedure for Customer Satisfaction(QP-S-303)<br>- Working Std of Packing and Shipment(QP-WI-PD-01)<br>- Certificate of Conformance (ISO 10204)<br>- Declaration of Conformity (PEC 97/23/EC) |

**Remarks** :

1. SEOJEON VALMAC will guarantee the product against defects / damages in manufacturer for a period of one (1) year after loading from factory

2. SEOJEON VALMAC will guarantee warrant quality through QC or Customer inspection before loading.

# 8. Certification & Registration

## 8-1. License & Certification Status

| Date | Title | Contents | Licensor | Approval Type |
|---|---|---|---|---|
| 2012. 03 | ISO 14001 | The Environmental Management System for the Control Valves | ICR | Environmental Assurance System |
| 2006. 11 | CE Mark | The Certificate for the Design and Construction of Control Valves | T U V NORD | Safety System |
| 2008. 06 | Type Approval | Fire Test Type approval for the Ball & Butterfly Valve | KETC | Safety System |
| 2011. 09 | R Class | . Listed as a Control Valves Supplier for Thermal & hydroelectric Power plant | Korea Midland & East-West Power Co., Ltd | Quality Assurance System |
| 2011. 06 | Venture Business | Technology Evaluation Assured Company | Small and medium enterprise | New Technology |
| 2010. 03 | R & D Center | Permission of R&D center | Korea Industrial Technology Association | Research & Development |
| 2010. 06 | Inno-Biz | New Technology Company | Small and medium enterprise | New Technology |
| 2012. 11 | API Q1 / 602 / 608 | The Quality Management System for Control Valves | API | Quality Assurance System |
| 2012. 12 | OHSAS 18001 | The Safety Management System for the Control Valves | ICR | Safety Assurance System |
| 2013. 10 | CE Mark (0425ATEX2584) | The Certificate for the Design and Construction of Control Valves | ICIM | Safety System |
| 2013. 11 | API Spec 6D | The Quality Management System for Control Valves | API | Quality Assurance System |
| 2014. 03 | ISO 9001 | The Environmental Management System for the Control Valves | ICR | Environmental Assurance System |

# 8. Certification & Registration

## 8 – 1 - 1. Certification (ISO 9001, ISO 14001 & OHSAS 18001)

Certificate
of Registration

This is to certify that :

SEOJEON VALMAC CO., LT

46, Daegotbuk-ro 158beon-gil, Daegot-myeon, Gimpo-si, Gyeonggi-do,

Has been assessed by International Certification Registrar Ltd., in
Quality Management Systems and found to comply wi

ISO 9001:2008

Approval is hereby granted for registration providing the rules a
relating to certification are observed at all times.

Certification Scope

Design/Development, Manufacture and Maintenanc
Control Valves, Manual Valves, Valve Accessorie

Certificate Issue Date : 14th March 2014
Expiration Date : 13th March 2017 Certificate No. :

The Seal of ICR Limited was here to affixed
in the presence of :

President

Certificate
of Registration

This is to certify that :

SEOJEON VALMAC CO., LTD.

46, Daegotbuk-ro 158beon-gil, Daegot-myeon, Gimpo-si, Gyeonggi-do, Korea

Has been assessed by International Certification Registrar Ltd., in respect o
Environmental Management Systems and found to comply with

ISO 14001:2004

Approval is hereby granted for registration providing the rules and condit
relating to certification are observed at all times.

Certification Scope

Design/Development, Manufacture and Maintenance of
Control Valves, Manual Valves, Valve Accessories

Certificate Issue Date : 14th March 2014
Expiration Date : 13th March 2017 Certificate No. : E08171

The Seal of ICR Limited was here to affixed
in the presence of :

President

CreBIZ
Certificate No. 0A160032

CERTIFICATE OF REGISTRATION

Occupational Health and Safety Management System

SEOJEON VALMAC CO., LTD.

46, Daegotbuk-ro 158beon-gil, Daegot-myeon, Gimpo-si, Gyeonggi-do, Korea

CREBIZQM hereby certifies that the Management System of the above organization
conforms with the requirement of the following standard :

Standard of Certification

K-OHSMS 18001:2007 / OHSAS 18001:2007

Scope of Certification

Design, development and manufacture of automatic control valve, manual control valve and valve accessory

Valid until : 14, July, 2019 / Date : 15, July, 2016
Issue Date : 15, July, 2016

KAB-OC-11

Approved by :
President CreBizQM

7F, Seongsan Bldg., 127, Yangpyeong-ro, Yeongdeungpo-gu, Seoul, Korea

CREBIZQM Co., Ltd. has accredited by Korea Accreditation Board as a Certification Body for
Occupational Health and Safety Management System (Accreditation number: KAB-OC-11).
This certificate remains the property of CREBIZQM and is bound by the conditions of contract.

