



COMPANY BROCHURE



WBR ENERGIES (SAS)

WE ARE AN **ENGINEERING COMPANY AND EQUIPMENT SUPPLIER** SPECIALIZED IN PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES DEDICATED TO ENERGY INDUSTRIES.

ABOUT US:

WBR ENERGIES offers innovative solutions to support customers through complete life cycle of their projects, from **Conceptual Studies** and **Detailed Engineering**, to **Custom Manufacturing, Testing and Certification**.

Leading by our engineering expertise, we are focused on increase projects performances by offering a **high quality of products** and **services** to optimize costs and lead times.



COMPANY PRESENTATION

EXPERTISE

PIPING EQUIPMENT AND CUSTOM
STEEL STRUCTURES

EXPERTISE

WBR ENERGIES PROVIDES INNOVATIVE **SERVICES** AND **PRODUCTS** FOR THE ENERGY INDUSTRIES

HIGH PRESSURE CONNECTORS

SPECIAL PIPING COMPONENTS

CUSTOM DESIGNED STEEL STRUCTURES

PIPING, FITTINGS & ACCESSORIES



OIL AND GAS: SUBSEA / OFFSHORE / ONSHORE

LIQUID NATURAL GAS (LNG)

PETROCHEMICAL

NUCLEAR POWER

MARINE RENEWABLE / HYDROGEN INDUSTRY

BIOGAS - HYDROELECTRIC

COMPANY PRESENTATION

EXPERTISE

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES



COMPANY PRESENTATION

OUR LOCATIONS

PIPING EQUIPMENT AND CUSTOM
STEEL STRUCTURES

OUR LOCATIONS

WE ARE OFFERING HIGH QUALITY OF **SERVICES** AND **PRODUCTS** FOR CUSTOMERS WORLDWIDE

WBR ENERGIES - FRANCE

Head Office:
L'Espace Inneos
1401 Avenue de la Grande Halle 78200
Buchelay, France

 +33 (0) 1 82 36 00 33

 contact@wbr-energies.com



COMPANY PRESENTATION

WHO WE ARE

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

OUR MANAGEMENT TEAM

WE ARE A TEAM OF SPECIALISTS WITH SEVERAL YEARS OF INDUSTRY EXPERIENCE, PROVIDING HIGH QUALITY OF SERVICES AND PRODUCTS TO OUR PARTNERS ON THE ENERGY MARKET.

Managing Director

Elisa BARITEAU
Mechanical Engineer
Expertise: Design, Innovation
Operational Roles: Business Management, Commercial

QHSE Manager

Alisson MATOS
Mechanical Engineer
Expertise: Quality, Health, Safety, Environment
Operational Role: Quality Management

Project Engineer, FEA Specialist

Vanessa DUC
FEA Engineer
Expertise: Design, Finite Elements Analysis
Operational Roles:
Engineering, Project Management

Project Manager

Ewerton BARRETO
Mechanical Engineer
Expertise: Design, Structural Analysis
Operational Roles:
Commercial, Engineering, Project Management

Project Engineer, CFD Specialist

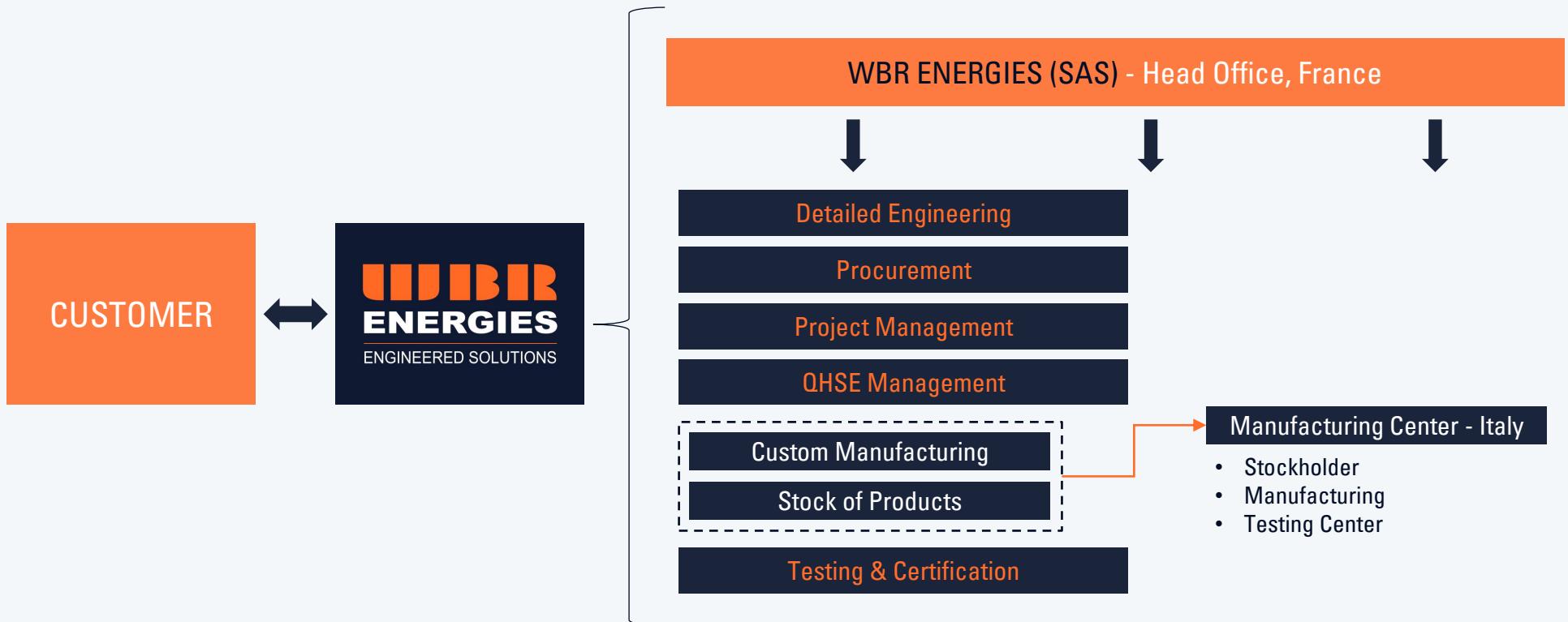
Anthony CUFFARO
CFD Engineer
Expertise: Computational Fluid Analysis
Operational Roles:
Engineering, Project Management

COMPANY PRESENTATION

OUR WORKING PROCESS

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

OUR WORKING PROCESS



OUR SERVICES



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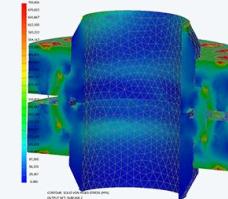


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OUR SERVICES

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

DESIGN & ENGINEERING



PROJECT MANAGEMENT



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



OUR SERVICES

DESIGN & ENGINEERING

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

DESIGN & ENGINEERING

ANALYSIS OF HIGH PRESSURE EQUIPMENT

STRUCTURAL ANALYSIS – FEA CALCULATION

FLUID MECHANICS ANALYSIS

DESIGN – 3D MODELING / 2D DRAFTING

EQUIPMENT TECHNICAL SPECIFICATIONS

DESIGN TOOLS

- AUTODESK INVENTOR®
- NASTRAN® / ROBOT® / AUTODESK CFD®
- ABAQUS® (under request)

OUR SERVICES

DESIGN & ENGINEERING

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

ANALYSIS OF HIGH PRESSURE EQUIPMENT

DESIGN AND ANALYSIS OF:

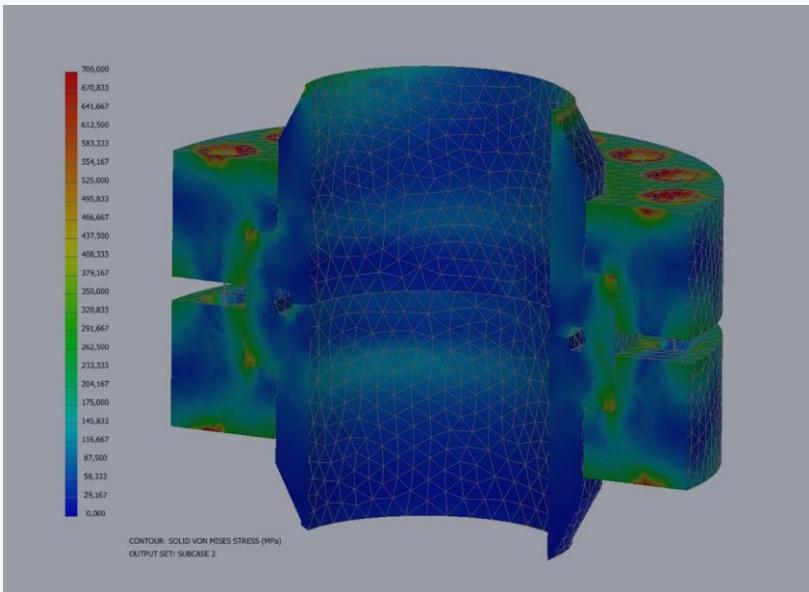
FLANGED JOINTS - CLAMPED CONNECTIONS - FLANGES - PIPING & FITTINGS -
WELDED JOINTS - NOZZLES - PULLING HEADS - SPECIAL PIPING COMPONENTS

