

ISO 22073-1:2024-11 (E)

Gas welding equipment - Part 1: Line pressure regulators and line pressure regulators with flow-metering devices for gas distribution pipelines up to 6 MPa (60 bar)

Contents		Page
Foreword		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Symbols and abbreviated terms	2
5	Design requirements	3
5.1	Materials	3
5.2	Design and construction	3
5.2.1	Oxygen pressure regulators	3
5.2.2	Acetylene pressure regulators	3
5.2.3	Connections	3
5.2.4	Filter	3
5.2.5	Pressure-adjusting device	4
5.2.6	Flow-control valve	4
5.2.7	Pressure gauges	4
5.2.8	Pressure relief valve	4
5.2.9	Leakage	4
5.2.10	Mechanical resistance	4
6	Operating characteristics	5
6.1	Operating-temperature range	5
6.2	Coefficient of pressure increase upon closure R (applicable for line pressure regulators without flow-metering devices)	5
6.3	Accuracy classification (applicable for line pressure regulators with flow-metering devices)	5
7	Marking	5
7.1	Line pressure regulators without flow-metering devices	5
7.2	Line pressure regulators with flow-metering devices	6
8	Instructions for use	6
9	Type-test procedure	6
9.1	General	6
9.2	Test samples and necessary documents	7
9.3	Test conditions	7
9.3.1	General characteristics of the test installation	7
9.3.2	Test gas	7
9.3.3	Accuracy of a flow-metering device	8
9.3.4	Pressure measurement	8
9.4	Units	8
9.4.1	Pressure	8
9.4.2	Flow	8
9.4.3	Temperature	8

9.5	Test for performance and operating characteristics of pressure regulators without flow-metering devices	8
9.5.1	General	8
9.5.2	Nominal discharge Q_n	9
9.5.3	Coefficient of pressure increase upon closure, R	9
9.6	Test for accuracy classification of pressure regulators with flow-metering devices	9
9.7	Tests for mechanical resistance of pressure regulators or pressure regulators with flow-metering devices	10
9.7.1	General	10
9.7.2	Test for mechanical resistance to internal pressure	10
9.7.3	Leakage tests	10
9.7.4	Oxygen pressure surge test	11
9.7.5	Acetylene decomposition test	12
9.8	Test for durability of markings	12
	Bibliography	13