# 8. Certification & Registration

## 8 – 1 - 2. Certification (API 602 - Globe Valve, 608 – Metal Seated Ball Valve , 6D – Ball Valve)

**Certificate of Authority to use the Official API Monogram**
**License Number:** 6D-1397 ORIGINAL

The American Petroleum Institute hereby grants to

SEOJEON VALMAC CO., LTD.
#595, Chowonji-ri Daegot-myeon
Gimpo-si, Kyunggi-do
South Korea

American Petroleum Institute

**Certificate of Authority to use the Official API Monogram**
**License Number:** 602-0039 ORIGINAL

The American Petroleum Institute hereby grants to

SEOJEON VALMAC CO., LTD.
#595, Chowonji-ri Daegot-myeon
Gimpo-si, Kyunggi-do
South Korea

American Petroleum Institute

**Certificate of Authority to use the Official API Monogram**
**License Number:** 608-0016 ORIGINAL

The American Petroleum Institute hereby grants to

SEOJEON VALMAC CO., LTD.
#595, Chowonji-ri Daegot-myeon
Gimpo-si, Kyunggi-do
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 608** 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: **608-0016**

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 product: Metal Ball Valves

QMS Exclusions: No Exclusions Identified as Applicable

American Petroleum Institute

Effective Date: NOVEMBER 14, 2012
Expiration Date: NOVEMBER 14, 2015
To verify the authenticity of this license, go to www.api.org/compositelist.

Director of Global Industry Services

# 8. Certification & Registration

## 8 – 1 - 3. Certification (CE Mark – Control Globe Valve, Ball Valve & Piston Valve)

Certificate
of conformity with the follov
European Directives

Registered No.:
K3586/M10

Machinery Directive 2006/42/EC

| Reference of applicant | Date of application | File reference |
|---|---|---|
| - | 10.11.2010 | KP-10-344 |

This is to certify that the following products comply to the essential
above mentioned European Directive and the following standards, ta
national deviations:

**Product:** Globe Control Valves

**Type designation:** GCV-x ( x = 15, 20, 25, 40, 50, 65, 80, 10
350, 400, 500, 550, 600)

**Applicant:** SEOJEON VALMAC CO., LTD.
595 Chowonji-ri, Daegot-myeon, Gimpo-s
Gyeonggi-do 415-837, Korea

**Standard(s):** EN ISO 12100-2:2003 + A1:2009

This Certificate of conformity is based on the evaluation of samples of t
assessment of the production and it does not permit the use of a mark o
of the TÜV NORD CERT. The holder of this certificate may use this C
Declaration of Conformity.

Certification Body for Product Safety

CE The CE marking can be affixed on the product if all relevant and effective

SZUTEST
NOTIFIED BODY 2195

CE 2195

Szutest Technical Inspection and Certification, İstanbul,
Notified Body 2195

EC CERTIFICAT

according to 97/23/EC Pressure Equipment Directive Annex III Module

Number: 2195-PED-1415302

Manufacturer: SEOJEON VALMAC CO., LTD.
#46 158gil Daegotbuk-ro, Daegot-myeon
415-837 Korea

Product: Globe control valves and pneumatic actu

Type/Model: Globe Control Valves: VM 1000, VM 110
VM 1330, VM 1440, VM 1410, VM 1500,
Pneumatic Actuators: VM500, VM510, V
VM930

Base of certificate: Report No. PED-141 dated 19 May 2014

Expiry date: 01 June 2017

Szutest Technical Inspection and Certification hereby confirms that the r
mentioned products, has determined and applied the quality system, that sa
Directive 97/23/EC of The European Parliament and of the Council c
approximation of the laws of the Member States concerning pressure equ
H.Through this EC Certificate, manufacturer shall affix CE mark with id
exclusively to products that fulfill requirements of the directive.