CODES:

- ASME VIII Div 2 / ASME VIII Div 1 / ASME B31.3 / API 16A / API 6A
- DNVGL-RP-D101 / DNV-OS-F101 / EN13445 / CODAP

ANALYSIS:

- ALLOWABLE DESIGN STRESSES DEFINITION
- ELASTIC / ELASTIC-PLASTIC STRESS ANALYSIS
- CHECK AGAINST PLASTIC COLLAPSE / LOCAL FAILURE / BUCKLING / FATIGUE



DESIGN TOOLS

- AUTODESK INVENTOR®
- NASTRAN®
- ABAQUS® (under request)

OUR SERVICES

DESIGN & ENGINEERING

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

STRUCTURAL ANALYSIS – FEA CALCULATIONS

DESIGN AND ANALYSIS OF:

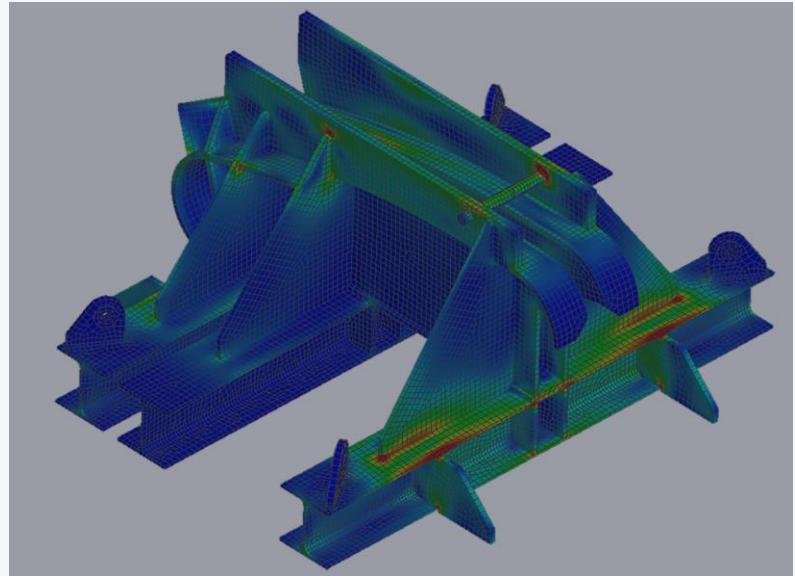
CUSTOM STEEL STRUCTURES - FRAMES - PLATFORMS - STRUCTURAL CLAMPS
- PIPE SPOOLS - LIFTING EQUIPMENT - SEAFASTENING

CODES:

- DNVGL-RP-D101 / DNVGL-OS-C101 / DNV-RP-C205 / DNV-RP-C203 / ...
- API RP 2RD / API 2A-WSD / AISC / EUROCODES

ANALYSIS:

- ALLOWABLE DESIGN STRESSES DEFINITION
- ELASTIC / ELASTIC-PLASTIC STRESS ANALYSIS
- CHECK AGAINST PLASTIC COLLAPSE / LOCAL FAILURE / BUCKLING / FATIGUE
- INSTALLATION ANALYSIS: LIFTING / LOAD OUT / LOWERING / ...
- TRANSPORTATION AND SEAFASTENING ANALYSIS



DESIGN TOOLS

- AUTODESK INVENTOR®
- NASTRAN® / ROBOT®
- ABAQUS® (under request)

OUR SERVICES

DESIGN & ENGINEERING

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

FLUID MECHANICS ANALYSIS

DESIGN AND ANALYSIS OF:

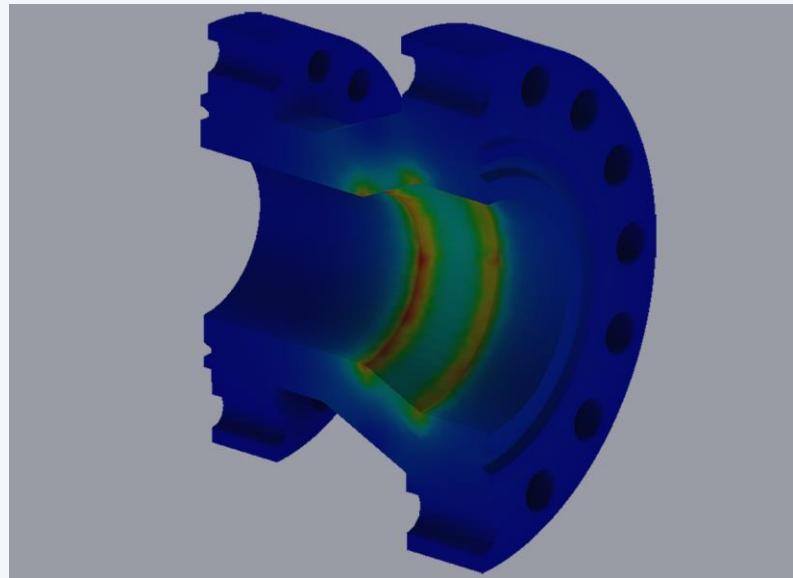
FLANGED JOINTS - CLAMPED CONNECTIONS - CONTROL VALVES - NOZZLES -
ORIFICE PLATES - ANTI-BACKFLOW VALVES - FITTINGS AND PIPING

CODES:

- IEC 60534 / AISI-FCI 70-2
- ASME MFC-3M / ISO 5167 / ASME PTC 19.5

ANALYSIS:

- FLUID FLOW CALCULATION
- FLOW COEFFICIENT EVALUATION
- SEAT LEAKAGE CALCULATION
- LOCAL PRESSURE LOSS EVALUATION
- HEAT TRANSFER



DESIGN TOOLS

- AUTODESK INVENTOR®
- AUTODESK CFD®
- ABAQUS® (under request)

OUR SERVICES

DESIGN & ENGINEERING

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

EQUIPMENT TECHNICAL SPECIFICATIONS

- DETAILED DRAWINGS
- DESIGN REPORTS / TECHNICAL DATASHEETS
- INSPECTION & TESTING PLAN
- MANUFACTURING PROCEDURE SPECIFICATION
- FACTORY ACCEPTANCE TESTING PROCEDURES
- DIMENSIONAL CONTROL PROCEDURES
- MANUFACTURING FINAL DOSSIER

DESIGN – 3D MODELING / 2D DRAFTING

- 3D MODELS
- 2D DRAFTING: GENERAL ARRANGEMENT / DETAILED DRAWINGS
- FABRICATION AND AS-BUILT DRAWINGS
- INSTALLATION & TRANSPORTATION LAYOUTS
- ISOMETRIC PLANS

DESIGN TOOLS

- AUTODESK INVENTOR®
- AUTODESK AUTOCAD®

OUR SERVICES

PROJECT MANAGEMENT

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

PROJECT MANAGEMENT

CONCEPTUAL & FEED STUDIES

DETAILED ENGINEERING

EQUIPMENT DATASHEETS

MATERIAL PROCUREMENT

CUSTOM MANUFACTURING

INSPECTION & TESTING

THIRD PARTY CERTIFICATION



OUR SERVICES

CUSTOM MANUFACTURING

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

CUSTOM MANUFACTURING

FORGING & HEAT TREATMENT

Forging and Heat Treatment process is carried out in accordance with customer material specifications and following requirements of International.

ASTM A694 / ASTM A350 / ASTM A-707 / ASTM A105 / ASTM A322 / ASTM A182 ...

PRECISION MACHINING

All parts are machined according to customer design specifications and following dimensional requirements from International Design Codes.

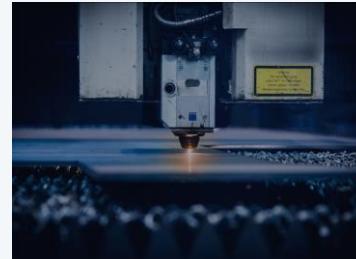
Turning / Drilling / Boring / Reaming / Milling / Planning / Broaching ...

WELDING & FABRICATION OF STEEL STRUCTURES

Custom Steel Structures are fabricated in accordance with customer specifications and following requirements of International Construction Codes.

Cutting / Rolling / Bending / Machining

GTAW (TIG) / GMAW (MIG/MAG) / FCAW / WELD OVERLAY



OUR SERVICES

TESTING & CERTIFICATION

PIPING EQUIPMENT AND CUSTOM STEEL STRUCTURES

TESTING & CERTIFICATION

HYDROSTATIC TESTING

PRESSURE TESTS

LEAK TESTING

LOAD TESTS

FIT UP & ASSEMBLY TESTS

All products can be fully certified by a Third Party Authority: DNV® / Lloyd's Register® / Bureau Veritas® / Apave® / ...



