AMPO
POYAM VALVES

High Specification

Gate, Globe & Check

Jon Gorrotxategi - Sales Manager, **Josune Maiza** - Area Sales Manager

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AMPO

"Commitment made of steel"

Aitor Aierbe - Manufacturing Manager, **Iban Mateos** - Area Sales Manager

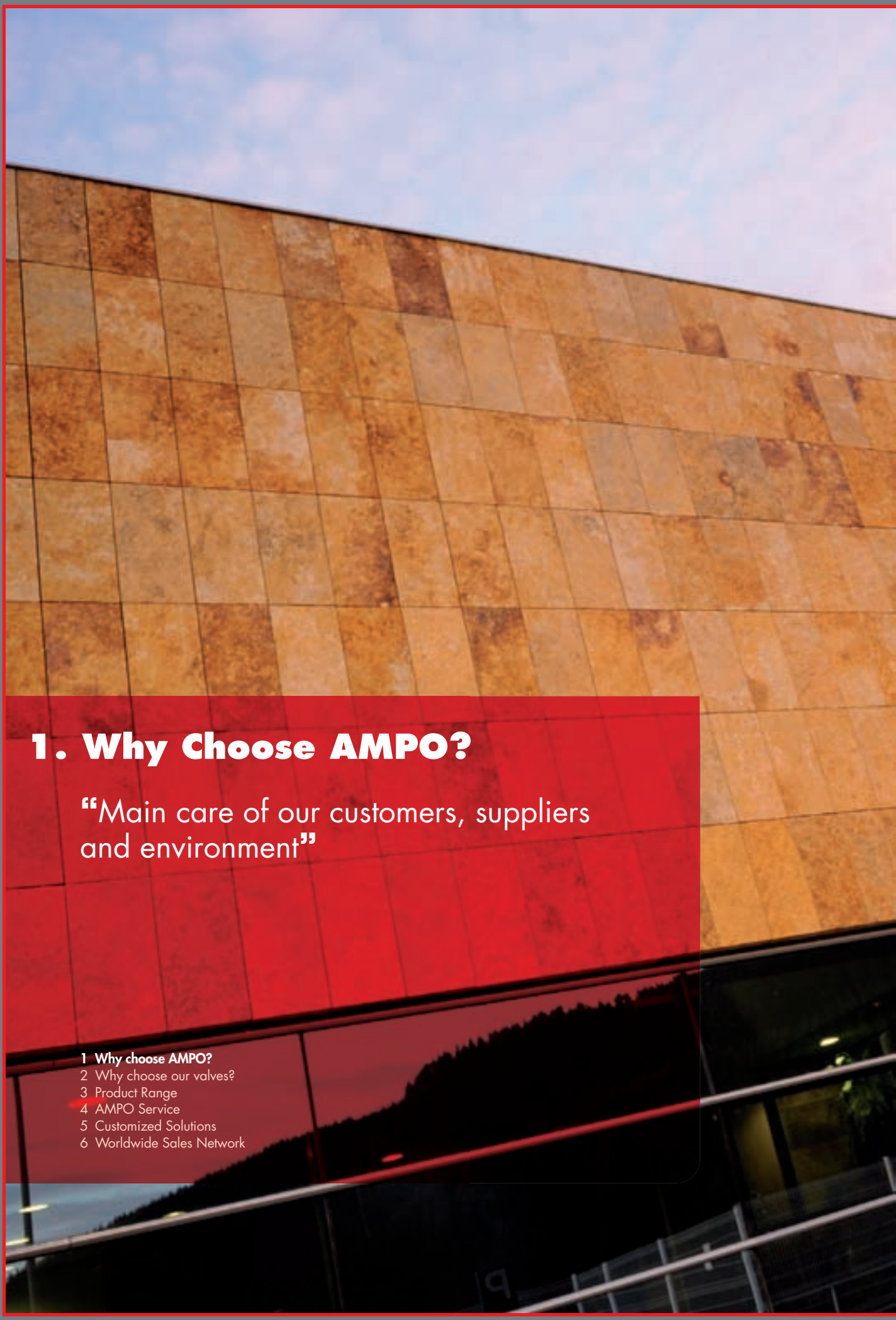
AMPO S.Coop, located in Idiazabal, Spain, and founded in 1964, has been involved in many large international projects, supplying not only the product but also expertise in project management, finance of high value projects and logistical expertise to ensure trouble-free and on-time delivery of quality products. AMPO has been entrusted with the largest international projects by the world's leading engineering construction companies.
In short, Quality, Service, Cost, Innovation, Work Safety and Health and Shared Experience are the keys to our business.

AMPO Engineering:
"Our aim is engineering efficiency: Our engineers are ready to help customers meet the most demanding design challenges and applications"

AMPO Foundry:
"Our foundry is fully in line with manufacturing processes, providing us with the best quality castings and service"

AMPO Poyam Valves:
"AMPO is able to design and manufacture high-technology valves with best performance and low maintenance costs".

AMPO's workforce comprises highly-trained, experienced and motivated specialists who understand the customer process, enabling us to offer a flexible product suited to customer needs with best quality and optimum performance in the most severe services.



1. Why Choose AMPO?

"Main care of our customers, suppliers and environment"

1.1 Best Quality & Optimum Performance

i. **Quality assurance system:**
ISO 9001, ADI Spec Q1&6D, SIL3.

ii. **Environment:**
ISO 14001

iii. **In-House quality control:**
X-Ray examination, Dye Penetrant Test, Magnetic particles, Ultrasonic Test, PAMI, Pickling and 3D Dimensional Control.

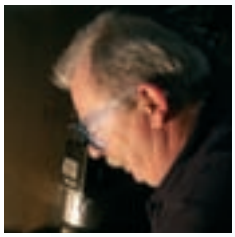


iv. **Internal Weld Overlay Technologies:**
Stellite 6, Nickel, Inconel 625, Incoloy 825 and other hardfacing alloys.



v. **Highly qualified human team.**



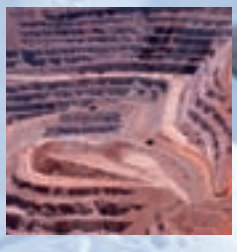


1.2 Customized Solutions
Under High Specifications

i. **Special materials:**
Alloys, Incoloys, Hastelloys, monels, duplex, superduplex,...

ii. **Solutions for special applications:**
Extremely low or extremely high temperatures, high pressure, highly corrosive applications,...

iii. **Solutions for a wide range of sectors:**
Oil & gas, petrochemical & chemical, power plants, mining,...



