

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