OUR PRODUCTS



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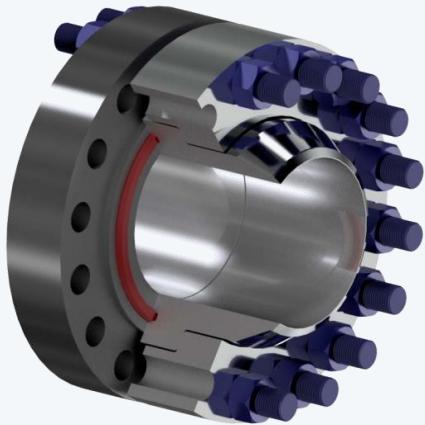


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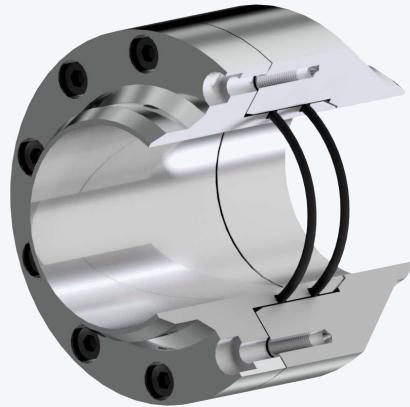
OUR PRODUCTS

PIPING EQUIPMENT

CUSTOM MADE PRODUCTS



SWIVEL RING FLANGES



HIGH PRESSURE CONNECTORS

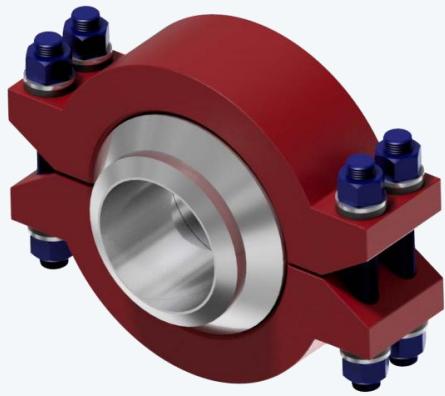


PULLING & HANDLING HEADS

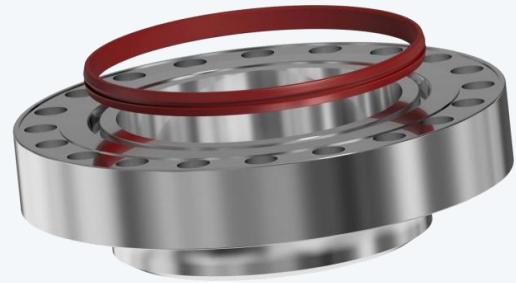
OUR PRODUCTS

PIPING EQUIPMENT

CUSTOM MADE PRODUCTS



CLAMPS & HUBS – API 16A



COMPACT FLANGES

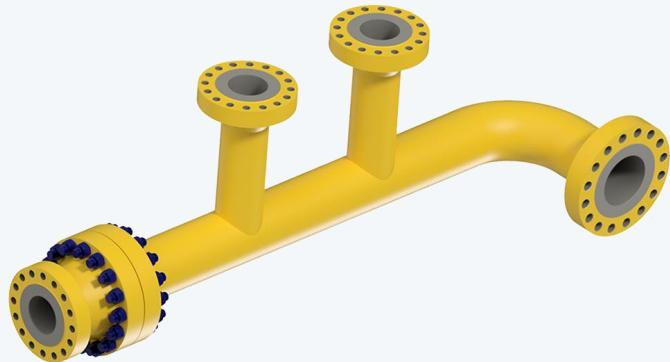


SPECIAL PIPING COMPONENTS

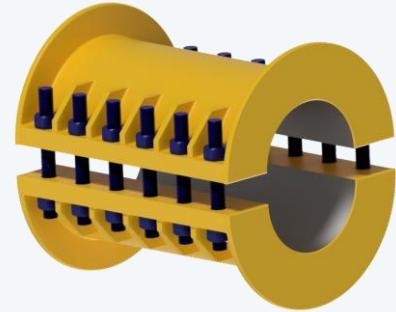
OUR PRODUCTS

CUSTOM DESIGNED STEEL STRUCTURES

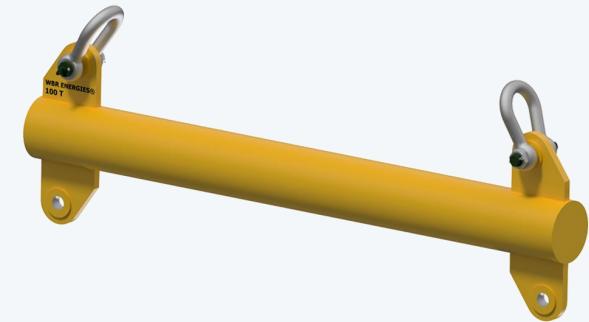
CUSTOM MADE PRODUCTS



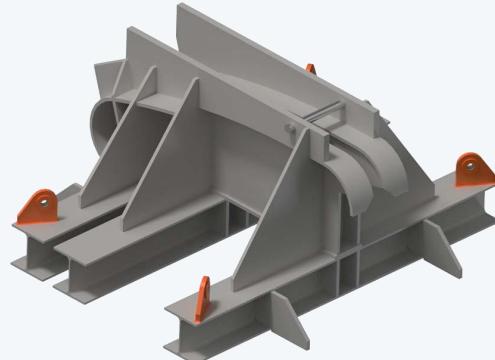
PIPE SPOOLS



STRUCTURAL CLAMPS



SPREADER BARS & FRAMES

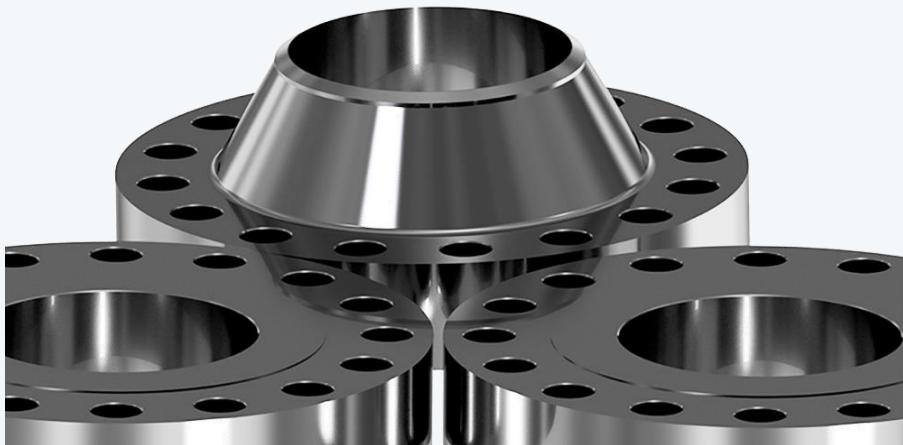


CUSTOM STEEL STRUCTURES

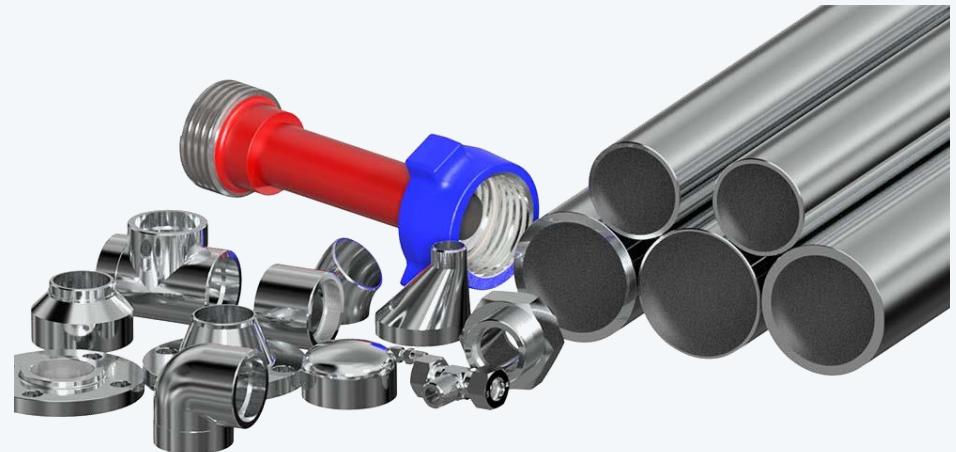
OUR PRODUCTS

DISTRIBUTION

DISTRIBUTION & ACCESSORIES



STANDARD FLANGES

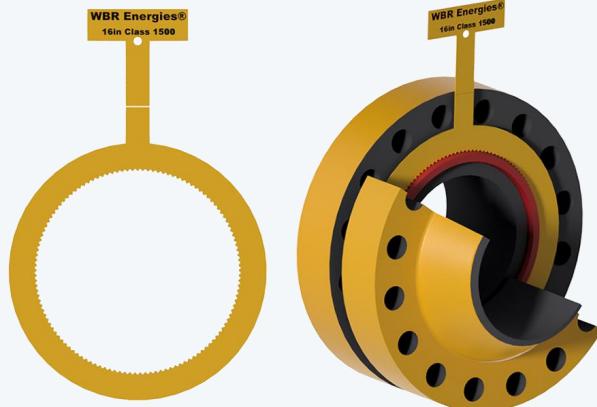


PIPING & FITTINGS

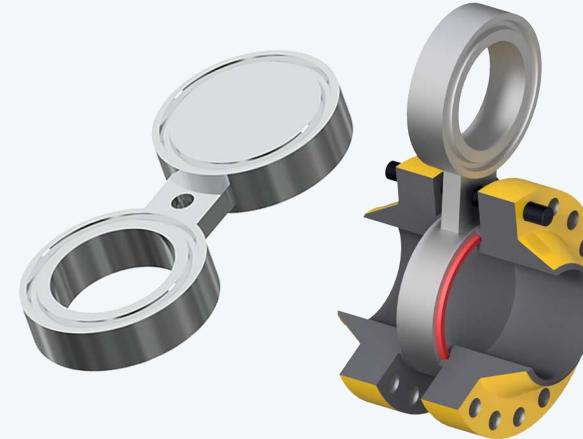
OUR PRODUCTS

ACCESSORIES

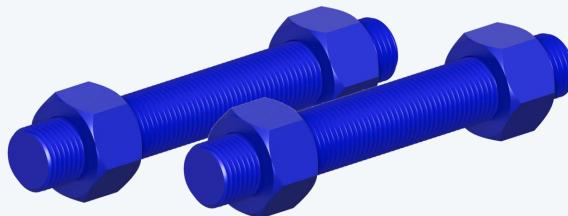
DISTRIBUTION & ACCESSORIES



GASKET INSTALLATION TOOL



SPECTACLE BLINDS & SPADES



SPECIAL BOLTING



RING JOINT GASKETS

PRODUCTS DATASHEETS



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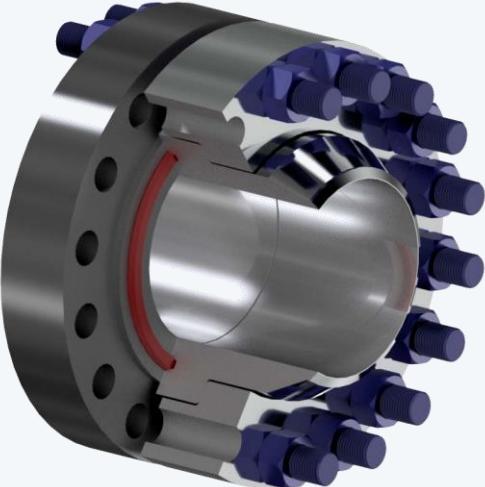


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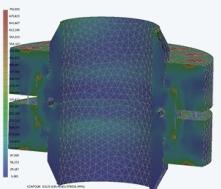
SWIVEL RING FLANGES

PIPING EQUIPMENT

CUSTOM-MADE PRODUCTS



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

SWIVEL RING FLANGES

ASME B16.5 / ASME B16.47

SWIVEL RING FLANGES

API 17D

SIZES & RATING

ASME B16.5 / B16.47

4in to 60in – Class 150 to 2500

API 17D

2 1/16in to 13 5/8in – 2000 PSI to 20000 PSI

DESIGN CODES

ASME B16.5

Pipe Flanges and Flanged Fittings

ASME B16.47

Large Diameter Steel Flanges

API 17D

Specification for Subsea Wellhead and Tree Equipment

ASME VIII Div 2

Rules for Construction of Pressure Vessels

MATERIALS

ASTM A694