1.3 Fully Inhouse Manufacturing Process

- Casting design
- Pattern design
- Pouring
- Casting
- NDE
- Machining
- Assembling
- Testing
- Painting
- Packing

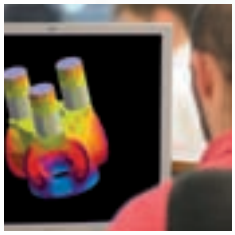
1.4 **Best Service**

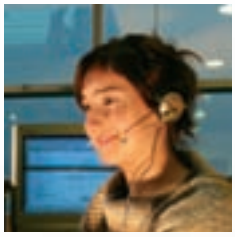
i. **Always fulfilling delivery periods**
ii. **Fast actions to customer requests:**
Technical support, maintenance shut-down supervision, troubleshooting and repair service, operation training, ...

Miren Begiristain - Product Development, **Iban Mateos** - Area Sales Manager

1.5 **Close to You**

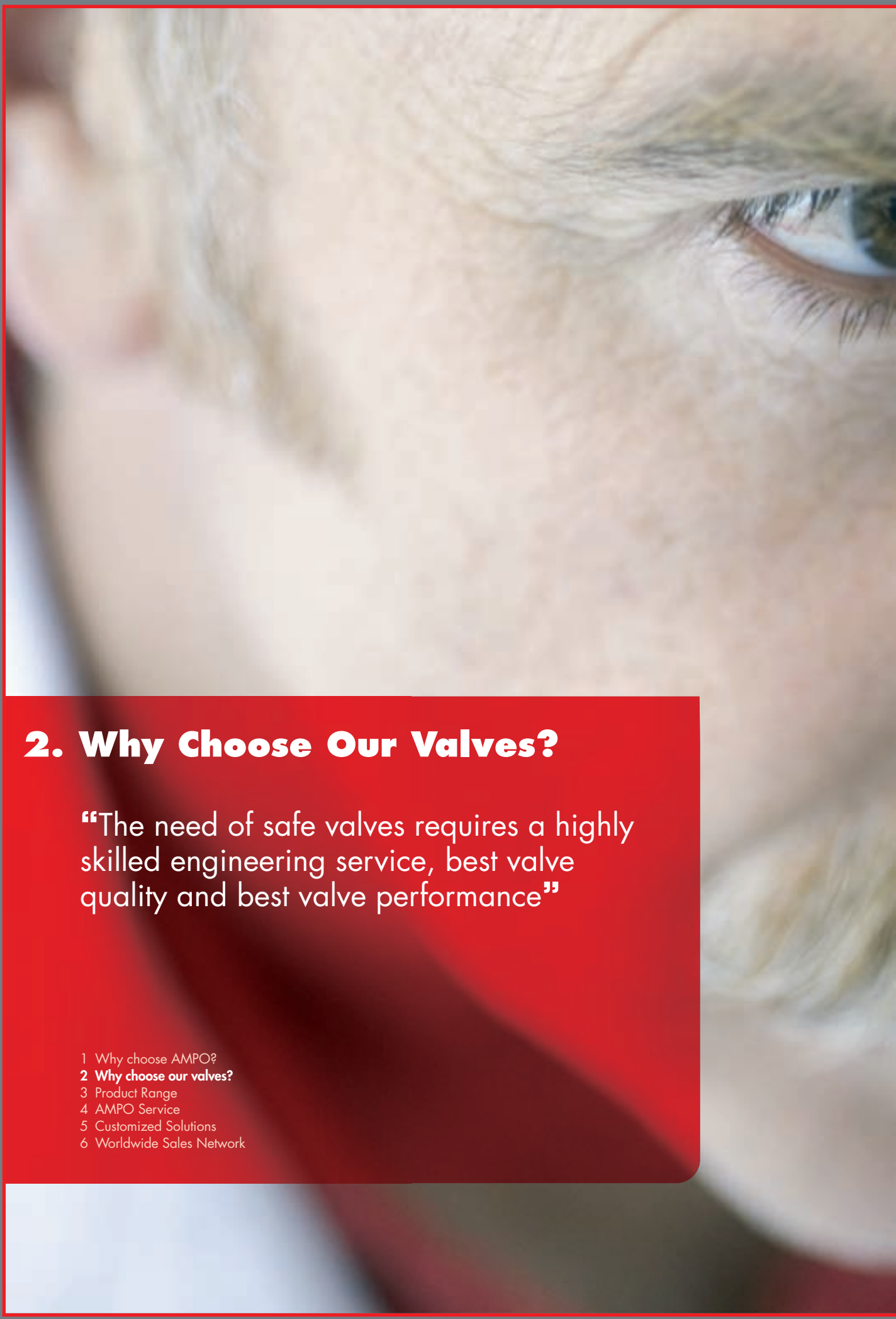
i. Customer advice
ii. Best service flexibility (lead time)
iii. Our solutions are available worldwide through our Sales Network.





1.6 **Strategic Focus on Innovation**

i. **Development** of new products, processes and services
ii. **Partnership** with customers
iii. **Collaboration** with the World's leading R&D centres, laboratories and University Engineering Departments.



2. Why Choose Our Valves?

"The need of safe valves requires a highly skilled engineering service, best valve quality and best valve performance"

Juan Jose Alustiza - Quality Services

2.1 AMPO Engineering

Our experience allowed AMPO to identify the needs and requirements of the customers. A new R+D+I team was created in collaboration with research centres for filling these needs up. This team tries to offer the most advanced technologies for the valves engineering. The resources and efforts are driven to different valve stages: from process engineering until valve maintenance.

Process analysis, Design and Improvement:

Work groups are formed in close cooperation with the customer for the purpose of troubleshooting processes using the tools and means available at AMPO. In addition to in-house resources, close ties with specialist research centres ensure that such analyses are always to the customer's satisfaction.
The combination of the know-how of plant personnel and of AMPO engineering leads to truly satisfactory results in process innovative design, development of new solutions and engineering support to Piping and Instrumentation Diagrams.

