

ISO 16810:2012-04 (E)

Non-destructive testing - Ultrasonic testing - General principles

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Qualification and certification of personnel	2
4	Information required prior to examination	2
5	Principles of ultrasonic examination	3
5.1	General	3
5.2	Vibration mode and direction of sound propagation	3
5.3	Transmission technique	3
5.4	Pulse echo technique	3
6	Equipment	4
6.1	Ultrasonic instrument	4
6.2	Ultrasonic probes	4
6.2.1	Probe selection	4
6.2.2	Frequency and dimensions of transducer	4
6.2.3	Dead zone	4
6.2.4	Damping	5
6.2.5	Focusing probes	5
6.3	Coupling media	5
6.4	Calibration blocks	5
6.5	Reference blocks	5
6.6	Specific blocks	6
7	Settings	6
7.1	General settings	6
7.2	Range settings	6
7.3	Amplification	7
7.4	Pulse repetition frequency	7
8	Preparation for examination	7
8.1	Surface preparation	7
8.2	Identification and datum points	7
8.3	Application of transfer correction	7
9	Examination	8
9.1	Examination coverage	8
9.2	Overlap and scanning speed	8
9.2.1	Overlap	8
9.2.2	Scanning speed	8
9.3	Evaluation and recording levels	8
9.3.1	Pulse echo technique	8
9.3.2	Transmission technique	8
10	Characterization of imperfections	8
10.1	Pulse echo technique	8
10.2	Transmission techniques	9

11	Examination procedure	9
12	Examination report	10
	Introduction	v