F42 / F52 / F60 / F65 / F70

ASTM A350

LF2 Classes 1 and 2 / LF1 to LF9

ASTM A105

36K / 45K / 60K / 75K

API 6A

F316 / 316L / F304 / 304L

ASTM A182

F51 / F53 / F55 / F5 / F9 / F11 / F22 / F91

ASTM A182

Corrosion Resistance Overlay (Cladding)

ASME IX / DNV-OS-F101

DUPLEX / INCONEL® / SUPER DUPLEX

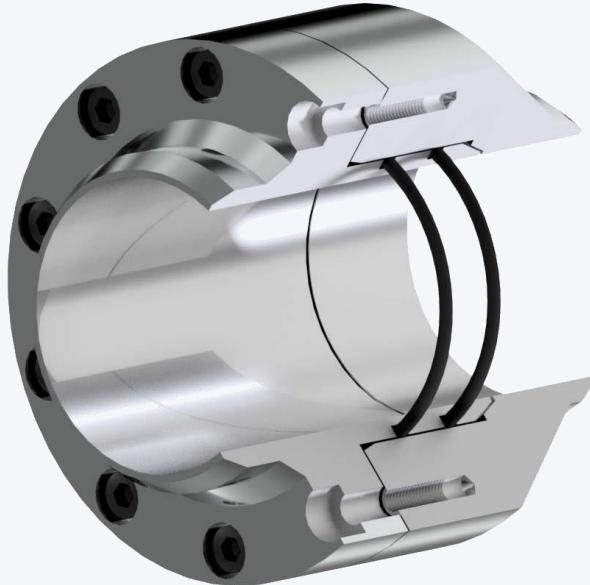
SPECIALS

*Other grades are available under request

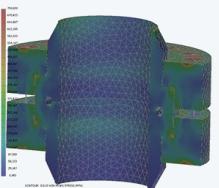
HIGH PRESSURE CONNECTORS

PIPING EQUIPMENT

CUSTOM-MADE PRODUCTS



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

HIGH PRESSURE CONNECTORS for Hydraulic and Pneumatic applications
Custom designed according to customer technical requirements

SIZES & RATING

2in to 10in – Maximal Working Pressure 100 bar (for o-rings sealing interface solution)
Other sizes and pressure rating under request

DESIGN CODES

| | |
|-----------------|--|
| ASME VIII Div 2 | Rules for Construction of Pressure Vessels |
| API 6A | Specification for Subsea Wellhead and Tree Equipment |
| API 16A | Specification for Drill-through Equipment |
| ISO 3601 | Fluid Power Systems — O-rings |
| EN 13445 | Unfired pressure vessels |
| DNVGL-RP-D101 | Structural analysis of piping systems |
| ASME B31.3 | Process Piping |

MATERIALS

| | |
|-----------|---|
| ASTM A694 | F42 / F52 / F60 / F65 / F70 |
| ASTM A350 | LF2 Classes 1 and 2 / LF1 to LF9 |
| ASTM A105 | |
| API 6A | 36K / 45K / 60K / 75K |
| ASTM A182 | F316 / 316L / F304 / 304L |
| ASTM A182 | F51 / F53 / F55 / F5 / F9 / F11 / F22 / F91 |
| SPECIALS | DUPLEX / INCONEL® / SUPER DUPLEX |

*Other grades are available under request

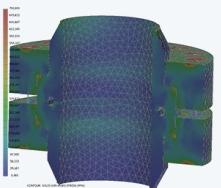
PULLING & HANDLING HEADS

PIPING EQUIPMENT

CUSTOM-MADE PRODUCTS



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

PULLING and HANDLING HEADS

ASME B16.5 / ASME B16.47 / API 6A / NORSOKE L-005 / O-Ring Seal Solution

SIZES & RATING

ASME B16.5 / B16.47

4in to 60in – Class 150 to 2500

API 6A

1 13/16in to 21 1/4in – 2000 PSI to 20000 PSI

NORSOKE L-005

4in to 48in – Class 150 to 2500

ISO 3601

O-Rings Seal Solution (maximal working pressure 100 bar)