Istanbul, 02 June 2014

SZUTEST Teknik Kontrol ve Belgelendirme Hizmetleri Tic. Ltd

Strojírenský zkušební ústav, s.p. (Engineering Test Institute, Public Enterprise)
Hudcova 56b, 621 00 Brno, Czech Republic

CERTIFICATE

B-39-00501-14

Manufacturer: Seojeon VALMAC Co., Ltd.
46, 158gil, Daegotbuk-Ro, Daegot-Myeon
Gimpo-Si, Gyeonoggi-Do
Korea

Products: Globe valves

Type designation: VM1100, VM1300, VM1320, VM1400, VM1410

The Engineering Test Institute hereby certifies that, under the condition of a
mounting (one shut-off Globe valve), the products comply with the SIL3 require
in the operation with low frequency of demands, with the SIL2 requirements
operation with high frequency of demands and under the condition of a d
mounting (series of two shut-off Globe valves) they comply with the SIL4
operation with low frequency and high frequency requirements for functional saf
active elements in electronic systems in the operation with low and high frequer
demands, as required by

ČSN EN 61508-1 ed.2:2011, ČSN EN 61508-2 ed.2:2011,
ČSN EN 61508-6 ed.2:2011,

within functions of safety shut-off, and are subject to inspections every 12 months

The present Certificate has been issued on the basis of Final Report 39-102
2014-06-30, issued by Engineering Test Institute, Public Enterprise.

The rules for using the Certificate are specified on Page 2.

Brno, 2014-06-30

Ing. Jiří Rozsíval
Deputy Direct

B-39-00501-14, page 1 (2)

Strojírenský zkušební ústav, s.p., Hudcova 56b, 621 00 Brno, Česká republika
Engineering Test Institute, public enterprise, Hudcova 56b, 621 00 Brno, Czech Republic

www.szutest.cz

ICIM

ATTESTATO DI ARCHIVIAZIONE DEL FASCICOLO TECNICO DELLA COSTRUZIONE
ACKNOWLEDGEMENT OF RECEIPT OF TECHINCAL CONSTRUCTION FILE
DIR. 94/9/CE – D.P.R.24.3.1998 n.126

CE 0425

Questo certificato è rilasciato in conformità a quanto prescritto dall'Art.8 par.1 lettera b) capo II) della Direttiva 94/9/CE
This certificate has been issued in conformity to Art.8 par.1 letter b) of the Directive 94/9/CE

| ATTESTATO N° | 0425 ATEX 2583 | CERTIFICATE N° |
|---|---|---|
| Organismo notificato | | Notified Body |
| ICIM S.p.A. - Piazza Don Mapelli, 75 – 20099 Sesto San Giovanni (MI) | | N° of identification: 0425 |
| Dati Fabbricante | | Manufacturer |
| Sede legale | SEOJEON VALMAC.CO.,LTD<br>46 158gil, Daegotbuk-ro, Daegot-myeon, Gimpo-Si, Gyeonggi-Do<br>KOREA | Head office |
| Dati prodotto | | Product |
| Prodotto | PNEUMATIC DIAPHRAGM ACTUATOR | Product |
| Tipo / Modello | VM 500-23, VM 500-42, VM 500-61, VM 500-74, VM 500-145, VM 500-202 | Type /Model Designation |
| Caratteristiche del modello | Equipaggiamento non elettrico / Non electrical equipment | Characteristics of the model |
| Classificazione | Ex II 2 G c IIC T6 | Classification |
| ICIM Dichiara di aver ricevuto per archiviazione il fascicolo tecnico n. SV-TQ-EX-VM 500 in data 28-09-2013<br>ICIM declares the receipt of the Technical File SV-TQ-EX-VM 500 on 28-09-2013 | | |
| Eventuali estensioni | Nessuna / None | Extensions |
| Eventuali condizioni di subordine della Certificazione CE | Nessuna / None | Condition relating to CE Certification |
| Note | ICIM non esegue alcuna verifica relativamente alla completezza e correttezza dei documenti costituenti il fascicolo tecnico ricevuto / ICIM does not perform any verification of the documents received<br>Rimane responsabilità del fabbricante dimostrare conformità ad altre Direttive applicabili al prodotto oggetto di questo certificato / It is the responsibility of the manufacturer to prove conformity with other Directives applicable to the product | Notes |