Modular Design:

In order to make easier the components installation and to improve process reliability AMPO Engineering builds sub processes, miniplants and spools prepared for being installed directly at site. In close cooperation with the customer, plant process is analyzed, innovation is introduced and the module is constructed, checked and tested. It is sent ready for installation avoiding cleaning processes, commissioning tests and failure possibilities.

Training plan for qualified personnel:

Close cooperation with the customer leads to the drafting of a training plan for the plant's construction, operation and maintenance staff. This training schedule addresses aspects related to valves, motors, positioners, regulation, etc. focusing on preventive maintenance and valve know-how in order to ensure the plant is self-sufficient, insofar as possible. Training may be held on site or at AMPO Valve's facilities.

- **Qualified team**
- **Last generation work stations**
- **3D Design programs, FEM, fluid simulation capacity**
- **Simulations of the valve behaviour under real operation conditions**
- **Modular design: spool and kit assemblies**
- **P&ID analysis: Improvement of the process by customizing valve designs to achieve the plant performance targets.**
- **Support of Research centres.**

Iñaki Aizpeolea & Alex Eizmendi - Area Sales Managers

2.2 Best Valve Quality

"Our motivated personnel, efficient production system and high-tech equipment enable AMPO to supply the best quality valves together with the highest production capabilities for ensuring on-time deliveries for the most demanding project schedules".

Manufacturing process:

High performance production equipment, such as CNC Valve-machining centers, Plasma hardfacing stations, 3D measuring machines, special Coating Welding station, Ambient testing bench, Cryo testing bench, Fully automatic painting lines, Vacuum testing facilities, NDE bunkers (X-ray, magnetic particles, penetrant liquids) and an extremely clean assembly area enable us to provide our customers with high quality valves.






Quality Assurance System:

AMPO Valves are well-known worldwide, with a reputation for reliability and high quality. Our operating and production processes are implemented and controlled by a quality assurance system, certified since 1991 under the ISO 9001 Standard, API Spec Q1&6D and SIL3, accredited by the most important external organizations in the market, such as Lloyd's Register, Nippon Kaiji Kyokai, Det Norske Veritas, TUV, Bureau Veritas and Germanischer Lloyd. We are continually undergoing revisions and audits, both internal and external, ensuring that AMPO meets customer requirements and fulfils international standards.

All production areas undergo intermediate and final inspections. These are documented with the corresponding certifications and reports, directly coordinated by an efficient, highly-qualified team and always in accordance with internal and external Quality Assurance standards and procedures. Every step, from purchase order receipt through procurement, NDE, machining, assembling, testing, painting and packaging is in accordance with regulations stipulated in QA Manuals.

Internal Quality Control Personnel are highly-qualified to carry out Non-Destructive Examinations, such as X-ray, Dye Penetrant, Magnetic Particles and PAMI (positive alloy material identification).

We are equipped with the most modern installations and a highly-qualified human team, enabling us to offer the widest possible range of valves combining high standards in technology, quality and productivity, as well as tradition, experience and dependability, with an unrivalled reputation for quality and service.

Management based on the strictest quality standards allow AMPO to develop the product which best satisfies our customers.

2.3 Foundry Services
for the Best Valve Performance

Our foundry works together with our R+D+I team to create new developments and designs, a key factor in enabling AMPO to control the whole process, from start to finish.

Cast materials are produced under strict quality controls at AMPO foundry. Ongoing control is the key to our quality and success, starting with castings from one of the world's leading valve foundries to a product finished and tested to any specification, all within our own facilities.

Steels and Grades

Austenitic Stainless Steel

ASTM	EN	UNS	OTHERS
A351 CF8	1.4308	J92600	AISI 304
A351 CF8M	1.4408	J92900	AISI 316
A351 CF8C	1.4552	J92910	AISI 347
A351 CF3	1.4306	J92500	AISI 304L
A351 CF3M	1.4404	J92800	AISI 316L
A351CF10MC	1.4581	-	AISI 316Nb
A351 CG8M	-	J93000	AISI 317

Super Austenitic Stainless Steels

ASTM	EN	UNS	OTHERS
A351 CN7M	1.4527	-	-
A351 CK3MCuN	1.4593	J93254	254 SMO
-	1.4469	S32654	654 SMO

Martensitic Stainless Steels

ASTM	EN	UNS	OTHERS
A217 CA-15	1.4008	J91150	AISI 410
A352 CA-6NM	-	J91540	-
A747 CB7Cu-1	-	J92180	17-4PH

Austenitic -Ferritic Stainless Steel(duplex)

ASTM	EN	UNS	OTHERS
A890Gr4A	1.4470	J92205	DUPLEX S31803
A890Gr5A	J93404	-	SUPERDUPLEX
A890Gr6A	1.4469	J93380	SUPERDUPLEX S32760
CD4MCu	1.4517	J93370	-

Medium And Low Alloy Steels

ASTM	EN	UNS	OTHERS
WC6	1.7357	-	-
WC9	1.7365	-	-
A217C5	1.7365	-	-
A217C12	-	-	-

Nickel-Based Alloys

ASTM	EN	UNS	OTHERS
A494 CU5MCuC	-	-	INCOLOY 825
A494 M-35-1	-	N24135	MONEL 400
A494 M-30H	-	N24030	-
A494 CW-6MC	-	N26625	INCONEL 625
A494 CW-12MW	-	N30002	HASTELLOY C276

Heat-Resistant Steels

ASTM	EN	UNS	OTHERS
A297 HH	-	-	25/12
A297 HK	-	-	25/20
A297 HP	-	-	25/35
A297 HU	-	-	18/38

"OUR FOUNDRY's exceptional expertise, quality and specialization make it the best foundry for the energy sector"

3. Product Range

High Specification Gate, Globe & Check valves

"AMPO POYAM VALVES offers the widest Gate, Globe and Check valve solutions in the market and is able to design and manufacture high-technology valves with the best performance and low maintenance costs"


OYAM
CF8M

3.1 Cryogenic Gate, Globe & Check Valves

"As a result of over 30 years of experience in manufacturing of cryogenic valves, AMPO Valves is the leading manufacturer of the high specification valves for the LNG market, specially with top entry or split body cryogenic ball valves, and cryogenic gate, globe and check valves"

3.1.1 Cryogenic Gate Valves:

During the experience of more than 30 years designing and manufacturing cryogenic gate valves, the design and production have reached a great reliability and a perfect sealing quality. The production range has been increased step by step up to 72 inch valves and the manufacturing of small valves is still very competitive due to process improvements and productivity achieved by AMPO Valves.

