

# ISO 7039:2024-07 (E)

## Metallic materials - Tensile testing - Method for evaluating the susceptibility of materials to the effects of high-pressure gas within hollow test pieces

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Symbols .....	2
5	Principle .....	2
6	Test piece .....	3
6.1	General .....	3
6.2	Shape and dimensions .....	3
6.3	Inner surface of hole .....	3
6.4	Number of test pieces .....	4
7	Measurement of original cross-sectional area .....	4
8	Marking the original gauge length .....	4
9	Test equipment .....	4
9.1	Principle .....	4
9.2	Testing machine .....	5
9.3	Extensometer .....	5
9.4	Test deviation .....	5
10	Test conditions .....	5
10.1	Test gas .....	5
10.2	Test temperature .....	6
10.3	Test pressure .....	6
10.4	Testing rate .....	6
11	Evaluation of the test results .....	6
11.1	Yield strength, tensile strength, percentage elongation after fracture with hollow test piece .....	6
11.2	Percentage reduction of area at leakage .....	7
11.3	Relative elongation after fracture with hollow test piece, $A_h(\text{rel})$ .....	7
11.4	Relative reduction of area at leakage with hollow test piece, $Z_h(\text{rel})$ .....	7
11.5	Relative 0,2 % proof strength with hollow test piece, $R_{p0,2 h}(\text{rel})$ .....	7
11.6	Relative tensile strength with hollow test piece, $R_{mh}(\text{rel})$ .....	8
12	Test report .....	8
Bibliography .....		9