

ISO 4266-5:2024-09 (E)

Petroleum and liquid petroleum products - Measurement of level and temperature in storage tanks by automatic methods - Part 5: Measurement of temperature in marine vessels

Contents		Page
Foreword		iv
1	Scope	1
2	Normative reference	1
3	Terms and definitions	1
4	Precautions	2
4.1	Safety precautions	2
4.2	Equipment precautions	2
4.3	General precautions	2
5	Accuracy	3
5.1	General	3
5.2	Intrinsic error of ATTs	3
5.3	Calibration prior to installation	3
5.3.1	General	3
5.3.2	ATT calibrated as a system	4
5.3.3	ATT calibrated by components	4
5.3.4	Multiple-point ATTs	4
5.3.5	Uncertainty of the reference	4
5.4	Error caused by installation and operating conditions	4
5.5	Overall accuracy	4
5.5.1	General	4
5.5.2	Use of ATT for fiscal/custody transfer purposes	5
6	Selection of ATTs	5
6.1	General	5
6.2	ATTs for fiscal/custody transfer purpose	5
7	Description of ATT equipment -- Electrical temperature elements	6
7.1	General	6
8	Installation of marine ATTs	6
8.1	General	6
8.2	Location of temperature-sensing element(s)	6
8.3	Location of manual (temperature) gauge hatch	6
8.4	Temperature measurement of inerted tanks	6
9	Calibration and on-board verification of marine ATTs	7
9.1	General	7
9.2	Calibration of single-point temperature element ATTs for fiscal/custody transfer purposes	7
9.2.1	Calibration prior to installation	7
9.2.2	Initial verification at shipyard or during sea trials	7
9.3	Calibration of multiple-point ATTs for fiscal/custody transfer purposes	8
9.3.1	Calibration prior to installation	8
9.3.2	Initial on-board verification at shipyard or during sea trials	8

9.4	Subsequent verification of ATTs	9
9.4.1	General	9
9.4.2	Frequency of subsequent verification	9
9.4.3	Record keeping	9
10	Data communication and receiving	10
Annex A (informative)	Accuracy limitations of tank-temperature measurements on board marine vessels	11
Bibliography	12