

ISO 10863:2011-09 (E)

Non-destructive testing of welds - Ultrasonic testing - Use of time-of-flight diffraction technique (TOFD)

Contents		Page
Foreword		iv
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	General remarks on the capabilities of the technique	2
5	Testing levels	3
6	Information required prior to testing	3
6.1	Items to be defined by specification	3
6.2	Specific information required by the operator before testing	4
6.3	Written test instruction or procedure	4
7	Requirements for personnel and equipment	4
7.1	Personnel qualifications	4
7.2	Equipment	5
8	Preparation for testing	5
8.1	Volume to be inspected	5
8.2	Setup of probes	6
8.3	Scan increment setting	6
8.4	Geometry considerations	6
8.5	Preparation of scanning surfaces	6
8.6	Temperature	7
8.7	Couplant	7
8.8	Provision of datum points	7
9	Testing of base material	7
10	Range and sensitivity settings	8
10.1	Settings	8
10.2	Checking of the settings	8
10.3	Reference blocks	9
11	Weld testing	10
12	Interpretation and analysis of TOFD images	10
12.1	General	10
12.2	Assessing the quality of the TOFD image	10
12.3	Identification of relevant TOFD indications	11
12.4	Classification of relevant TOFD indications	11
12.5	Determination of location and size	12
12.6	Evaluation against acceptance criteria	13
13	Test report	13
Annex A (informative)	Reference blocks	15
Annex B (informative)	Examples of TOFD scans	20
Bibliography		30