

# DIN EN 16750:2020-11 (E)

## Fixed firefighting systems - Oxygen reduction systems - Design, installation, planning and maintenance (includes Amendment :2020)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
Introduction .....		5
1	Scope .....	6
2	Normative references .....	7
3	Terms and definitions .....	7
4	System requirements .....	9
4.1	General .....	9
4.2	Personnel safety .....	9
4.3	Effectiveness and application .....	10
4.4	Alarm organization and emergency plan .....	10
5	Design .....	10
5.1	Qualification of the designer .....	10
5.2	Fire protection concept .....	10
5.3	Structural specifications for the protected area .....	11
5.4	Oxygen concentration .....	11
5.5	Oxygen reduction to prevent fire .....	12
5.6	Safety margins .....	12
5.7	Oxygen reduced air quantity .....	16
5.7.1	Continuous oxygen reduction .....	16
5.7.2	Emergency plan .....	16
5.7.3	Oxygen reduced air .....	16
5.7.4	Gaseous supply .....	17
5.7.5	Fault signals .....	17
5.8	Technical areas .....	18
5.8.1	Technical area for control panel .....	18
5.8.2	Technical area for reduced oxygen air generation .....	18
6	Distribution pipework .....	19
6.1	Pipework .....	19
6.2	Pipe supports .....	19
6.3	Components in the pipework .....	19
7	Monitoring the oxygen concentration .....	20
8	Alarms and notifications .....	21
9	Control equipment .....	22
9.1	Function .....	22
9.2	Requirements .....	22
9.3	Electrical power supply .....	22
9.4	Electrical installations .....	22
9.5	Data recording .....	22
10	System operation .....	23
10.1	Instruction and training of personnel .....	23

10.2	Inspections .....	23
10.3	Operations log .....	23
10.4	Further obligations .....	23
11	Maintenance .....	24
12	Documentation .....	24
13	Installation .....	25
13.1	Qualification of the installer .....	25
13.2	General specifications, installation .....	25
Annex A(normative) Ignition thresholds for oxygen reduction using nitrogen in fire prevention .....		26
A.1	Ignition thresholds .....	26
A.2	Tests to ascertain ignition thresholds of unfamiliar materials .....	27
A.2.1	Cup burner tests .....	27
A.2.2	Ignition threshold tests .....	28
A.2.2.1	General .....	28
A.2.2.2	Test criteria .....	29
A.2.2.3	Test documentation .....	29
Annex B(informative) Information for health and safety - Working in oxygen-reduction atmospheres for reasons of fire prevention .....		31
B.1	General .....	31
B.2	Principles of occupational health .....	31
B.3	Risk classes .....	31
B.4	Basic requirements, planning and installation .....	32
B.5	Protective measures for all areas with oxygen-reduced atmospheres .....	33
B.5.1	Structural and technical measures .....	33
B.5.2	Organizational measures .....	34
B.6	Risk classes and safety measures .....	35
Annex C(informative) Existing national regulations for access and working in areas with lower oxygen concentration .....		36
Bibliography .....		37