



Document No.	GIS 43-313
Applicability	Group
Date	30 May 2007

GIS 43-313

Seamless Linepipe in Grades up to X80 – Supplement to API 5L, 43rd Edition

Group Instruction for Supply

**BP GROUP
ENGINEERING TECHNICAL PRACTICES**

Foreword

This revision of Engineering Technical Practice (ETP) BP GIS 43-313 incorporates:

Recognition of GIS 43-317 for application to line pipe for bends.

Inclusion of BP references in Normative references clause.

Deletion of CE (IIW) limits from Table 2C and clause P.6.1.1.

Addition of drop weight tear tests for gas service in clause 6.2.5.3.

Decrease ID tolerance in Table 8.

Addition of pipe loading and transportation requirements in clause 13.

Other minor corrections.

This Group Instruction for Supply (GIS) is newly created and 'not based on heritage documents from the merged BP companies. This GIS is not to be used as a standalone document. It is to be used in accordance with GP 43-31 and PR 43. BP Group Standards (gHSEr, Integrity Management Functional Standard, etc.) dictate requirements that are to be satisfied in addition to these ETP documents. This GIS is to be used in conjunction with DS 43-313, Data Sheet for Line Pipe (Seamless), detailing the design conditions and mechanical property requirements.

The structure of the GIS has been arranged such that the base GIS (without Appendices P, Q, R and S) is applicable to linepipe for the land based transmission of sweet crude oil and condensate with design temperatures between (14°F and 212°F (–10°C and 100°C)). For specific applications in which the design temperatures are outside this range, additional impact and tensile testing requirements may be defined.

If service conditions other than those outlined above apply, the base GIS is to be extended or modified by the application of the appropriate appendix or appendices. Appendices contained herein are available for:

Appendix P Sour service conditions.

Appendix Q Submarine pipelines.

Appendix R High pressure gas transmission.

Appendix S Steel Catenary Risers (SCRs).

The fundamental requirements of BP are to insure that the linepipe has good weldability and close dimensional tolerances at welding ends to facilitate possible mechanised welding during pipeline installation.

Copyright © 2007, BP Group. All rights reserved. The information contained in this document is subject to the terms and conditions of the agreement or contract under which the document was supplied to the recipient's organization. None of the information contained in this document shall be disclosed outside the recipient's own organization without the prior written permission of BP Group, unless the terms of such agreement or contract expressly allow.



Table of Contents

	Page
Foreword	2
Introduction	6
1 Scope	7
1.1 Purpose and coverage	7
1.2 Product specification level (PSL)	7
1.6 Quality assurance	7
1.7 Symbols and abbreviations	8
2 References	8
3 Definitions	8
3.9 Manufacturer	8
3.11 Pipe mill	8
3.20 Approve	9
3.21 BP	9
3.22 BP Technical Representative	9
3.23 Quality Assurance	9
3.24 Quality Manual	9
3.25 Quality System	9
3.26 Steelmaker	9
3.27 Supplier	9
3.28 Tenderer	9
3.29 Will	9
5 Process of manufacture and material	10
5.1 Process of manufacture	10
5.2 Cold expansion	10
5.3 Material	10
6 Material requirements	10
6.1 Chemical properties	10
6.2 Mechanical properties	12
7 Dimensions, weights, lengths, defects, and end finishes	13
7.2 Diameter	13
7.3 Wall thickness	14
7.5 Length	14
7.6 Straightness	14
7.7 Jointers	14
7.8 Workmanship and defects	14
7.9 Pipe ends	15
9 Inspection and testing	15
9.2 Testing of chemical composition	15



9.3	Testing of mechanical properties	16
9.4	Hydrostatic tests	17
9.6	Surface inspection	17
9.8	Nondestructive inspection	17
9.9	Disposition of pipe containing defects	20
9.12	Retests	20
10.	Marking	21
10.1	General	21
10.2	Location of markings	21
10.3	Sequence of markings	21
10.7	Die stamping	22
11.	Coating and protection	22
11.1	Coatings	22
12	Documents	22
12.1	Certification	22
13	Pipe loading and transportation	23
Appendix A	Specification for welded jointers (Normative)	24
Appendix F	Supplementary requirements (Normative)	25
SR3	Color identification	25
SR5, 5A, 5B	Fracture toughness testing (Charpy V-notch) for pipe of size 4 ½ or larger ...	25
SR6	Drop-weight tear testing on pipe sizes 20 or larger, grade X52 or higher	25
SR15	Test certificates and traceability for linepipe	25
SR18	Carbon equivalent	26
Appendix H	Purchaser inspection (Normative)	27
H.2	Plant access	27
H.4	Rejection	27
Appendix N	Manufacturing procedure specification checklist (Normative)	28
Appendix O	Scope of manufacturing procedure qualification testing (Normative)	30
Appendix P	Linepipe for sour service applications (Normative)	31
P.1	Scope	31
P.5	Process of manufacture and material	31
P.5.3	Material	31
P.6	Material requirements	31
P.6.1	Chemical properties	31
P.6.2	Mechanical properties	31
P.6.3	Corrosion testing	31
P.9	Inspection and testing	32
P.9.8	Nondestructive inspection	32
P.Appendix O	Scope of manufacturing procedure qualification testing (Normative)	32
Appendix Q	Linepipe for submarine applications (Normative)	33
Q.1	Scope	33

