

GENERAL SPECIFICATION

Drilling & Wells

GS EP FP 330

Specification for new seamless OCTG carbon & low alloy material Manufacturing

06	12/2019	General revision – Covers all topics raised during Maersk Oil Gap Analysis
05	04/2017	Addition of SSC qualification tests
04	01/2015	Organization change – January 2015
03	11/2013	Full revision and name change
02	01/2012	Revision of the referential following E&P reorganization – March 2011
01	09/2009	Update of reference documents
00	10/2006	Cancellation of CT 78-4-01
Rev.	Date	Purpose of the revision

Owning entity: DSO/FP	Managing entity: DSO/FP
Other Approving entity(ies):	

General Specification		GS EP FP 330
Specification for new seamless OCTG carbon & low allow material Manufacturing		
Rev.: 06	Effective date: 12/2019	Page: 2 of 26

Contents

1. Scope	4
2. Reference documents	4
3. Application.....	5
3.1 Waiver / Derogation	5
4. Glossary	5
5. Purchase Requirements	6
5.1 Requirements to be specified on Purchase Order / Enquiry	6
5.2 Vendor Acknowledgement of the Purchase Order.....	7
6. Quality Management Requirements	8
6.1 Quality Assurance	8
6.2 Quality Control	10
6.3 Third-Party Inspection	11
7. Contract Management.....	12
7.1 Project Contract Management Documentation	12
7.2 Purchase order management.....	12
8. Design	12
8.1 Design Requirements.....	12
8.2 Design Review Documentation	13
8.3 Engineering Alert	13
9. Manufacturing	13
9.1 Manufacturing Scheduling / Planning	13
9.2 Pre-Production Meeting	14
9.3 Material	14
9.4 Supplier receiving inspection for sub contracted equipment or process	17
9.5 Special Processes	17
9.6 Non-Destructive Examination	18
9.7 Hydrostatic test	19
9.8 Traceability	20

General Specification		GS EP FP 330
Specification for new seamless OCTG carbon & low allow material Manufacturing		
Rev.: 06	Effective date: 12/2019	Page: 3 of 26

9.9	Drift Testing	20
9.10	Surface treatment	21
9.11	Connections make-up	22
9.12	Thread protection	22
9.13	Pipe Coating	23
9.14	Marking	23
9.15	Packaging	24
9.16	Certification Requirements	24
10.	Connection Qualification Requirements	24
11.	Supplementary Requirements	25
11.1	Wall Thickness Segregation	25
11.2	Bore slug detection	25
11.3	Detailed information on individual pipes	25
11.4	Flaw depth limitation	26
11.5	Tracking system	26
11.6	Wall thickness tolerance	26
11.7	Outside diameter (OD) tolerance	26

General Specification		GS EP FP 330
Specification for new seamless OCTG carbon & low allow material Manufacturing		
Rev.: 06	Effective date: 12/2019	Page: 4 of 26

1. Scope

This document defines the requirements for Quality Assurance and Quality Control with respect to design, material, manufacturing, testing and final supply of steel pipes (casing, tubing, plain-end casing liners and pup joints), couplings, coupling stock and accessories for the use within Company.

This General Specification is applicable to [API SPEC 5CT](#) material grades and other agreed proprietary grades.

2. Reference documents

The reference documents listed below form an integral part of this General Specification.

External Documents

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the effective date of this document.

Reference	Title
API SPEC 5CT	Specification for Casing and Tubing
API SPEC Q1	Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas
API STD 20D	Qualification of Nondestructive Examination Services for Equipment Used in the Petroleum and Natural Gas Industry
ASNT SNT-TC-1A	Recommended Practice For Personal Qualification And Certification In Nondestructive Testing
EN 10204	Metallic products - Types of inspection documents
ISO 8501-1	Preparation of steel substrates before application of paints and related products - Visual assessment of surface cleanliness - Part 1: rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings
ISO 9712	Non-destructive testing - Qualification and certification of NDT personnel
ISO 10005	Quality management — Guidelines for quality plans
ISO 13678	Petroleum and natural gas industries - Evaluation and testing of thread compounds for use with casing, tubing, line pipe and drill stem elements
ISO 14001	Environmental management systems - Requirements with guidance for use
NACE MR0175/ISO 15156	Petroleum and Natural Gas Industries - Materials for use in H ₂ S-containing environment in oil and gas production

General Specification		GS EP FP 330
Specification for new seamless OCTG carbon & low allow material Manufacturing		
Rev.: 06	Effective date: 12/2019	Page: 5 of 26

Reference	Title
NACE TM 0177	Laboratory Testing of Metals for Resistance to Sulfide Stress Cracking and Stress Corrosion Cracking in H2S Environment

Total General Specifications

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published in the applicable yearly collection.

Reference	Title
GS EP COR 170	Materials for upstream sour service application. Specification for selection and design
GS EP FP 336	Conductor, riser, casing and tubing connection qualification requirements

3. Application

Any OCTG supplied to Company under this specification shall be manufactured by a Company-approved Manufacturer. Approval is granted by the QAQC entity within D&W in HQ.

Coupling material issued from a forging process is not suitable for use by the Company.

3.1 Waiver / Derogation

Any significant deviation from the requirements stipulated in this document shall be approved by the relevant HQ DSO Product Line, upon recommendation of the QAQC entity within D&W in HQ following the submission by the D&W entity of the subsidiary of a formal derogation request.

Should the equipment delivered by the Manufacturer not fulfill the requirements of this General Specification, and should the Manufacturer not be granted the derogation by the purchaser, then the Third-Party inspection representative will not accept the materials.

