



Exploration & Production

GENERAL SPECIFICATION

PIPELINES - RISERS

GS PLR 000

General Specification catalogue

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1. Scope

The present General Specification provides the lists of:

- the PIPELINES - RISERS General Specifications
- the other General Specifications which could be of relevance for the Pipeline Systems, when the following issues shall be addressed:
 - the interfaced facilities
 - the environment (soil, oceano-meteo)
 - the commissioning and operation
 - the safety and environment requirements

It is outlined that these lists are subjected to modifications in time.

2. PIPELINES - RISERS General Specifications

2.1 Numbering principle

Pipelines - Risers (PLR) discipline "General Specifications" are identified as follows :

GS PLR XXX : (XXX = 3 digits)

These GS are split in 4 main technical topics (plus one related to generalities).

Each topic is identified by the first of the three digits, as follows:

- GS PLR 0XX : Generalities
- GS PLR 1XX : Design
- GS PLR 2XX : Materials
- GS PLR 4XX : Construction
- GS PLR 5XX : Testing and Pre-commissioning

2.2 Generalities

GS PLR 000 General Specification catalogue

GS PLR 001 Documentation requirements

GS PLR 002 Organisation of the design work

2.3 Design

GS PLR 100 Submarine pipeline systems

GS PLR 101 Design of submarine pipelines as per DNV 1981

GS PLR 102 Design of submarine pipelines as per API RP 1111 and ANSI B 31.4/31.8

GS PLR 103 Design of submarine pipelines as per DNV OS F101

- GS PLR 104 Onshore pipeline systems
- GS PLR 105 Design of submarine pipelines as per ISO 13623
- GS PLR 106 Design of onshore pipelines as per ISO 13623
- GS PLR 107 Design and construction of pipelines in swamp and marsh areas
- GS PLR 109 Design, fabrication and testing of submarine unbonded flexible pipes and risers
- GS PLR 111 Submarine bundles
- GS PLR 151 Design of steel catenary riser systems

2.4 Materials

- GS PLR 201 Fabrication of seamless pipes for pipelines (sweet and mild sour service)
- GS PLR 201 Fabrication of seamless pipes for pipelines (sweet and mild sour service)
- GS PLR 202 Fabrication of longitudinally submerged arc welded pipes for pipelines (sweet and mild sour service)
- GS PLR 211 Fabrication of seamless pipes for pipelines (intermediate and severe sour service)
- GS PLR 212 Fabrication of longitudinally submerged arc welded pipes for pipelines (intermediate and severe sour service)
- GS PLR 221 Fabrication of hot bends for pipelines (sweet and mild sour service)
- GS PLR 222 Carbon steel flanges for pipelines (sweet and mild sour service)
- GS PLR 223 Carbon steel tees for pipelines (sweet and mild sour service)
- GS PLR 231 Induction bends for pipelines (intermediate and severe sour service)
- GS PLR 232 Carbon steel flanges and branch outlet fittings for pipelines (intermediate and severe sour service)
- GS PLR 233 Carbon steel tees for pipelines (intermediate and severe sour service)

2.5 Construction

- GS PLR 401 Installation of submarine pipelines
- GS PLR 403 Installation of onshore pipelines
- GS PLR 404 Installation of steel pipeline by horizontal directional drilling
- GS PLR 405 Design and installation of hot tapplings on subsea gas pipelines
- GS PLR 406 Packaging and Transportation of Line Pipes
- GS PLR 407 Load Out of Submarine Cables, Umbilicals and Flexible Pipes
- GS PLR 408 Transportation of submarine cables, umbilicals and flexible pipes
- GS PLR 409 Installation of submarine cables, umbilicals and flexible pipes
- GS PLR 410 Concrete coating for submarine pipelines



- GS PLR 420 Site welding of carbon steel pipelines to API 1104 (sweet and mild sour service)
- GS PLR 421 Site welding of carbon steel pipelines to API 1104 (intermediate and severe sour service)
- GS PLR 430 Automated Ultrasonic Examination (AUT) of pipeline girth welds

2.6 Testing and precommissioning

- GS PLR 501 Hydrostatic testing of submarine pipelines
- GS PLR 502 Precommissioning of submarine gas pipelines

3. Interfaced General Specifications

3.1 Civil Works

- GS CIV 101 General earthworks
- GS CIV 102 Dredging filling-up
- GS CIV 103 Fences
- GS CIV 201 Design and construction of roads and stabilized areas
- GS CIV 202 Drainage and underground networks
- GS CIV 300 Reinforced and prestressed concrete
- GS CIV 301 Design of reinforced and prestressed concrete
- GS CIV 401 Minimum requirements for building design and construction
- GS CIV 403 Temporary construction camps and associated facilities (onshore)
- GS CIV 500 Special foundations

