

ISO 17640:2017-10 (E)

Non-destructive testing of welds - Ultrasonic testing - Techniques, testing levels, and assessment

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Symbols	2
5	Principle	3
6	Information required prior to testing	3
6.1	Items to be specified	3
6.2	Specific information required before testing	3
6.3	Written test procedure	4
7	Requirements for personnel and equipment	4
7.1	Personnel qualifications	4
7.2	Test equipment	4
7.3	Probe parameters	4
7.3.1	Test frequency	4
7.3.2	Angles of incidence	4
7.3.3	Element size	5
7.3.4	Adaptation of probes to curved scanning surfaces	5
7.3.5	Coupling media	5
8	Testing volume	5
9	Preparation of scanning surfaces	6
10	Parent metal testing	6
11	Range and sensitivity setting	7
11.1	General	7
11.2	Reference for sensitivity setting	8
11.3	Evaluation levels	9
11.4	Transfer correction	9
11.5	Signal-to-noise ratio	9
12	Testing levels	9
13	Testing techniques	10
13.1	General	10
13.2	Manual scan path	10
13.3	Testing for imperfections perpendicular to the testing surface	10
13.4	Location of discontinuities	10
13.5	Evaluation of indications	10
13.5.1	General	10
13.5.2	Maximum echo amplitude	10
13.5.3	Discontinuity length	11

13.5.4	Discontinuity height	11
13.5.5	Characterization of discontinuities	11
14	Test report	11
Annex A (normative) Testing levels for various types of welded joints		13
Bibliography		29