

DIN EN 13480-2:2012-11 (E)

Metallic industrial piping - Part 2: Materials

Contents		Page
Foreword		3
1	Scope	5
2	Normative references	5
3	Terms and definitions, symbols and units	8
3.1	Terms and definitions	8
3.2	Symbols and units	9
4	Requirements for materials to be used for pressure containing parts in industrial piping .	10
4.1	General	10
4.2	Special provisions	12
4.3	Technical delivery conditions	14
4.4	Marking	15
5	Requirements for materials to be used for non-pressure parts	15
Annex A (normative) Grouping system for steels for pressure equipment		16
Annex B (normative) Requirements for prevention of brittle fracture at low temperatures		18
B.1	General	18
B.2	Material selection and impact energy requirements	19
B.2.1	Method 1 - Code of practice	19
B.2.2	Method 2	28
B.2.3	Method 3 -- Fracture mechanics analysis	40
B.3	General test requirements	41
B.3.1	General	41
B.3.2	Sub-sized specimens	42
B.4	Welds	43
B.4.1	General	43
B.4.2	Welding procedure qualification	43
B.4.3	Production test plates	43
B.5	Materials for use at elevated temperatures	43
B.5.1	General	43
B.5.2	Materials	43
B.5.3	Welding procedure qualification and production test plates	44
B.5.4	Start up and shut down procedure	44
B.5.5	Pressure test	44
Annex C (normative) Provisional technical delivery conditions for clad products for pressure purposes		52
C.1	Introduction	52
C.2	Requirements for the base material	52
C.3	Requirements for the cladding material	52
C.4	Qualification of the cladding procedure	53
C.5	Production tests	54
Annex D (informative) European steels for pressure purposes		56

D.1	European Standards for steels and steel components for pressure purposes	56
D.2	European standardised steels grouped according to product forms	57
Y.1	Differences between EN 13480:2002 and EN 13480:2012	80
Annex ZA (informative)	Relationship between this European Standard and the Essential Requirements of EU Pressure Equipment Directive (97/23/EC)	81
Bibliography	82