All gate valves manufactured by AMPO are rising stem type, outside screw and yoke design and flexible wedge design. Apart from that all the rest design parameters can be adapted to the customer requirements by our engineering teams. That flexibility allows us being the reference in very special applications and special valve requirements.

Valve range and alternatives:

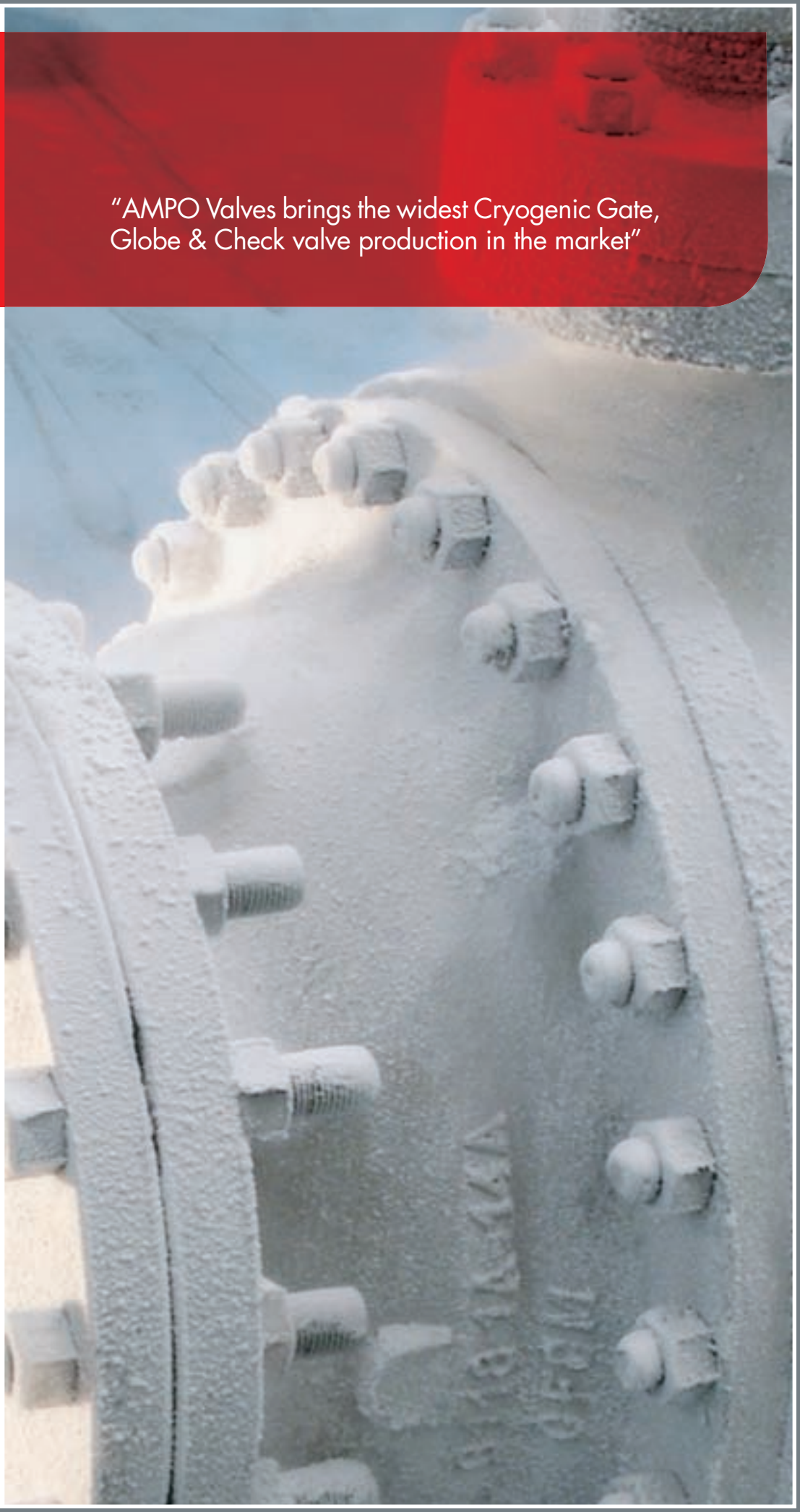
Gate valve range goes from 150# up to 2500# and from 2" up to 72" and can be bolted bonnet (BB) or pressure seal design (PS) depending on pressure ratings and project specifications.
Body minimum wall thickness can be defined by API 600 standard, by ASME B.16.34 standard or by ISO 12516.

Sealing System:

Standard cryogenic gate valves normally have a 3mm vent hole on the wedge upstream side that relieves the cavity in case of overpressure. Thus, standard cryogenic gate valves are unidirectional valves. Pressure deforms the flexible wedge and it is introduced through the upstream seat and cavity vent to the internal cavity. Inside, pushes the wedge downstream face against the seat and gets the closure.

If bidirectional cryogenic valves are required, external relief system shall be used. In that case, the vent hole is avoided and downstream seat makes the seal in each direction. Cavity is vented in case of overpressure through a relief valve connected to the valve bonnet inside cavity and besides the packing.

On cryogenic gate valves, the back seat is integral with the bonnet. The conical back seat plug is integral with the stem and seals when the valve is in the fully open position. This allows re-packing of the gland under full service conditions.



"AMPO Valves brings the widest Cryogenic Gate, Globe & Check valve production in the market"

3.1.1 Cryogenic Gate Valves:

Design and construction:

The design and construction of the cryogenic range of AMPO, is based on the requirements and codes of practice of the American and British Petroleum, Petrochemical and Power Industries.