DESIGN CODES

ASME VIII Div 2

Rules for Construction of Pressure Vessels

API 6A

Specification for Subsea Wellhead and Tree Equipment

ASME B16.5

Pipe Flanges and Flanged Fittings

ASME B16.47

Large Diameter Steel Flanges

NORSOKE L-005

Compact Flanged Connections

ISO 3601

Fluid Power Systems – O-Rings

MATERIALS

ASTM A694

F42 / F52 / F60 / F65 / F70

ASTM A350

LF2 Classes 1 and 2 / LF1 to LF9

ASTM A105

36K / 45K / 60K / 75K

API 6A

F316 / 316L / F304 / 304L

ASTM A182

F51 / F53 / F55 / F5 / F9 / F11 / F22 / F91

ASTM A182

DUPLEX / INCONEL® / SUPER DUPLEX

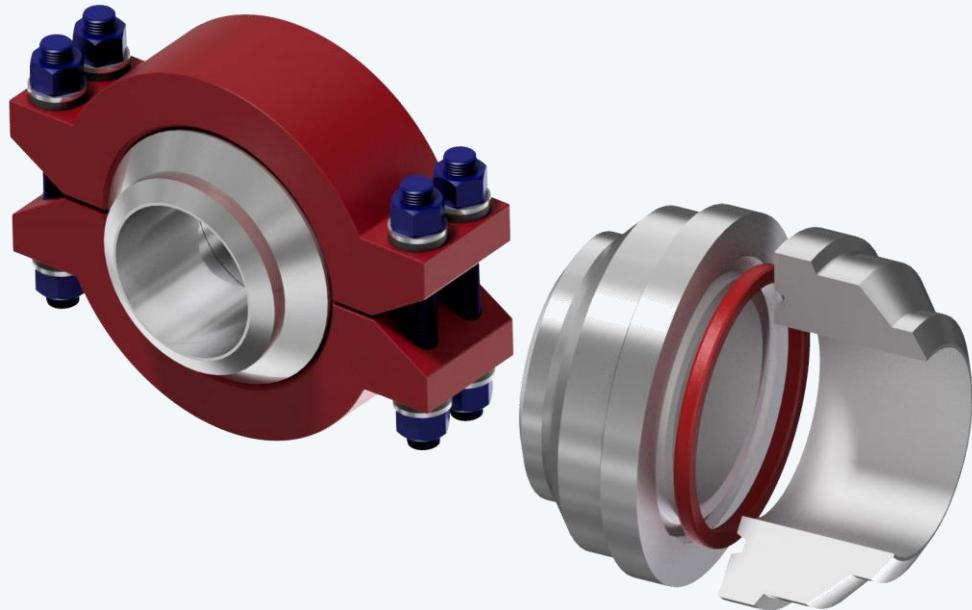
SPECIALS

*Other grades are available under request

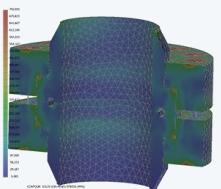
CLAMPS & HUBS – API 16A

PIPING EQUIPMENT

CUSTOM-MADE PRODUCTS



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

CLAMPS and HUBS as per API 16A / API 6A

Hubs are available as Weld Neck, Integral & Blinds. Rings Joints Type: BX and RX

SIZES & RATING

CLAMPS Clamp N°1 to Clamp N°28 – 2000 PSI to 20000 PSI

HUBS 1 13/16in to 21 1/4in – 2000 PSI to 20000 PSI

DESIGN CODES

API 16A Specification for Drill Through Equipment

API 6A Specification for Subsea Wellhead and Tree Equipment

ASME VIII Div 2 Rules for Construction of Pressure Vessels

MATERIALS

API 6A 36K / 45K / 60K / 75K

AISI 4130 / 4140

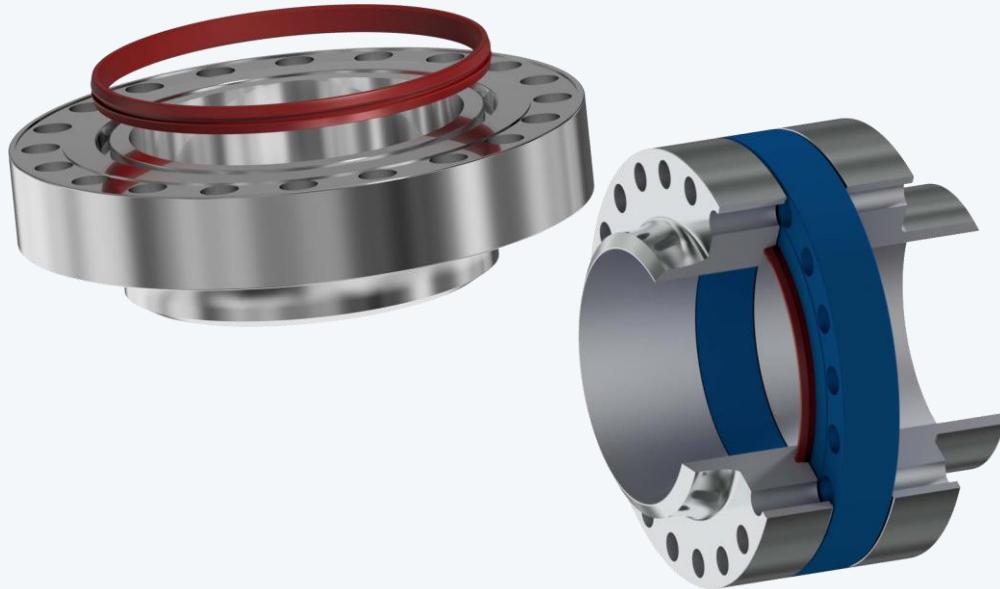
SPECIALS DUPLEX / INCONEL ® / SUPER DUPLEX

*Other grades are available under request

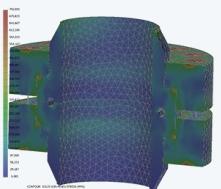
COMPACT FLANGES

PIPING EQUIPMENT

CUSTOM-MADE PRODUCTS



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

COMPACT FLANGES

NORSOK L-005 / ISO 27509

Welding Neck / Blind / Integral / Rigid Interface / Paddle Blank / Spades / Reducing Threaded

SIZES & RATING

NORSOK L-005 / ISO 27509

4in to 48in – Class 150 to 2500

**Custom dimensions for special load cases conditions under request

DESIGN CODES

NORSOK L-005

Compact Flanged Connections

ISO 27509

Compact Flanged Connections with IX Seal Rings

MATERIALS

ASTM A694

F42 / F52 / F60 / F65 / F70

ASTM A350

LF2 Classes 1 and 2 / LF1 to LF9

ASTM A105

NORSOK M-630

F316 / 316L / F304 / 304L

ASTM A182

F51 / F53 / F55 / F5 / F9 / F11 / F22 / F91

ASTM A182

Corrosion Resistance Overlay (Cladding)

ASME IX / DNV-OS-F101

DUPLEX / INCONEL® / SUPER DUPLEX

SPECIALS

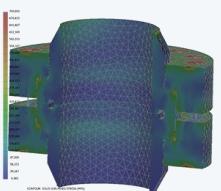
*Other grades are available under request

SPECIAL PIPING COMPONENTS

PIPING EQUIPMENT



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



CUSTOM-MADE PRODUCTS

TYPES

SPECIAL PIPING COMPONENTS

Spool Adapter Flanges / Nozzles / Anchor Flanges / Forged Barred Tee / Elbows ...

SIZES & RATING

Various sizes and pressure ratings available under request

DESIGN CODES

| | |
|--------------|--|
| ASME B16.11 | Forged Fittings, Socket-Welding and Threaded |
| ASME B16.5 | Pipe Flanges and Flanged Fittings |
| API 6A | Specification for Subsea Wellhead and Tree Equipment |
| NORSOK L-005 | Compact Flanged Connections |

MATERIALS

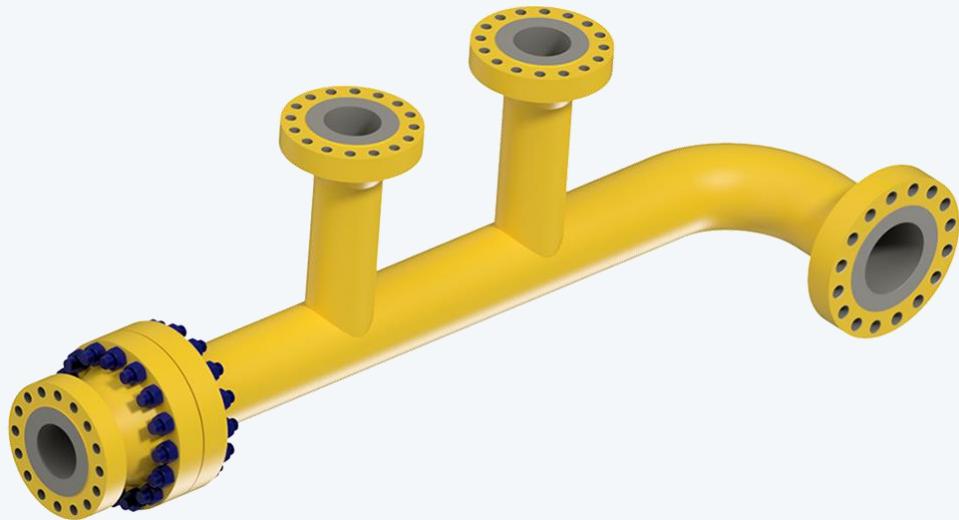
| | |
|-----------------------|---|
| ASTM A694 | F42 / F52 / F60 / F65 / F70 |
| ASTM A350 | LF2 Classes 1 and 2 / LF1 to LF9 |
| ASTM A105 | |
| API 6A | 36K / 45K / 60K / 75K |
| NORSOK M-630 | |
| ASTM A182 | F316 / 316L / F304 / 304L |
| ASTM A182 | F51 / F53 / F55 / F5 / F9 / F11 / F22 / F91 |
| ASME IX / DNV-OS-F101 | Corrosion Resistance Overlay (Cladding) |
| SPECIALS | DUPLEX / INCONEL® / SUPER DUPLEX |