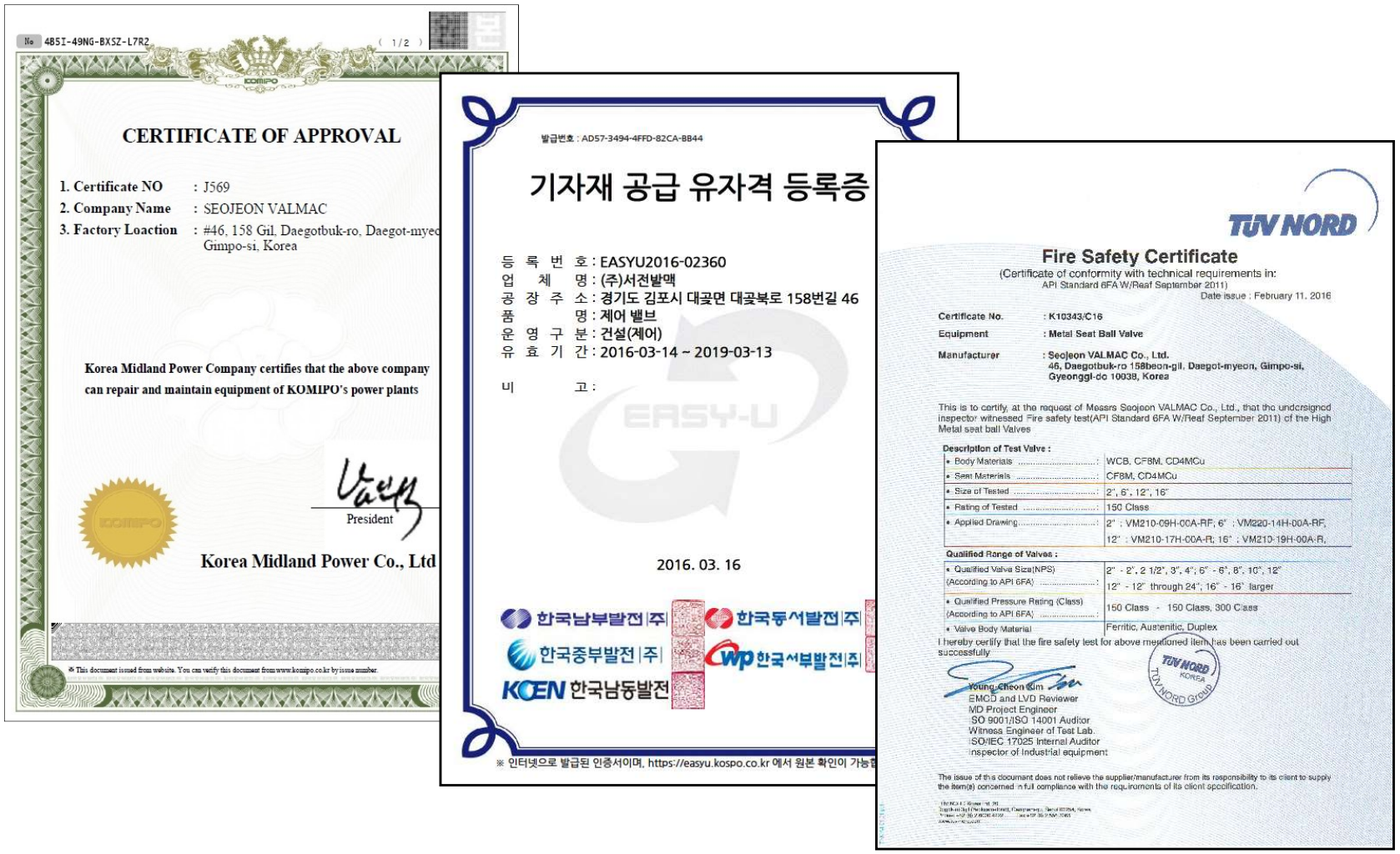
This certificate issued is valid only for the models above specified. Any technical change must be declared to ICIM S.p.A. that will give information how to proceed.

| Data di emissione<br>First issue | Emissione corrente<br>Current Issue | Data di scadenza<br>Expiring date |
|---|---|---|
| 22/10/2013 | 22/10/2013 | 21/10/2023 |

ICIM S.p.A.

# 8. Certification & Registration

## 8 – 1 - 4. Certification (Fire Safety Test, Power Plant Approval, ATEX )



No 4B5I-49NG-BXSZ-L7R2 ( 1/2 )

KOMIPO

CERTIFICATE OF APPROVAL

1. Certificate NO : J569
2. Company Name : SEOJEON VALMAC
3. Factory Loaction : #46, 158 Gil, Daegotbuk-ro, Daegot-myeo Gimpo-si, Korea

Korea Midland Power Company certifies that the above company can repair and maintain equipment of KOMIPO's power plants

President

Korea Midland Power Co., Ltd

※ This document issued from website. You can verify this document from www.komipo.co.kr by issue number.

