

DIN EN 12583:2014-07 (E)

Gas infrastructure - Compressor stations - Functional requirements

Contents	Page
Foreword	4
1 Scope	5
2 Normative references	6
3 Terms and definitions	7
4 Safety	13
5 Asset management and quality assurance	14
6 Environmental constraints	14
7 Design, construction and testing	14
7.1 General requirements for design	14
7.1.1 General	14
7.1.2 Safety and the environment	15
7.2 Location and station lay-out	15
7.2.1 Location	15
7.2.2 Station lay-out	16
7.3 Pipework	17
7.3.1 Design considerations	17
7.3.2 Valves	18
7.3.3 Gas cleaning	18
7.3.4 Gas coolers	18
7.3.5 Pressure reduction stations	18
7.3.6 Recycle line	18
7.3.7 Vent systems	18
7.3.8 Station isolation system	19
7.3.9 Corrosion protection	19
7.3.10 Services pipework	19
7.3.11 Standard colour code	19
7.4 Compressor unit	19
7.4.1 General	19
7.4.2 Driver	20
7.4.3 Compressor	21
7.4.4 Unit Control System (UCS)	22
7.4.5 Unit auxiliary equipment	25
7.4.6 Foundations	29
7.4.7 Compressor Unit Housing	29
7.5 Station Control and Automation	30
7.5.1 Station Control System (SCS)	30
7.5.2 Station emergency shutdown systems	30
7.5.3 Gas detection system	31
7.5.4 Fire protection system	31
7.5.5 Station valve control and supervision	31
7.5.6 Over-pressure protection system	31
7.5.7 Over-temperature protection system	32
7.6 Electrical installation and power supply	32
7.6.1 General	32
7.6.2 Electrical power supply	32

7.6.3	Electrical installation	32
7.7	General requirements for construction	32
7.7.1	General	32
7.7.2	Execution of work	33
7.7.3	Station pipework construction	33
7.8	Testing and acceptance	33
7.8.1	General requirements	33
7.8.2	Pre-commissioning	33
7.8.3	Commissioning	33
7.8.4	As built records of the station	34
7.8.5	Handover	34
7.8.6	Responsibility for safety	34
 8	 Operation	 34
8.1	Introduction and basic requirements	34
8.2	Operating organization	35
8.3	Instruction procedures	35
8.3.1	General	35
8.3.2	Instructions for normal situations	35
8.3.3	Instructions for failure or emergency situations	36
8.3.4	Procedures for specific planned situations	36
8.4	Management of operating procedures	36
8.5	Training of personnel	37
8.6	Safety precautions	37
8.6.1	Prevention of gas explosion and fire	37
8.6.2	Storage of combustible materials	37
8.6.3	Venting	37
 9	 Maintenance	 38
9.1	Introduction and basic requirements	38
9.2	Maintenance organization	38
9.3	Maintenance procedures	38
9.3.1	General	38
9.3.2	Gas compressor units	39
9.3.3	Pipework	39
9.4	Management of the maintenance procedures	39
9.5	Training of personnel	39
9.6	Maintenance tools and equipment	39
9.7	Safety	40
9.7.1	General	40
9.7.2	Safety precautions	40
9.7.3	Safety devices	40
 10	 Decommissioning and disposal	 41
10.1	Decommissioning	41
10.2	Disposal	41
 Annex A (informative)	Boundary of a gas compressor station	42
 Annex B (informative)	Parts of a gas compressor unit	44
 Annex C (informative)	Boundary Gas compressor unit -- Driver package	45
 Annex D (informative)	Boundary Gas compressor unit -- Gas compressor	46
 Annex E (informative)	Boundary Gas compressor unit -- Unit control system	47
 Annex F (informative)	Boundary Gas compressor unit -- Auxiliary equipment	48
 Annex G (informative)	Significant technical changes between this European Standard and the previous edition	49
 Bibliography	51	