*Other grades are available under request

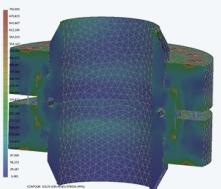
PIPE SPOOLS

PIPING EQUIPMENT

CUSTOM-MADE PRODUCTS



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

SPECIAL PIPE SPOOLS

Designed according to customers technical requirements

SIZES & RATING

Various sizes and pressure ratings available under request

DESIGN CODES

| | |
|-----------------|--|
| ASME B16.5 | Pipe Flanges and Flanged Fittings |
| API 6A | Specification for Subsea Wellhead and Tree Equipment |
| NORSOK L-005 | Compact Flanged Connections |
| BS EN 1092-1 | Circular flanges for pipes, valves, fittings and accessories |
| ASME VIII Div 2 | Rules for Construction of Pressure Vessels |
| DNVGL-RP-D101 | Structural analysis of piping systems |
| ASME B31.3 | Process Piping |

MATERIALS

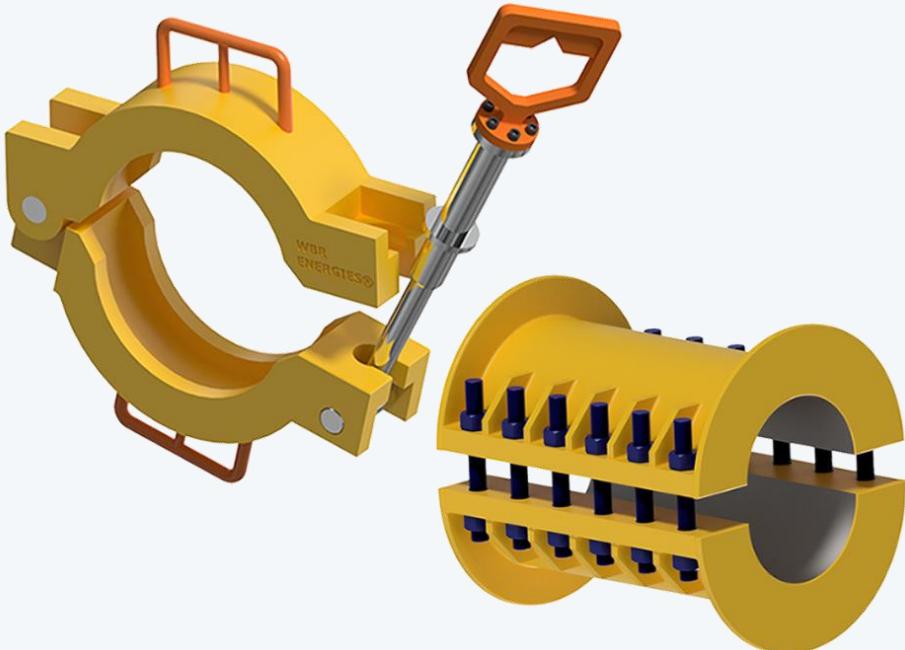
| | |
|-----------|-----------------------------------|
| ASTM A694 | F42 / F52 / F60 / F65 / F70 |
| ASTM A350 | LF2 Classes 1 and 2 / LF1 to LF9 |
| API 6A | 36K / 45K / 60K / 75K |
| EN 10219 | S235 / S275 / S355 / S420 / ... |
| API 5L | X42 to X80 |
| SPECIALS | DUPLEX / INCONEL ® / SUPER DUPLEX |

*Other grades are available under request

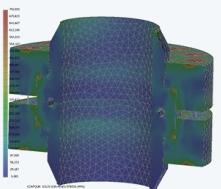
STRUCTURAL CLAMPS

STEEL STRUCTURES

CUSTOM-MADE PRODUCTS



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

STRUCTURAL CLAMPS, designed according to customers technical requirements
Our clamps can be adapted to be ROV operated for subsea applications.

SIZES & RATING

Various sizes and load capacities available under request

DESIGN CODES

| | |
|-----------------|--|
| ASME VIII Div 2 | Rules for Construction of Pressure Vessels |
| DNVGL-RP-D101 | Structural analysis of piping systems |
| DNVGL-ST-F101 | Submarine pipeline systems |
| API 6A | Specification for Subsea Wellhead and Tree Equipment |
| API 16A | Specification for Drill-through Equipment |

MATERIALS

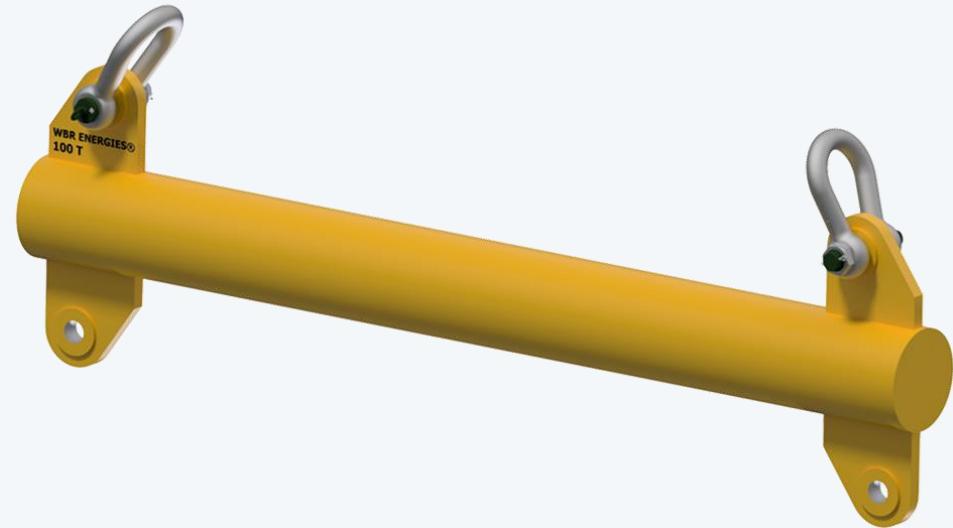
| | |
|-------------------------------|----------------------------------|
| EN10025 / EN 10210 / EN 10219 | S235 / S275 / S355 / S420 / ... |
| ASTM A350 | LF2 Classes 1 and 2 / LF1 to LF9 |
| ASTM A694 | F52 / F60 |
| AISI | 4130 / 4140 |
| API 5L | X42 to X80 |
| SPECIALS | DUPLEX / INCONEL® / SUPER DUPLEX |

*Other grades are available under request

SPREADER BARS & FRAMES

STEEL STRUCTURES

CUSTOM-MADE PRODUCTS



TYPES

LIFTING SPREADER BARS AND SPREADER FRAMES

Custom designed according to customers requirements

SIZES & RATING

Various sizes and load capacities available under request

DESIGN CODES

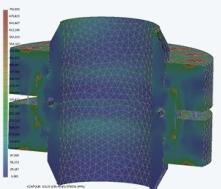
| | |
|--------------------|---|
| API 2A WSD | Constructing Fixed Offshore Platforms-Working Stress Design |
| API RP 2RD | Design of Risers for Floating Production Systems |
| AISC | Code of Standard Practice for Steel Buildings |
| DNVGL-OS-C101 | Design of offshore steel structures |
| EN 1993 EUROCODE 3 | Design of Steel Structures |

MATERIALS

EN10025 / EN 10210 / EN 10219 S235 / S275 / S355 / S420 / ...

*Other grades are available under request

DESIGN & ENGINEERING



CUSTOM MANUFACTURING

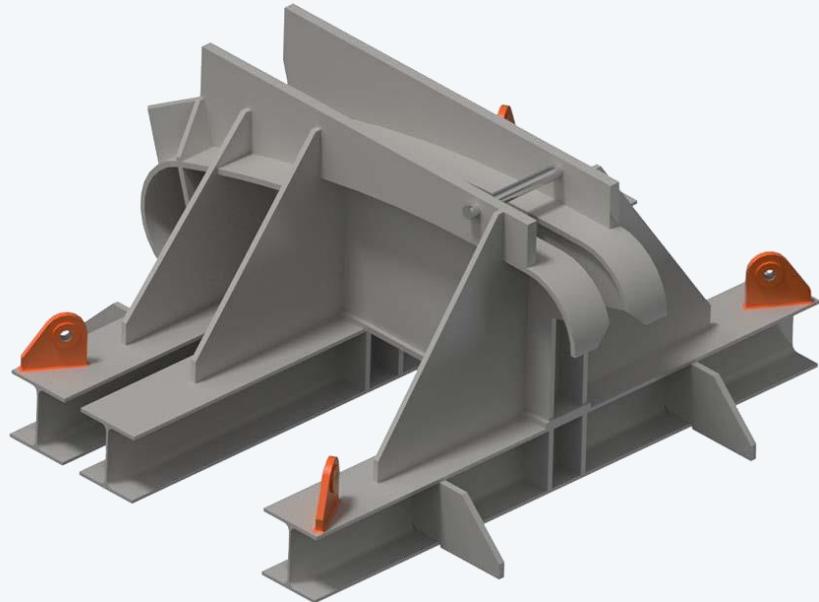


TESTING & CERTIFICATION

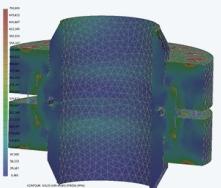


CUSTOM STEEL STRUCTURES

STEEL STRUCTURES



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



CUSTOM-MADE PRODUCTS

TYPES

CUSTOM DESIGNED STEEL STRUCTURES

Seafastening / Fabrication Aids / Transportation Frames / Mudmats / Platforms / ...