발급번호 : AD57-3494-4FFD-82CA-8B44

기자재 공급 유자격 등록증

등 록 번 호 : EASYU2016-02360
업 체 명 : (주)서전발맥
공 장 주 소 : 경기도 김포시 대곶면 대곶북로 158번길 46
품 명 : 제어 밸브
운 영 구 분 : 건설(제어)
유 효 기 간 : 2016-03-14 ~ 2019-03-13

비 고 :

2016. 03. 16

한국남부발전㈜ 한국동서발전㈜
한국중부발전㈜ 한국서부발전㈜
KOEN 한국남동발전

※ 인터넷으로 발급된 인증서이며, https://easyu.kospo.co.kr 에서 원본 확인이 가능

TÜV NORD

Fire Safety Certificate

(Certificate of conformity with technical requirements in: API Standard 6FA W/Reaf September 2011)

Date issue : February 11, 2016

Certificate No. : K10343/C16

Equipment : Metal Seat Ball Valve

Manufacturer : Seojeon VALMAC Co., Ltd. 46, Daegotbuk-ro 158beon-gil, Daegot-myeon, Gimpo-si, Gyeonggi-do 10038, Korea

This is to certify, at the request of Messrs Seojeon VALMAC Co., Ltd., that the undersigned inspector witnessed Fire safety test(API Standard 6FA W/Reaf September 2011) of the High Metal seat ball Valves

Description of Test Valve :

| | |
|---|---|
| • Body Materials | WCB, CF8M, CD4MCu |
| • Seat Materials | CF8M, CD4MCu |
| • Size of Tested | 2", 6", 12", 16" |
| • Rating of Tested | 150 Class |
| • Applied Drawing | 2" : VM210-09H-00A-RF; 6" : VM220-14H-00A-RF, 12" : VM210-17H-00A-R; 16" : VM210-19H-00A-R, |

Qualified Range of Valves :

| | |
|---|---|
| • Qualified Valve Size(NPS) (According to API 6FA) | 2" - 2", 2 1/2", 3", 4", 5" - 6", 8", 10", 12" 12" - 12" through 24"; 16" - 16" larger |
| • Qualified Pressure Rating (Class) (According to API 6FA) | 150 Class - 150 Class, 300 Class |
| • Valve Body Material | Ferritic, Austenitic, Duplex |

I hereby certify that the fire safety test for above mentioned item has been carried out successfully

Young-Cheon Kim
EMCD and LVD Reviewer
MD Project Engineer
ISO 9001/ISO 14001 Auditor
Witness Engineer of Test Lab.
ISO/IEC 17025 Internal Auditor
Inspector of Industrial equipment

TÜV NORD KOREA TÜV NORD Group

The issue of this document does not relieve the supplier/manufacturer from its responsibility to its client to supply the item(s) concerned in full compliance with the requirements of its client specification.

# 8. Certification & Registration

## 8-2. Client Approval Status

| Symbol Mark | Name of Client | Symbol Mark | Name of Client |
|---|---|---|---|
| KEPCO | Korea Power Plant Co | | Honam Petro-chemical Co |
| KOGAS | Korea Gas Corp | | Hyundai Steel Co |
| HYUNDAI | Hyundai Eng & Cont' | KOLON | Kolon Construction Co |
| LG | LG Chemical Co | KARI | Korea Aerospace R & I |
| SAMSUNG | Samsung Digital Co | SK | SK Construction Co |
| DOOSAN | DOOSAN Heavy Ind Co | KCC | KCC Co |
| S-OIL | S - Oil Co | | China Petro Chemical Co |
| posco | POSCO Steel Co | ExxonMobil | Exxon Mobil |
| GS | GS Construction Co | spirax sarco | Spirax Sarco |
| HANKOOK | Hankook Tire Co | BASF | B A S F |
| SC ENGINEERING | SC Engineering Co | | N I G C |
| Hyundai Oilbank | Hyundai Oil Bank Co | Mapna Group | MAPNA Group |

