

DIN EN ISO 16903:2015-11 (E)

Petroleum and natural gas industries - Characteristics of LNG, influencing the design and material selection (ISO 16903:2015)

Contents		Page
European foreword		3
1 Scope		4
2 Normative references		4
3 Terms and definitions		4
4 Abbreviated terms		5
5 General characteristics of LNG		5
5.1 General		5
5.2 Properties of LNG		5
5.2.1 Composition		5
5.2.2 Density		5
5.2.3 Temperature		6
5.2.4 Viscosity		6
5.2.5 Examples of LNG		6
5.3 Physical properties		6
5.3.1 Physical properties of boil-off gas		6
5.3.2 Flash		7
5.3.3 Spillage of LNG		7
5.3.4 Expansion and dispersion of gas clouds		7
5.3.5 Ignition		8
5.3.6 Pool fires		8
5.3.7 Development and consequences of pressure waves		8
5.3.8 Containment		8
5.3.9 Rollover		8
5.3.10 RPT		9
5.3.11 BLEVE		9
6 Health and safety		9
6.1 General		9
6.2 Exposure to cold		10
6.2.1 Warning notice		10
6.2.2 Handling, cold contact burns		10
6.2.3 Frostbite		10
6.2.4 Effect of cold on the lungs		10
6.2.5 Hypothermia		10
6.2.6 Recommended protective clothing		10
6.3 Exposure to gas		10
6.3.1 Toxicity		10
6.3.2 Asphyxia		10
6.4 Fire precautions and protection		11
6.5 Colour		11
6.6 Odour		11
7 Materials of construction		11
7.1 Materials used in the LNG industry		11
7.1.1 General		11
7.1.2 Materials in direct contact		11

7.1.3	Materials not in direct contact under normal operation	12
7.1.4	Other information	12
7.2	Thermal stresses	13
	Bibliography	14