The standards and codes used are from the following institutions:

API American Petroleum Institute
ASME American Society of Mechanical Engineers
ASTM American Saciety for Testing Materials
BSI British Standards Institution
MSS Manufacturers Standardization Society

Gate valves are designed to comply with the following standards:

BS1414	API 600	ASME B16.10.
ASME B16.25.	ASME B16.5.	ASME B16.47.
ASME B16.34	BS 6364	ASME VIII

Materials:

Our own foundry allows us controlling the whole process of the high quality austenitic stainless steel valves for bodies, bonnets, etc. For stem materials, apart from the common stainless steel laminated or forged material such as Gr304, 304L, 316, 316L. 347, 347L,etc. high performance stainless steel material are used, such as S17400, NITRONIC 50®, MONEL K500®,etc.

Casting Pieces:

ASTM A 351 Gr CF8
ASTM A 351 Gr CF8M
ASTM A 351 Gr CF3
ASTM A 351 Gr CF3M
ASTM A 351 Gr CF8C

Stem materials:

ASTM A 479 Gr 304
ASTM A 479 Gr 304L
ASTM A 479 Gr 316
ASTM A 479 Gr 316L
ASTM A 564 TYPE 630 H1150D
NITRONIC 50®
MONEL K-500®

Valve wedge is normally hard faced by satellite6 overlay and body seat is an integrated seat but any kind of combination can be manufactured. Any kind of bolting material required by each specification and each process condition.

GATE VALVES — BOLTED BONNET

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 150 lbs up to 2500 lbs

Sizes: 2″ up to 72″

Temperature: Down to - 196°C

Construction: Bolted bonnet. Extended bonnet (gas column). Flanged and butt weld ends. Manual, gear and actuated (pneumatic/ electric/ hydraulic). Metal & soft seats.

Type: Standard Design (API600)
Light Pattern Design (ASME BI6.39)

GATE VALVES — PRESSURE SEAL BONNET

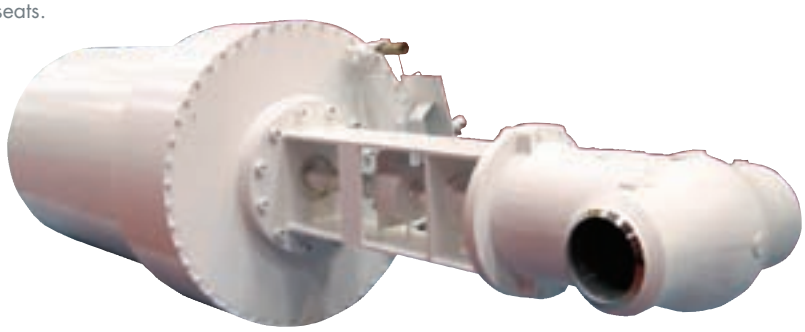
Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 600 lbs up to 2500 lbs

Sizes: 1/2″ up to 56 ″

Construction: Pressure Seal Bonnet. Extended Bonnet (gas column). Flanged and butt weld ends. Manual and actuated. Metal seats.

Temperature: Down to -196°C



3.1.2 Cryogenic Globe Valves:

Cryogenic globe valves are designed exclusively for the handling of cryogenic liquids on bulk storage tanks, transports and pipelines. These globe valves are used for throttling services, provide positive shut off and offer a long, low-maintenance service life.

The valves have been carefully designed and constructed to get maximum rigidity and reliability for long service life and trouble free even under heavy-duty operation.

Valves range and alternatives:

Cryogenic globe valve range goes from 150# up to 2500# and from ½" up to 72" and can be bolted bonnet (BB) or pressure seal design (PS) depending on pressure ratings and project specifications.
At customer's request, different configurations can be manufactured:
- Discs can be fitted as parabolic design.
- Body design can be standard pattern, angle pattern type or straight pattern type.
- Valve can be designed as a stop check valve. A stop check valve design has the advantages of the check valve, working as a non-return when it is in open position and the advantage of the globe valve for shut-off.

Sealing system:

AMPO's globe valves are built with metal to metal technology. On cryogenic globe valves, the seats are integral with the body and the disc has a stellite overlay in order to hardener.
On cryogenic globe valves, the back seat is integral with the bonnet. The conical back seat plug is integral with the stem and seats when the valve is in the fully open position. This allows re-packing of the gland under full service conditions.

Design and construction:

The design and construction of the cryogenic range of AMPO, is based on the requirements and codes of practice of the American and British Petroleum, Petrochemical and Power Industries.

The standards and codes used are from the following institutions:

API American Petroleum Institute
ASME American Society of Mechanical Engineers
ASTM American Society for Testing Materials
BSI British Standards Institution
MSS Manufacturers Standardization Society

Globe valves are designed to comply with the following standards:

BS1873	API 600	ASME B16.10.
ASME B16.25.	ASME B16.5.	ASME B16.47.
ASME B16.34	BS 6364	ASME VIII

GLOBE VALVES

BOLTED BONNET

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 150 lbs up to 2500 lbs

Sizes: 2" up to 72"

Temperature: Down to - 196°C

Construction: Bolted bonnet. Extended bonnet (gas column). Flanged and butt weld ends. Manual, gear and actuated (pneumatic/ electric/ hydraulic). Throttling Service Globe valves. Metal & soft seats.

Type: Straight Pattern. "Y" Pattern & Stop Check.

GLOBE VALVES

PRESSURE SEAL BONNET

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 600 lbs up to 2500 lbs

Sizes: 1/2" up to 56 "

Construction: Pressure Seal Bonnet. Extended Bonnet (gas column). Flanged and butt weld ends. Manual and actuated. Metal seats.

Temperature: Down to -196°C

3.1.3 Cryogenic Check Valves:

Check valves are normally used in systems involving rapid and frequent flow reversals, pulsation or excessively turbulent flow should be avoided. These valves are suitable for low to moderate velocity LNG, water, oil, or other liquid service, and can only be used in horizontal pipe runs with the cover straight up.

Check valves are used to prevent flow reversal in piping systems. They are suitable for horizontal or vertical (flow up through valve only) piping runs. In order to guarantee the perfect operability, the standard design of AMPO Valves has a stop integrated on the cover.