# 9. Major Reference List

## 9-1. Domestic Area (1)

| Client / Customer | Item Description | Size | Year | Major Plant |
|---|---|---|---|---|
| POSCO | Control & Shut-off Valves | 2“~ 24” | 1991~ | Finex, Gas Power & Steel |
| POSCO E&C | Control Valves ,. etc. | 1“~ 18” | 1995~ | Iron Steel & Power |
| KEPCO | Control Valves ,. etc. | 2“~ 16” | 2001~ | Thermal Power |
| Samsung Digital | Control & Shut-Off Valves ,. etc. | 1“~ 12” | 2005~ | Steam & Water Treatment |
| Kumho Petro-Chemical | Control valves ,. etc. | 2“~ 24” | 2008~ | Refinery |
| K C C | Control & Shut-Off Valves ,. etc. | 1“~ 36” | 2008~ | Chemical |
| S – Oil | Control Valves | 2“~ 28” | 2008~ | Petro-chemical |
| DOOSAN Heavy Ind | Control valves ,. etc. | 2“~ 30” | 2008~ | Steam &Water Treatment |
| Cheil Chemical | Control & Shut-off Valve,. etc. | 2“~ 18” | 2008~ | Steam & Chemical |
| KARI | Control Valves | 1“~ 8” | 2006~ | Aerospace Fluid Line |
| CJ | Control & Shut-Off Valves ,. etc. | 1“~ 24” | 2007~ | Steam |
| INI Steel | Desuper Heater & Control Valves | 2“~ 28” | 2007~ | Oxygen & Steel |
| Ulsan Chemical | Control & Shut-off Valves ,. etc. | 2“~ 36” | 2007~ | Chemical |
| Kolon | Control & Shut-Off Valves ,. etc. | 2“~ 16” | 2008~ | Chemical |
| Hansol Pulp | Control & Shut-Off Valves ,. etc. | 21“~ 20” | 2008~ | Paper & Pulp |

# 9. Major Reference List

## 9-1. Domestic Area (2)

| Client / Customer | Item Description | Size | Year | Major Plant |
|---|---|---|---|---|
| Hyundai Oil Bank | Control & Shut-off Valves,. etc | 2“~ 24” | 2004~ | Refinery |
| Hyundai Eng’ | Desuper Heater &Control Valves | 1“~ 28” | 2004~ | Oil & Refinery |
| LG Chemical | Control & Shut-off Valves ,. etc. | 2“~ 20” | 2006~ | Chemical Plant |
| KOGAS | Control & Shut-off Valves ,. etc. | 2“~ 14” | 2006~ | LNG Gas |
| LG Caltex | Control Valves ,. etc. | 2“~ 18” | 2006~ | Refinery |
| Hyosung | Control & Shut-off Valves ,. etc. | 1“~ 48” | 2006~ | Chemical & Steam |
| Hanwha | Control Valves | 1“~ 18” | 2007~ | Petro-chemical Plant |
| Hankook Tire | Control Valves ,. etc. | 2“~ 16” | 2007~ | Steam & Water Treatment |
| Namhae Chemical | Control & Shut-off Valve,. etc. | 2“~ 48” | 2008~ | Steam & Refinery |
| BASF | Control Valves | 1“~ 24” | 2009~ | Chemical |
| ISU Chemical | Control & Shut-off Valves ,. etc. | 2“~ 18” | 2009~ | Chemical |
| Hyundai Rotem | Desuper Heater & Control Valves | 2“~ 20” | 2009~ | Hydrogen & Iron |
| Il Jin Energy | Control & Shut-off Valves ,. etc. | 1“~ 18” | 2009~ | Nuclear Power |
| Spirax Sarco | Control Valves | 1” – 18” | 2009 ~ | Steam & Shipbuilding |

# 9. Major Reference List

## 9-2. Overseas Area

| Client / Customer | Item Description | Location | Year | Major Plant |
|---|---|---|---|---|
| Megantara Petro-chemical | Control Valves | Singapore | 2004~ | Oil & Steam |
| PT. Danan Wingus | Control & Shut-off Valves ,. etc. | Hong Kong | 2004~ | Steam |
| NSIF | Control Valves ,. etc. | Saudi Arabia | 2004~ | Oxygen |
| Jiaxing Samsung | Control Valves ,. etc. | China | 2004~ | Water Treatment |
| Deaarrollo SACV | Control Valves | Mexico | 2004~ | Thermal Power |
| China Petro-chemical | Control & Shut-off Valve,. etc. | China | 2005~ | Oil & Gas |
| TOSHIBA | Control Valves | Japan | 2005~ | Shipbuilding |
| Marafig | Control Valves | Saudi Arabia | 2009~ | Power Plant |
| Aldur | Ball Shut-off Valves | Bahrain | 2009~ | Power Plant |
| Alkhalij | Control & Shut-off Valves ,.etc. | Lybyan | 2010~ | Power Plant |
| Alqatrana | Control & Shut-off Valve ,.etc. | Jordan | 2010~ | Power Plant |
| Ptmitra Wira Pratama | Control valves , etc | Indonesia | 2010~ | Power Plant |
| Brocaina | Control Valves | Chille | 2012~ | Power Plant |
| Qurna phase 2 | Shut-off Valves | Iraq | 2012~ | Refinery |
| Bardsir Steel Complex | Control & Shut-off Valves,. etc. | Iran | 2012~ | Steel Plant |
| T & C Gulf | Control & Shut-off Valves,. etc. | UAE | 2012~ | Oil & Refinery |
| Gol-E-Gohar Iron Ore Co. | Control & Shut-off Valves,. etc | Iran | 2013~ | Steel Plant |