3.2 Corrosion

- GS COR 102 Design of cathodic protection of sea line by sacrificial anodes
- GS COR 110 Design of external cathodic protection of buried pipelines
- GS COR 163 Application of chemical treatments for corrosion control
- GS COR 170 Materials for Sour Service (Upstream Applications) Specification for design
- GS COR 201 Supply of sacrificial anodes
- GS COR 210 Insulating joints
- GS COR 220 Three layer polyethylene external coating for pipelines
- GS COR 221 Three layer polypropylene external coating for pipelines
- GS COR 223 Hot Enamel pipe coating

- GS COR 226 Materials for thermal insulation of pipeline, piping and subsea components
- GS COR 230 External laminated glass fibre/resin based coating for risers of sea-line
- GS COR 231 External Elastomer Based Coating for Risers of Sea Line
- GS COR 250 Friction-reduction internal coatings for pipelines transporting non-corrosive gases
- GS COR 353 Design and application of passive fire protection coatings
- GS COR 401 Installation of anodes on submerged pipelines
- GS COR 420 External field joint coatings of pipelines
- GS COR 502 Control by electrical measurements of cathodic protection of submerged pipelines
- GS COR 560 Physical and chemical treatment of hydrostatic test water

3.3 Electrical

- GS ELE 161 Electrical cables
- DS ELE 161 High voltage electrical cable
- DS ELE 162 LV electrical cables
- GS ELE 765 Subsea cables
- DS ELE 765 Subsea cable

3.4 Geophysical - Geotechnical - Surveys - Metocean

- GS GEO 202 Geophysical survey for offshore pipeline installation
- GS GEO 203 Geophysical survey for offshore pipeline inspection
- GS GEO 204 Geophysical debris survey
- GS GEO 301 Off shore surface positioning works
- GS GEO 302 Subsea positioning works
- GS GEO 304 RTK positioning for bathymetric and geophysical surveys
- GS GEO 305 Aerial photography survey
- GS GEO 306 Geodetic survey for aerotriangulation MAP processing
- GS GEO 501 Metocean survey
- GS GEO 502 Meteorological survey of land location
- GS GEO 503 Rapid evaluation of metocean conditions for basic studies
- GS GEO 504 Comprehensive evaluation of metocean conditions for offshore projects
- GS GEO 701 Geotechnical data and foundation design considerations for subsea production systems and pipelines

3.5 Instrumentation

- GS INS 101 Instrumentation engineering, supply and construction general requirements
- GS INS 102 Instrumentation identification
- GS INS 172 Safety Shut-Down Valve – standard function - SDV
- GS INS 173 Emergency Shut-Down Valve – standard function - ESDV
- GS INS 174 Blow-Down Valve – standard function - BDV

3.6 Piping - Vessels - Valves

- GS PVV 000 General Specification catalogue
- GS PVV 211 Design and fabrication of pressure vessels according to ASME VIII
- GS PVV 212 Design and fabrication of pressure vessels according to PD 5500

3.7 Subsea Production Systems

- GS SPS 001 Design philosophy and requirements for Subsea Stations

3.8 Structures

- GS STR 100 Fixed offshore steel platforms - General
- GS STR 402 Anchorage for a support vessel on an offshore site
- GS STR 403 Acceptable criteria of a support vessel for offshore works
- GS STR 451 Design and operation of subsea production systems. General requirements and recommendations
- GS STR 455 Subsea production systems integration principles
- GS STR 461 Diving specification
- GS STR 481 Design and operation of remotely operated vehicle (ROV) interfaces with subsea production systems
- GS STR 485 Remote operated vehicle (ROV)
- GS STR 486 Remotely operated tool (ROT) intervention systems
- GS STR 611 Determination of the location of an offshore terminal
- GS STR 631 CALM buoy terminals in shallow and mid water depth
- GS STR 651 General principles for a F(P)SO design
- GS STR 901 Design rules and construction standards for ancillary structures of offshore installations



3.9 Precommissioning - Commissioning

GS EXP 101 Precommissioning & Commissioning Guidelines

GS EXP 103 Precommissioning & Commissioning Technical Preparation

GS EXP 105 Precommissioning Execution

3.10 Safety

GS SAF 021 Lay-out

GS SAF 216 Area classification