Swing check valves have low pressure drop and are best suitable for moderate velocity applications. Either too low line velocity or too high velocity can damage valve internals and shorten valve life.

Valve range and alternatives:

Cryogenic check valves range goes from 150# up to 2500# and from ½" up to 72" and can be bolted bonnet (BB) or pressure seal design (PS) depending on pressure ratings and project specifications.
At customer's request valves can be swing check type or piston check type.

Design and construction:

As standard, swing check valves are designed with internal hinge but external hinge swing check valves are available with an optional outside gearbox, counterweight or damper. This feature can be used to make smoother or assist closing of the check valve disc depending on orientation. By the use of a counterweight for counterbalancing the disc, the valve can be opened at lower flow rates.

Apart from that, gear operated swing check valves are also manufactured. This kind of valve works as a common swing check valve but when a reverse flow is required by plant process, it can be operated and opened by mean of the handwheel. It is commonly used in LNG vessel discharge lines in order to make easier carrier cooling downs.

The standards and codes used are from the following institutions:

API American Petroleum Institute
ASME American Society of Mechanical Engineers
ASTM American Society for Testing Materials
BSI British Standards Institution
MSS Manufacturers Standardization Society

Check valves are designed to comply with the following standards:

BS1873	API 600	ASME B16.10.
ASME B16.25.	ASME B16.5.	ASME B16.47.
ASME B16.34	ASME VIII	

Materials:

Our own foundry allows us controlling the whole process of the high quality austenitic stainless steel valves for bodies, bonnets, etc. For spindle and other internal materials, apart from the common stainless steel laminated of forged material such as Gr304, 304L, 316, 316L, 347, 347L,etc. high performance stainless steel material are used, such as S17400, NITRONIC 50®, MONEL K500®,etc.

Valve disc is normally hard faced by a stellite overlay and body seat is an integrated seat, but any kind of combination can be manufactured.
Any kind of bolting material required by each specification and each process condition.

CHECK VALVES

BOLTED BONNET

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 150 lbs up to 2500 lbs

Sizes: 2" up to 72"

Temperature: Down to - 196°C

Construction: Bolted bonnet. Flanged and butt weld ends. Metal & soft seats.

Type: Swing Check
Lift Check

CHECK VALVES

PRESSURE SEAL BONNET

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 600 lbs up to 2500 lbs

Sizes: 1/2" up to 56 "

Construction: Pressure Seal Bonnet. Extended Bonnet (gas column). Flanged and butt weld ends. Manual and actuated. Metal seats.

Temperature: Down to -196°C

3.2 High Pressure/High Temperature
Gate, Globe & Check Valves:

AMPO is one of the world's leading manufacturers of high-specification ball, gate, globe & check valves, recognized as a leader in quality and innovation.

Our company has developed advanced engineering capabilities and innovation-driven focus to continuously expand our offer of high-quality leading technology valves.

Today we produce engineered products up to 72" and up to 2500# in a variety of both standard and rare materials, such as Titanium, Hastelloy, Incoloy, Inconel and Super Duplex.

High pressure or high temperature gate, globe and check valves range goes from 600# up to 2500# and from 2" up to 72" and can be bolted bonnet (BB) or pressure seal design (PS) depending on pressure ratings and project specifications.

GATE VALVES — **HIGH PRESSURE/TEMPERATURE**

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

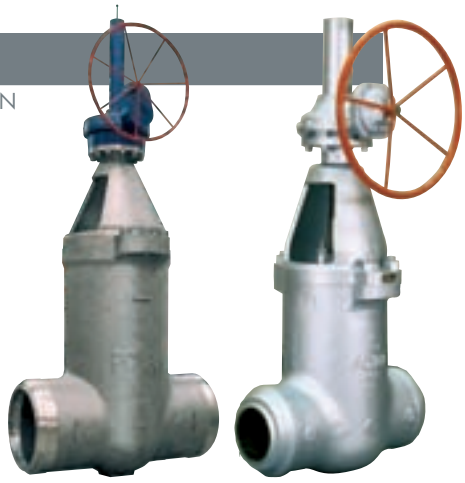
Classes: 600 lbs up to 2500 lbs

Sizes: 2" up to 56"

Construction: Pressure Seal Bonnet. Bolted Bonnet. Flanged and butt weld ends. Manual and actuated. Metal Seats. Parallel Seats available.

Types: Flexible Wedge
Parallel Slide

Temperature: From 750°C down to -196°C (Cryogenic)



GLOBE VALVES — **HIGH PRESSURE/TEMPERATURE**

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 600 lbs up to 2500 lbs

Sizes: 2" up to 56"

Construction: Pressure Seal bonnet. Flanged and butt weld ends. Manual and actuated. Metal Seats. Y type globe valves.

Types: Straight Pattern
"Y" Pattern Stop Check Valves

Temperature: From 750°C down to -196°C (Cryogenic)

CHECK VALVES

HIGH PRESSURE/TEMPERATURE

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 600 lbs up to 2500 lbs

Sizes: 2″ up to 56″

Construction: Pressure Seal bonnet. Flanged and butt weld ends. Metal Seats. Dumping option.

Types: Swing Check Type (PS or BB)
Lift Check Type (BB)
Tilting Disc Type (PS)

Temperature From 750°C down to -196°C (Cryogenic)

3.3 Special Fluid Gate, Globe & Check Valves:
(Sour & Acid or Corrosive Services)

AMPO is the perfect partner for the customers who require valves for special fluid applications such as sour applications, acid applications or highly corrosive applications.

Today we produce engineered products up to 60" and up to 2500# in a variety of both standard and rare materials, such as Titanium, Hastelloy, Incoloy, Inconel, Duplex, Super Duplex, etc. We also can produce the entire range of weld overlays on any kind of base materials for abrasive and corrosive applications.

We have long experience in supplying valves for different projects which requires special valves for services with extremely demanding environments. Our Technological services will assist you regarding any special requirement you may have.

We are your solution.