# 10. Production Conditions

## 10-1. Control Valve

| Item | Type Description | Size | Rating | Material | Actuator |
|---|---|---|---|---|---|
| Globe Control | 1. 2 & 3 Way Type<br>2. Angle Type<br>3. Micro Flow Type<br>4. High Temperature & Cryogenic ( 1,100℃/-194℃ ) | 1/2" ~ 24"<br>15~ 600 mm | 150 ~ 4,500 Lbs<br>PN10 ~ 250 | Carbon & Stainless Steel, Alloy | Multi Spring Diaphragm & Electric |

# 10. Production Conditions

## 10-2. Shut-off Valves (1)

| Item | Type Description | Size | Rating | Material | Actuator |
|---|---|---|---|---|---|
| Ball Valve | 1. Ball Valve (Side/Top Entry/ Metal Eccentric/Segment "V" Cut Type<br>2. High Temperature & Cryogenic ( 1,100℃/-194℃ ) | 1/2" ~ 48"<br>15~ 1,200mm | 150 ~ 2,500 Lbs<br>PN10 ~ 250 | Carbon & Stainless Steel, Alloy | Multi Spring Diaphragm, Cylinder & Electric |

# 10. Production Conditions

## 10-3. Shut-off Valves (2)

| Item | Type Description | Size | Rating | Material | Actuator |
|---|---|---|---|---|---|
| Butterfly Valve | 1. Rubber & Metal<br>2. Hi-Performance & Triple offset<br>3. High Temperature & Cryogenic ( 1,100℃/-194℃ ) | 1/2" ~ 78"<br>15~ 1,200 mm | 150 ~ 1,500 Lbs<br>PN10 ~ 250 | Carbon & Stainless Steel, Alloy | Multi Spring Diaphragm, Cylinder & Electric |

# 10. Production Conditions

## 10-3. Special Valves





| Item | Type Description | Size | Rating | Material | Actuator |
|---|---|---|---|---|---|
| Desuper Heater Valve | 1. Multiple Nozzle Spray<br>2. Variable Orifice<br>3. PRDS | 3" ~ 24"<br>80~ 600 mm | 150 ~ 1,500 Lbs<br>PN10 ~ 250 | Carbon & Stainless Steel, Alloy | Multi Spring Diaphragm, |

# 10. Production Conditions

## 10-4. Actuators




| Item | Type Description | Power | Capacity | Material | Valves |
|---|---|---|---|---|---|
| Electric Type | 1. Quarter Turn<br>2. Multi Turn | 380/440V<br>110/220V<br>50 / 60 Hz | IP 67<br>EExd 1 BT4 | Aluminum &<br>Steel, Alloy | Control & Shut-off Valves |

# 10. Production Conditions

## 10-4. Actuators

| Item | Type Description | Power | Capacity | Material | Valves |
|---|---|---|---|---|---|
| Pneumatic Diaphragm Type | 1. Multi Spring Diaphragm<br>2. Top Mounted Hand Wheel<br>3. Side Mounted Hand Wheel | 3 ~ 3.5 Bar | Direct<br>Reverse | Steel, Alloy | Control & Shut-off Valves |

