

DIN 21057-12:2017-04 (E)

Pipe classes for process plants - Part 12: Technical delivery conditions for pipe components of non alloyed and alloyed steel with specified properties at elevated temperatures of material group 1.2 and 5.1

Contents	Page
Foreword	4
1 Scope	5
2 Normative references	6
3 Symbols and abbreviations	8
4 General information	8
4.1 Prevention of brittle fracture — Minimum allowable temperature TS_{min}	8
5 Inspection documents	8
5.1 General	8
5.2 Additional requirements for distributors	8
6 Supplementary provisions	8
6.1 Qualification of welding procedures, welders and NDT personnel	8
6.2 Filler materials	8
7 Technical delivery conditions for pipes	9
8 Technical delivery conditions for pipe fittings	10
8.1 General requirements for pipe fittings	10
8.2 Pipe elbows	10
8.3 Reducers	11
8.4 Tees	11
8.5 Caps	12
9 Technical delivery conditions for reinforced nozzles	13
10 Technical delivery conditions for flanges	14
10.1 General requirements	14
10.2 Welding neck flanges	14
10.3 Blind flanges	15
11 Technical delivery conditions for fasteners	15
11.1 Threaded stud bolts	15
11.2 Double-end studs	16
11.3 Hexagon nuts for threaded stud bolts	16
11.4 NF-type hexagon nuts for double-end studs	17
11.5 Washers	17
Annex A (normative) Dimensions and allowable pressures	18
A.1 Dimensional specifications	18
A.2 Allowable pressures at elevated temperatures	18
A.3 Pipe	18
A.4 Fittings	20
A.4.1 Pipe elbows	20
A.4.2 Reducers	23
A.4.3 Tees	25
A.4.4 Caps	32

Annex B (informative) Pipe classes PN 25 to PN 100, material 16Mo3 (CC)	34
B.1 General	34
B.1.1 Fluid assignment	34
B.2 Additional requirements	34
B.3 Nominal diameter ranges	34
B.4 Key to branch tables	34
B.5 Sample pipe classes	35
B.5.1 Pipe class 25CC01B1	35
B.5.2 Pipe class 40CC01B1	40
B.5.3 Pipe class 63CC01B1	45
B.5.4 Pipe class 100CC01B1	50
Annex C (informative) Pipe classes PN 25 to PN 100, material 13CrMo4-5 (CD)	55
C.1 General	55
C.1.1 Fluid assignment	55
C.2 Additional requirements	55
C.3 Nominal diameter ranges	55
C.4 Key to branch tables	55
C.5 Sample pipe classes	56
C.5.1 Pipe class 25CD01B1	56
C.5.2 Pipe class 40CD01B1	61
C.5.3 Pipe class 63CD01B1	66
C.5.4 Pipe class 100CD01B1	71