GATE VALVES	**SPECIAL FLUID**
Standards:	API, BS, MSS, ANSI, ASME, ASTM, DIN
Classes:	600 lbs up to 2500 lbs
Sizes:	2" up to 56"
Construction:	Pressure Seal Bonnet. Bolted Bonnet. Flanged and butt weld ends. Manual and actuated. Metal Seats. Parallel Seats available.
Types:	Flexible Wedge Parallel Slide
Temperature:	From 750°C down to -196°C (Cryogenic)

GLOBE VALVES	**SPECIAL FLUID**
Standards:	API, BS, MSS, ANSI, ASME, ASTM, DIN
Classes:	600 lbs up to 2500 lbs
Sizes:	2" up to 56"
Construction:	Pressure Seal bonnet. Flanged and butt weld ends. Manual and actuated. Metal Seats. Y type globe valves.
Types:	Straight Pattern "Y" Pattern Stop Check Valves
Temperature:	From 750°C down to -196°C (Cryogenic)

CHECK VALVES

SPECIAL FLUID

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 600 lbs up to 2500 lbs

Sizes: 2″ up to 56″

Construction: Pressure Seal bonnet. Flanged and butt weld ends. Metal Seats. Dumping option.

Types: Swing Check Type (PS or BB)
Lift Check Type (BB)
Tilting Disc Type (PS)

Temperature From 750°C down to -196°C (Cryogenic)

GATE VALVES

SPECIAL FLUID

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 150 lbs up to 2500 lbs

Sizes: 2″ up to 56″

Construction: Bolted bonnet. (Also available in Pressure Seal).
Flanged and butt weld ends.
Manual and actuated.
Metal & soft seats.

Types: Standard Design
(API 600)
Light Pattern Design
(ASME B.16.34)

GLOBE VALVES

SPECIAL FLUID

Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 150 lbs up to 2500 lbs

Sizes: 2" up to 56"

Construction: Bolted bonnet. (Also available in Pressure Seal)
Flanged and butt weld ends.
Manual and actuated.
Metal & soft seats.

Types: Straight Pattern
"Y" Pattern
Stop Check

CHECK VALVES

SPECIAL FLUID

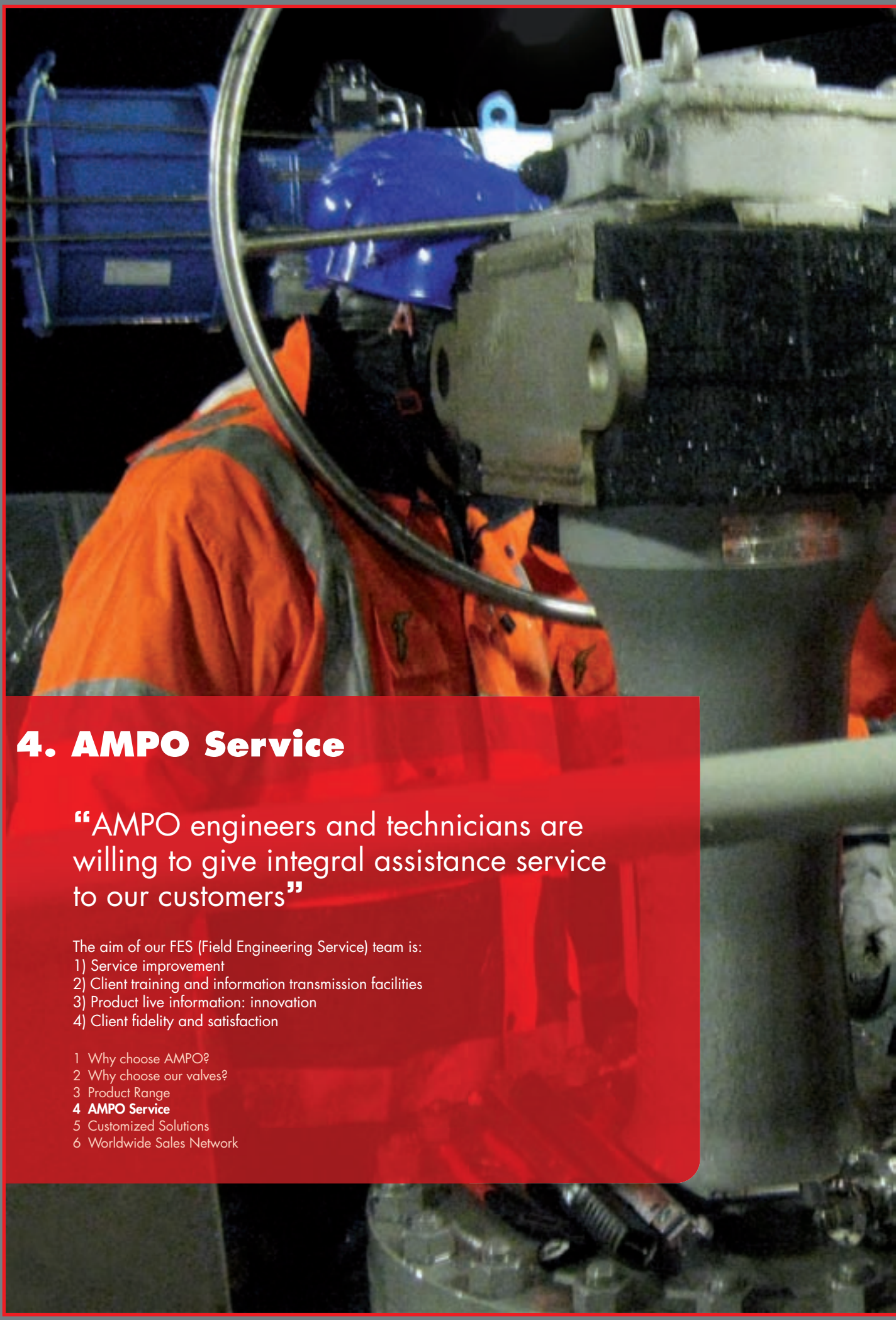
Standards: API, BS, MSS, ANSI, ASME, ASTM, DIN

Classes: 150 lbs up to 2500 lbs

Sizes: 2" up to 56"

Construction: Bolted bonnet. (Also available in Pressure Seal)
Flanged and butt weld ends.
Manual operated.
Metal & soft seats.