# 10. Production Conditions

## 10-4. Actuators

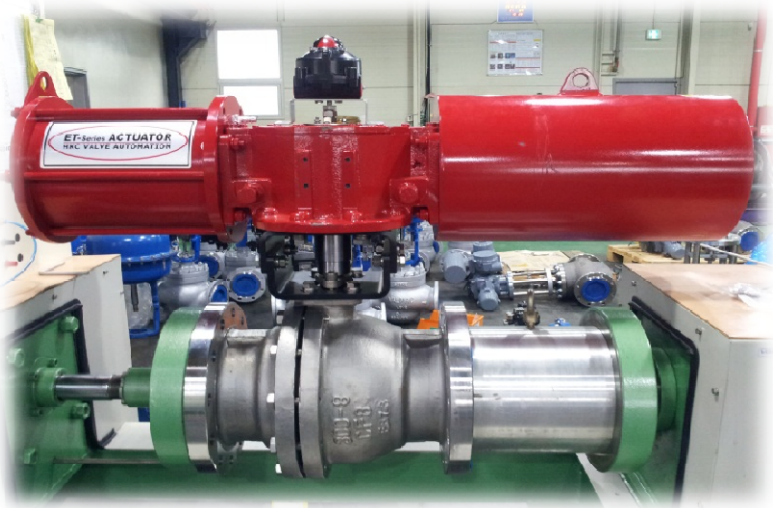
| Item | Type Description | Power | Capacity | Material | Valves |
|---|---|---|---|---|---|
| Pneumatic Cylinder Type | Rotary & Liner | 5 Bar | Double Acting Spring Return | Aluminum & Steel, Alloy | Control & Shut-off Valves |

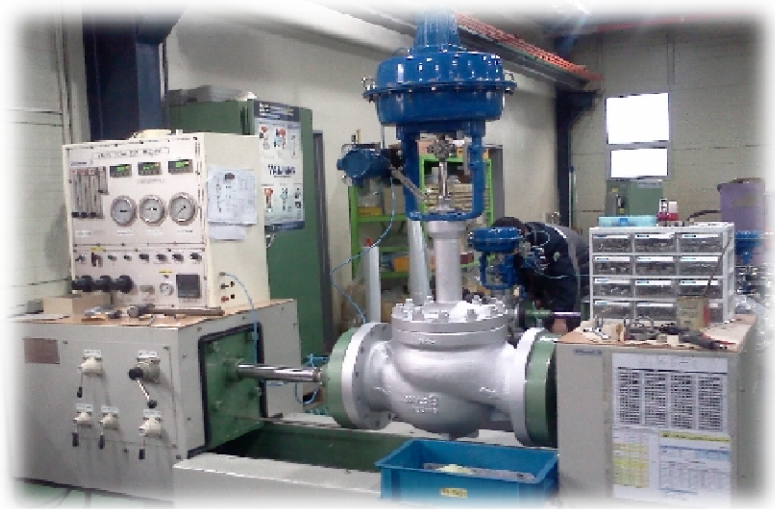
# 11. Production Photo Sheet

## 11-1. Test & Measurement


# 11. Production Photo Sheet

## 11-2. Inspection & Test



# 11. Production Photo Sheet

## 11-2. Production (1)

# 11. Production Photo Sheet

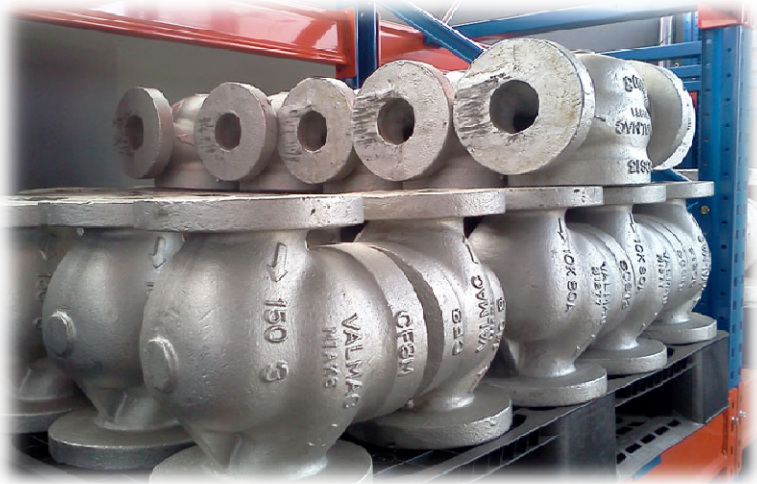
## 11-2. Production (2)

# 11. Production Photo Sheet

## 11-3. Packing


# 12. Materials Control

## 12-1. Part Materials



# 12. Materials Control

## 12-2. Stock

# Thanks

**We, SEOJEON Valmac will continuously develop our products with innovative thinking & technology and will do our best to serve you.**

**Thank you very much for your attention.**

# SeoJeon Valmac Co., Ltd


**#46, Daegotbuk-ro 158gil, Daegot-myeon, Gimpo-si, Gyounggi-do, Korea**

**Tel : 82-31-981-3121, Fax : 82-31-981-0365**

**E-mail : valmac@valmac.co.kr, http://www.valmacs.com**