4. Glossary

AUT	Automated Ultrasonic Testing
CFT	Call For Tender
D&W	Drilling and Wells
FEA	Finite Element Analysis
GRAL	General Rolling Action List: Continuous improvement process tracking system
IQ-ALL	Integrity & Quality for ALL: Inspection and Vendor Management web application
NDE	Non-Destructive Examination
OCTG	Oil Country Tubular Goods
PO	Purchase Order
QAQC	Quality Assurance Quality Control

General Specification		GS EP FP 330
Specification for new seamless OCTG carbon & low allow material Manufacturing		
Rev.: 06	Effective date: 12/2019	Page: 6 of 26

QCP	Quality Control Plan (also known as QP or ITP in some organizations)
QMS	Quality Management System
T&C	Threaded and Coupled
TPI	Third-Party Inspection

5. Purchase Requirements

The Purchaser should consult the relevant Company standard before selecting the manufacturer.

The Manufacturer of the OCTG seamless casing and tubing equipment shall be licensed to [API SPEC 5CT](#) and [API SPEC Q1](#).

When enquiring or placing orders for equipment to be manufactured in accordance with this Company specification, the Purchaser shall specify the following details as described in Section 5.1.

5.1 Requirements to be specified on Purchase Order / Enquiry

The following information, as a minimum, shall be described in the Purchase Order:

- I. Standard [API SPEC 5CT](#) or agreed proprietary specification, or this document or any Company approved quality plan with the given supplier.
- II. Seamless
- III. Product Specification Level (PSL)
- IV. Quantity
- V. Specified outside diameter
- VI. Specified mass (weight) or wall thickness
- VII. Grade and type where applicable
- VIII. Type of pipe or couplings

Casing:

- Threaded or plain-end
- Threaded & coupled or integral joint
- Type of connection
- With or without couplings
- Special clearance couplings

Liners:

- Non-upset, external-upset or integral joint
- Threaded or plain-end
- Type of connection
- With or without couplings

General Specification		GS EP FP 330
Specification for new seamless OCTG carbon & low allow material Manufacturing		
Rev.: 06	Effective date: 12/2019	Page: 7 of 26

- Special clearance couplings

Tubing:

- Non-upset, external-upset or integral joint
- Threaded, plain-end, or other connection
- With or without couplings
- Special bevel couplings
- Special clearance couplings

Couplings:

- Type of connection
- Special bevel
- Special clearance

- IX. Range length
- X. Drift (special if required)
- XI. Marking requirements
- XII. Thread and storage compound
- XIII. Thread protectors
- XIV. Coatings – (internal / external)
- XV. Packaging instructions
- XVI. Quality assurance requirements
- XVII. Delivery date and shipping instructions
- XVIII. Certification requirements
- XIX. Any already granted deviation from this General Specification requirements
- XX. Supplementary requirements if any:
 - a. For supplementary requirements described in Section 11.3, specify characteristic data to be provided (specify which characteristics among points 1 through 10) and provide the number “n” of pipes for which the data is to be provided.
 - b. For supplementary requirements described in Section 11.4, specify flaw depth limit.

A copy of the Purchase Order shall be provided to Company QAQC entity in D&W at HQs and / or to Company affiliate QAQC entity (if any) for technical and quality review and TPI allocation.

5.2 Vendor Acknowledgement of the Purchase Order

Prior to the acknowledgement of the Purchase Order, the Vendor shall:

- Ensure that the requirements from above Chapter 5.1 are fulfilled,

General Specification		GS EP FP 330
Specification for new seamless OCTG carbon & low allow material Manufacturing		
Rev.: 06	Effective date: 12/2019	Page: 8 of 26

- Confirm that the manufacturing plant is qualified by Company for the ordered equipment.

If either of the above conditions cannot be fulfilled, the Vendor shall not acknowledge the Purchase Order and shall instead call for an amendment to the Company Purchaser.

Once the Purchase Order is acknowledged, the Vendor shall ensure that it is informed of the Third-Party Inspection Agency in charge of the inspection. If not, the Vendor shall contact the Company QAQC entity in D&W in HQ and / or Company affiliate QAQC entity (if any), for clarification.

6. Quality Management Requirements

6.1 Quality Assurance

The selected contractor / supplier / manufacturer and / or its subcontractor(s) / sub-Supplier(s) shall be:

- able to demonstrate conformity and be auditable to [API SPEC Q1](#), [API STD 20D](#) and [ISO 14001](#).
- able to provide proof of license / certification to [API SPEC 5CT](#).
- auditable to ISO / API standards related to materials to be delivered.

The requirements from this General Specification shall be followed as if it was an integral part of the PO. The PO shall specify the obligation to comply with this General Specification requirements.

6.1.1 Supplier qualification

The selected contractor / supplier / manufacturer, as well as the manufacturing plant, shall be qualified by Company for the related equipment. If the manufacturing facility to which the Purchase Order is awarded is not qualified by Company, a qualification process has to be launched by Company's QAQC entity in D&W in HQ. Manufacturing shall not start prior positive completion of the above qualification process or without specific mitigations duly approved by Company's QAQC in HQ. The Company QAQC entity in D&W in HQ and / or Company affiliate QAQC department (if any) reserves the right to conduct audits of suppliers in order to ensure the quality of the activity performed.

Should the manufacturing plant be deemed not suitable for Company production after the qualification process, the selected contractor / supplier / manufacturer shall either:

1. Close all corrective actions stemming from qualification audits and / or technical assessments in a timely manner before manufacturing commences in order to guarantee equipment integrity and adequate delivery time, OR
2. Propose an already Company qualified alternative manufacturing route to insure delivery of equipment.