Types: Swing Check
Lift Check



4. AMPO Service

"AMPO engineers and technicians are willing to give integral assistance service to our customers"

The aim of our FES (Field Engineering Service) team is:
1) Service improvement
2) Client training and information transmission facilities
3) Product live information: innovation
4) Client fidelity and satisfaction

4.1 Construction Services

It is based on the training of construction personnel and process witnessing.

Works carried out during this process use to be the following ones:

- Inspection of the reception and storage systems of the equipment.
- Valve handling procedures for installation. Activity witnessing.
- Valve installation training and witnessing of the activity.
- Actuator Installation.
- Actuator and gearbox regulation and adjustment.
- Gearbox and actuator rotation.
- Technical support during installation, tests and line blowing.
- Valve cleaning.

All these services are carried out following approved procedures and quality certificates are delivered to the customer at the end of the process. Procedures created in a close collaboration with EPC contractors and approved by end customers or valve users.

Supported by an experience of more than 30 years giving service in the LNG market.

4.2 Maintenance Services

With the aim of giving an integral assistance of maintenance, training and After Sales Engineering support, making smoother the valve performance, and assuring a correct operation and maintenance of the equipment.

Concentrated on:

- Predictive and preventive maintenance
- Corrective maintenance
- Operators and maintenance technicians training
- Spare part and valve supply

Asier Solis - Product Technician, **Xabier Iturrioz -** Production Services

5. Customized Solutions

"We offer a service of highly-qualified technical advice to our customers"

Naiara Otegi - Project Manager

5.1 **Customized Solutions**

We offer a service of highly-qualified technical advice to our customers in areas such as: selection of optimum steel grade for castings based on conditions, flow, etc; selection of the best valve depending on its final application; selection of the most suitable and profitable production process,... always in accordance with the requirements of each customer.

AMPO's whole product range consists on:

- Ball valves
- Gate Valves
- Globe valves
- Check valves
- Non Lubricated Metal Seat Valves / Switch Valves
- Slurry Angle Valves

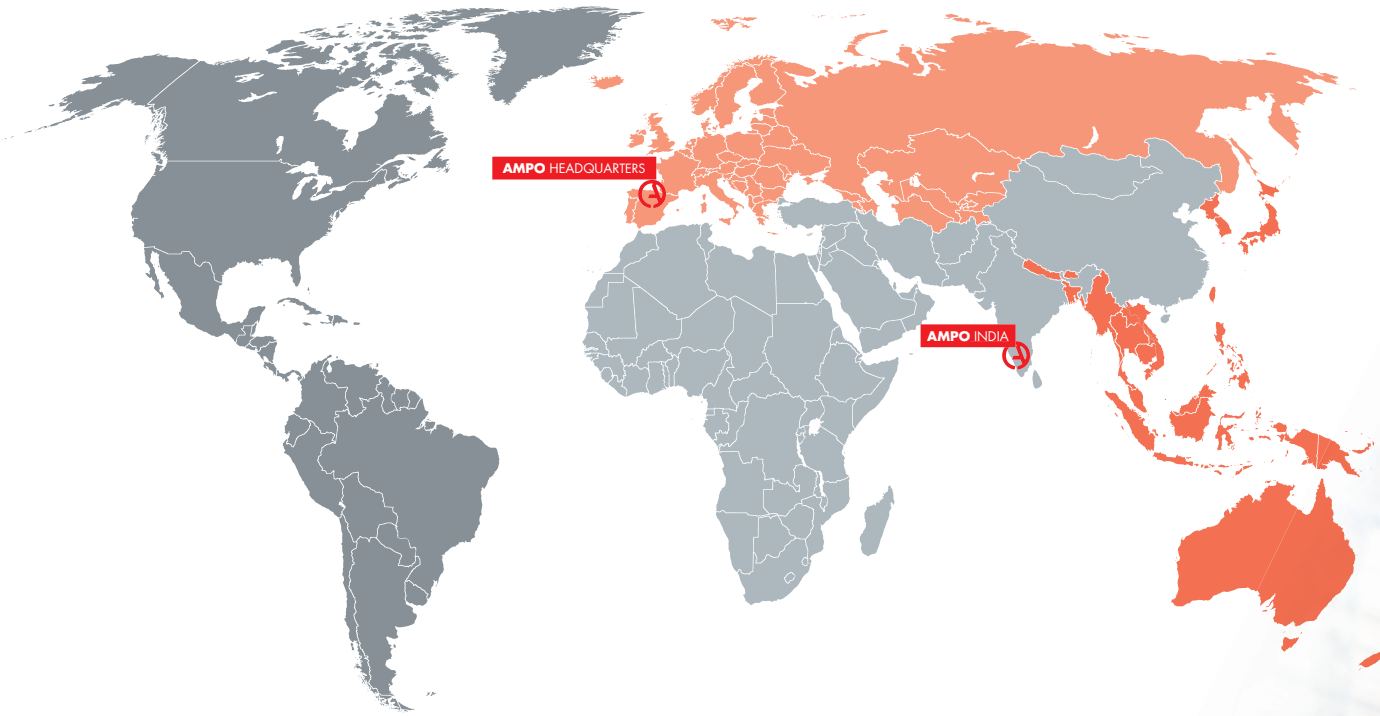
All these valves are designed and manufactured to withstand the extreme working conditions to which they are exposed in the most highly-specialized markets, such as:

- OIL & GAS:
  (Lng, Lng & Lpg carriers, offshore, refining, pipelines, gas processing)
- MINING
- PETROCHEMICAL & CHEMICAL
- POWER PLANTS
- SPECIALTY INDUSTRIES







6. Worldwide Sales Network

"AMPO services are available worldwide through our Sales Network"

Europe
Jon Gorrotxategi
jong@ampo.com

America
Alex Eizmendi
aeizmendi@ampo.com

Middle East, China, India & Africa
Iker Azurmendi
iazurmendi@ampo.com

Australasia, Japan & Korea
Iñaki Aizpeolea
iaizpeolea@ampo.com

AMPO - Manufacturing plants
Idiazabal - Spain
Coimbatore - India

AMPO is just 1 hour drive away from BILBAO (International Airport) and at the following distances from other important places:

65 km west of Pamplona
45 km south of San Sebastian
70 km south of the French border.

AMPO HEADQUARTERS

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