SIZES & RATING

Various sizes and load capacities available under request

DESIGN CODES

| | |
|--------------------|---|
| API 2A WSD | Constructing Fixed Offshore Platforms-Working Stress Design |
| API RP 2RD | Design of Risers for Floating Production Systems |
| AISC | Code of Standard Practice for Steel Buildings |
| DNVGL-OS-C101 | Design of offshore steel structures |
| EN 1993 EUROCODE 3 | Design of Steel Structures |

MATERIALS

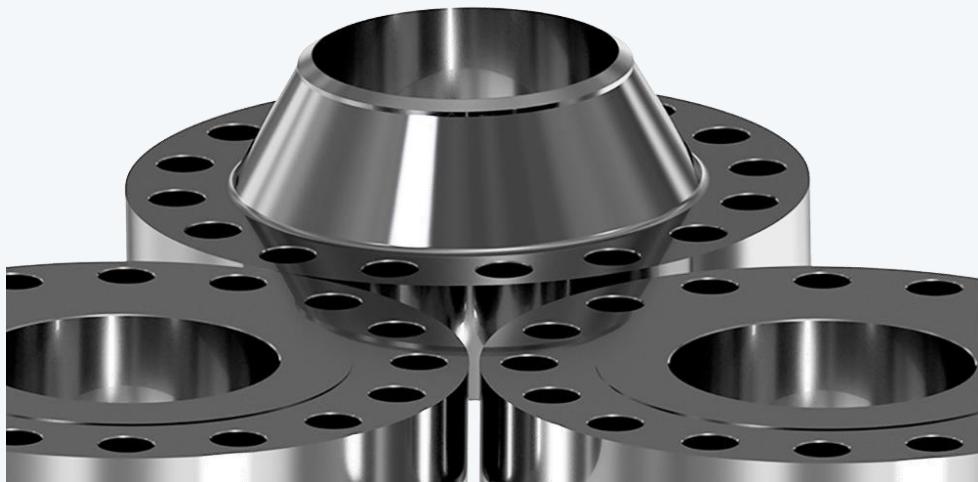
EN10025 / EN 10210 / EN 10219 S235 / S275 / S355 / S420 / ...

*Other grades are available under request

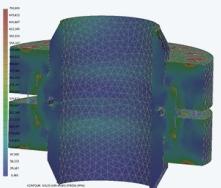
STANDARD FLANGES

DISTRIBUTION

DISTRIBUTION & ACCESSORIES



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

WELDING NECK – BLIND - THREADED
LAPPED – SLIP ON
ORIFICE FLANGES – LONG WELDING NECK

SIZES & RATING

| | |
|--------------------------|---|
| ASME B16.5 / ASME B16.47 | 1/2in to 60in – Class 150 to 2500 |
| API 6A | 1 13/16in to 21 1/4in – 2000 PSI to 20000 PSI |
| NORSOK L-005 / ISO 27509 | 4in to 48in – Class 150 to 2500 |
| BS EN 1092-1 | DN10 to DN2000 – PN 2,5 to PN 400 |

DESIGN CODES

| | |
|--------------|--|
| ASME B16.5 | Pipe Flanges and Flanged Fittings |
| ASME B16.47 | Large Diameter Steel Flanges |
| API 6A | Specification for Subsea Wellhead and Tree Equipment |
| NORSOK L-005 | Compact Flanged Connections |
| BS EN 1092-1 | Circular flanges for pipes, valves, fittings and accessories |

MATERIALS

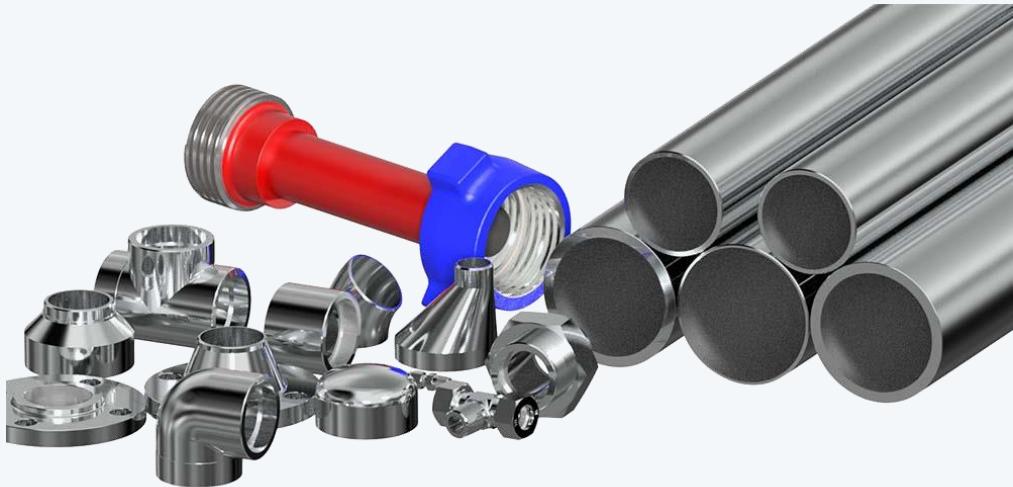
| | |
|-----------------------|---|
| ASTM A694 | F42 / F52 / F60 / F65 / F70 |
| ASTM A350 | LF2 Classes 1 and 2 / LF1 to LF9 |
| ASTM A105 | |
| NORSOK M-630 | |
| API 6A | API 6A – 36K / 45K / 60K / 75K |
| ASTM A182 | F316 / F304 / F22 |
| ASME IX / DNV-OS-F101 | Corrosion Resistance Overlay (Cladding) |
| SPECIALS | DUPLEX / INCONEL® / SUPER DUPLEX |

*Other grades are available under request

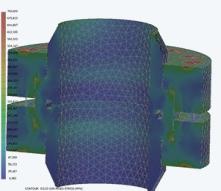
FITTINGS & PIPING

DISTRIBUTION

DISTRIBUTION & ACCESSORIES



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



WROUGHT BUTT WELD FITTINGS

TYPES:

ELBOWS: 45°, 90° & 180°, Short Radius (R=1D), Long Radius (R=1.5D), R=3D & R=5D
TEES: Equals & Reducing Tees / REDUCERS: Concentric & Eccentrics / CAPS

CODES:

ASME B16.9 – ASME B16.28 – MSS SP 43/75 – BS1640- BS1965

SIZES:

from 1/2 in to 48in

MATERIALS:

ASTM A234 WPB / A860 WPHY 52 to 65 / MSS SP75 WPHY 52 to 65 / A420 WPL3 to WPL6
ASTM A234 WP5-WP1-WP11-WP22-WP9-WP91
ASTM A403 WP304-WP316-WP321-WP347

FORGED FITTINGS

TYPES:

ELBOWS: 45°, 90° & 180°, Male-Female Elbows, Union elbows
TEES: Equals & Reducing Tees / CAPS / PLUGS / UNIONS / HEX HEAD BUSHINGS
COUPLINGS / HALF COUPLINGS / COUPLINGS TYPE HAMMER® – WECO ®

CODES:

ASME B16.11, BS1740, BS3799, MSS SP 79/95/97

SIZES:

from 1/8 in to 4in

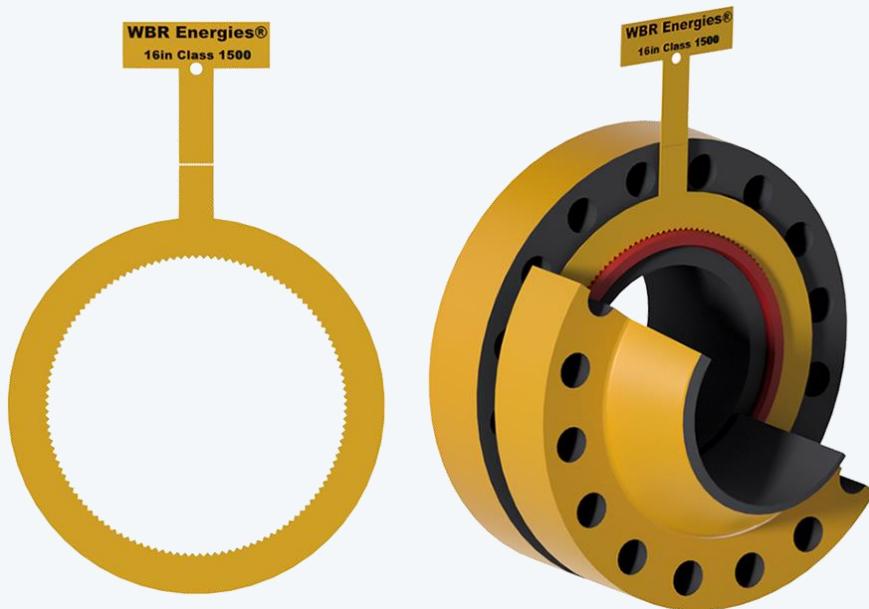
MATERIALS:

