

ISO 18132-3:2011-08 (E)

Refrigerated hydrocarbon and non-petroleum based liquefied gaseous fuels - General requirements for automatic tank gauges - Part 3: Automatic tank gauges for liquefied petroleum and chemical gases on board marine carriers and floating storage

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Terms, definitions and abbreviated terms	1
2.1	Terms and definitions	1
2.2	Abbreviated terms	2
3	General safety precautions	3
3.1	Compliance with safety regulations, standards, and classification rules	3
3.2	Equipment precautions	3
4	Design requirements	4
4.1	General	4
4.2	Provisions for routine maintenance and verification	4
4.3	Provision against sudden malfunctions	4
4.4	Dynamic response	4
4.5	Minimum measurable level	4
4.6	Data filtering and averaging	4
4.7	Compensation for variation of cargo temperatures and/or composition	5
4.8	Sealing, security and unsealing	5
4.9	Redundancy	5
4.10	Data communication	5
5	Installation	6
5.1	General	6
5.2	Location of installation	6
5.3	Interference of ATGs in a cargo tank	6
6	Accuracy	6
6.1	General	6
6.2	Calibration reference	6
6.3	Accuracy requirement	6
6.4	Readout resolution	7
7	Recertification of ATGs	7
7.1	General	7
7.2	Method of periodic certification	7
7.3	Maximum permissible error	7
7.4	Frequency of subsequent calibration and recertification	7
8	ATG calibration records	7
Annex A (normative)	Calibration and verification of various ATGs in common use	8
Annex B (normative)	Calibration and verification of radar-type ATG	10

Annex C (normative) Calibration and verification of magnetic-type ATG	13
Annex D (normative) Calibration and verification of float-type ATG	16
Annex E (normative) Calibration and verification of hydrostatic-type ATG	19
Annex F (informative) Accuracy limitations of level measurement of LPG and chemical gases	23
Annex G (informative) Uncertainty associated with accuracy test of float-type ATG	24
Bibliography	25