

ISO 16810:2024-10 (E)

Non-destructive testing - Ultrasonic testing - General principles

Contents		Page
Foreword.....		iv
Introduction.....		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Qualification and certification of test personnel	2
5	Information required prior to testing	2
6	Principles of ultrasonic testing (UT)	2
6.1	General.....	2
6.2	Wave mode and direction of sound propagation.....	3
6.3	Through-transmission technique.....	3
6.4	Pulse-echo technique.....	3
7	Test equipment	3
7.1	Instrument.....	3
7.2	Probes.....	3
7.2.1	General.....	3
7.2.2	Probe selection.....	4
7.2.3	Frequency and dimensions of transducer.....	4
7.2.4	Dead zone.....	4
7.2.5	Damping.....	4
7.2.6	Focusing probes.....	4
7.3	Coupling media.....	5
7.4	Standard blocks.....	5
7.5	Reference blocks.....	5
7.6	Specific test blocks.....	6
8	Settings	6
8.1	General.....	6
8.2	Range.....	6
8.3	Sensitivity.....	7
8.4	Pulse repetition frequency.....	7
9	Preparation for testing	7
9.1	Surface preparation.....	7
9.2	Identification and datum points.....	7
9.3	Application of transfer correction.....	7
10	Testing	8
10.1	Coverage of testing.....	8
10.2	Overlapping.....	8
10.3	Scanning speed.....	8
10.4	Evaluation and recording levels.....	8
10.4.1	General.....	8
10.4.2	Pulse-echo technique.....	8
10.4.3	Through-transmission technique.....	8
11	Characterization of discontinuities	9
11.1	Pulse-echo technique.....	9
11.2	Through-transmission technique.....	9

12	Test procedure	9
13	Test report	10
	Bibliography	11