ASTM A694 F52 to F65 / ASTM A350 / ASTM A150
ASTM A182 – F304 – F316 – F321 – F 347 – F51 – F53 – F55 – F5 – F9 – F11 – F22 – F91
ASTM A234 WP5 – WP1 – WP11 – WP22 – WP9 – WP91

*Other grades are available under request

GASKET INSTALLATION TOOL ACCESSORIES

DISTRIBUTION & ACCESSORIES



TYPES

GASKET INSTALLATION TOOL for ASME Flanges : R – RX – BX

GASKET INSTALLATION TOOL for API Flanges : R – RX – BX – SBX

SIZES & RATING

ASME B16.5 / ASME B16.47

4in to 60in – Class 150 to 2500

API 6A

1 1/16in to 21 1/4in – 2000 PSI to 20000 PSI

DESIGN CODES

ASME B16.5

Pipe Flanges and Flanged Fittings

ASME B16.47

Large Diameter Steel Flanges

API 6A

Specification for Subsea Wellhead and Tree Equipment

MATERIALS

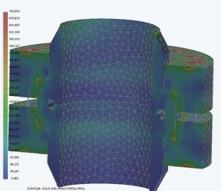
CARBON STEEL

STAINLESS STEEL

ALUMINIUM

*Other grades are available under request

DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION

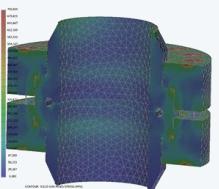


SPECTACLE BLINDS / SPADES ACCESSORIES

DISTRIBUTION & ACCESSORIES



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

SPECTACLE BLINDS – LINE SPADES & SPACERS – SPECTACLE BLINDS FOR RTJ FLANGES
LINE BLIND FEMALE TYPE WITH RTJ GROOVE – REVERSIBLE SPADES FOR RTJ FLANGES
LINE BLINDS MALE TYPE FOR RTJ FLANGES
NORSOK PADDLE & SPACER

SIZES & RATING

| | |
|--------------------------|---|
| ASME B16.5 / ASME B16.47 | 4in to 60in – Class 150 to 2500 |
| API 6A | 1 13/16in to 21 1/4in – 2000 PSI to 20000 PSI |
| NORSOK L-005 | 4in to 48in – Class 150 to 2500 |

DESIGN CODES

| | |
|--------------|--|
| ASME B16.5 | Pipe Flanges and Flanged Fittings |
| ASME B16.47 | Large Diameter Steel Flanges |
| ASME B16.48 | Line Blanks |
| API 6A | Specification for Subsea Wellhead and Tree Equipment |
| API 590 | Steel Line Blanks |
| NORSOK L-005 | Compact Flanged Connections |

MATERIALS

| | |
|-----------|-----------------------------------|
| ASTM A694 | F42 / F52 |
| ASTM A350 | |
| ASTM A105 | |
| API 6A | 36K / 45K |
| ASTM A182 | F316 / 316L / F304 / 304L |
| SPECIALS | DUPLEX / INCONEL ® / SUPER DUPLEX |

*Other grades are available under request

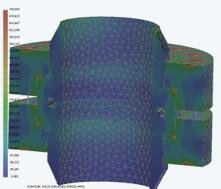
RING JOINT GASKETS

ACCESSORIES

DISTRIBUTION & ACCESSORIES



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

Ring Joint Gaskets for ASME Flanges: TYPE: R – RX – BX

Ring Joint Gaskets for API Flanges: TYPE: R – RX – BX – SBX

Ring Joint Gaskets for NORSOX Flanges: TYPE: IX

Gaskets for Raised Face Flanges: TYPE: Flat Gasket – Spiral wound gasket

SIZES & RATING

ASME B16.5 / ASME B16.47

4in to 60in – Class 150 to 2500

API 6A

1 13/16in to 21 1/4in – 2000 PSI to 20000 PSI

NORSOX L-005

4in to 48in – Class 150 to 2500

ASME B16.21

1/2in to 24in – Class 150 to 2500

DESIGN CODES

ASME B16.5

Pipe Flanges and Flanged Fittings

ASME B16.47

Large Diameter Steel Flanges

API 6A

Specification for Subsea Wellhead and Tree Equipment

NORSOX L-005

Compact Flanged Connections

ASME B16.21

Nonmetallic Flat Gaskets for Pipe Flanges

MSS-SP-44

Steel Pipeline Flanges

MATERIALS

CARBON STEEL

Soft Iron / Low Carbon Steel

STAINLESS STEEL

316 / 304

SPECIAL GRADES

DUPLEX / INCONEL® / SUPER DUPLEX

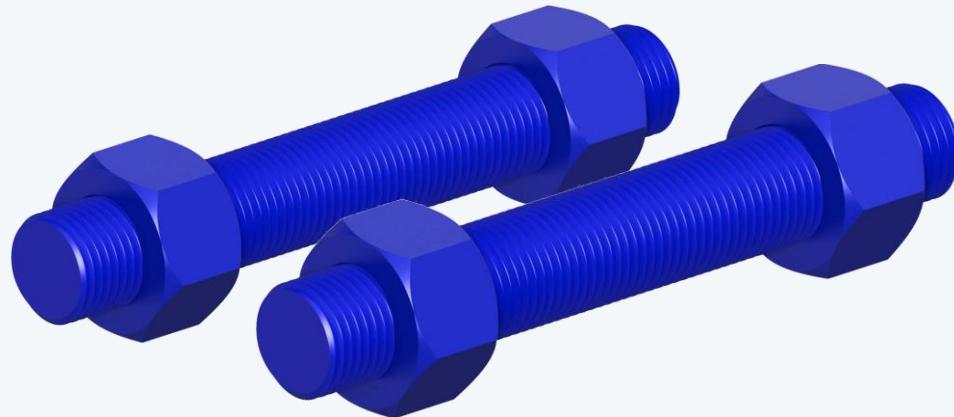
COATING

Zinc Plated / PTFE Coated / Xylan® / Fluoropolymer

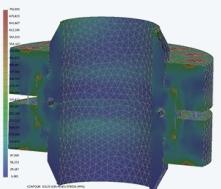
*Other grades are available under request

SPECIAL BOLTING ACCESSORIES

DISTRIBUTION & ACCESSORIES



DESIGN & ENGINEERING



CUSTOM MANUFACTURING



TESTING & CERTIFICATION



TYPES

STUD BOLTS & HEX NUTS - ASME B18.2.1 / ASME B18.2.2

API 6A BOLTING - PSL 1 / PSL 2 / PSL 3 / PSL 4 – BSL-1/BSL-2/BSL-3

NORSOK L-005 BOLTING - Manufactured in accordance with NORSOK M650 / NORSOK M630

HEX NUTS WITH TOMMY BAR HOLES - For Hydraulic Bolt Tensioner applications

BOLTS / SCREWS / NUTS / WASHERS - DIN 933 / ISO4017 / DIN 931 / ISO4014 / DIN 558 / ISO4018 / DIN-EN14339 / DIN 912 / ISO 4762 / DIN 934 / ISO 4032 / DIN 125 / ISO 7089

SIZES & RATING

1/4in to 4in – all lengths

DESIGN CODES

ASME B16.5

Pipe Flanges and Flanged Fittings

ASME VIII Div.2

Rules for Construction of Pressure Vessels

API 6A

Specification for Subsea Wellhead and Tree Equipment

API 20E

Alloy and Carbon Steel Bolting

API 20F

Corrosion Resistant Bolting

NORSOK L-005

Compact Flanged Connections

MATERIALS

ASTM A193/A193M

Grades: B7 / B7M / B8 / B8M / B16

ASTM A320/A320M

Grades: L7 / L7M / B8 / B8M

DIN 931/DIN 933

Grades: 4.6 / 4.8 / 5.6 / 5.8 / 8.8 / 10.9 / 12.9

COATING

Zinc Plated / Hot dip Galvanized / PTFE / Xylan® /

Zintek® / Delta Protekt® / Fluoropolymer coated

*Other grades are available under request

THANK YOU !

MERCI !

OBRIGADO !

GRAZIE !

Contact Us



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Email

contact@wbr-energies.com



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