

ISO 18563-2:2024-09 (E)

Non-destructive testing - Characterization and verification of ultrasonic phased array equipment - Part 2: Array probes

| Contents | | Page |
|--------------------|---|-------------|
| Foreword | | iv |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Quantities and symbols | 2 |
| 5 | General compliance | 2 |
| 6 | Technical information for array probes | 3 |
| 7 | Test equipment | 4 |
| 7.1 | Electronic equipment | 4 |
| 7.2 | Test setup | 4 |
| 7.2.1 | General | 4 |
| 7.2.2 | Contact technique | 4 |
| 7.2.3 | Immersion technique | 5 |
| 8 | Performance tests for array probes | 5 |
| 8.1 | General | 5 |
| 8.2 | Physical aspects | 5 |
| 8.2.1 | Method | 5 |
| 8.2.2 | Acceptance criterion | 5 |
| 8.3 | Relative pulse-echo sensitivity variation | 5 |
| 8.3.1 | General | 5 |
| 8.3.2 | Method | 5 |
| 8.3.3 | Acceptance criteria | 6 |
| 8.4 | Frequency, bandwidth and pulse duration | 6 |
| 8.4.1 | General | 6 |
| 8.4.2 | Method | 6 |
| 8.4.3 | Acceptance criteria | 7 |
| 8.5 | Array probe sensitivity | 7 |
| 8.5.1 | General | 7 |
| 8.5.2 | Method | 7 |
| 8.5.3 | Acceptance criteria | 7 |
| 8.6 | Inter-element cross-talk attenuation (optional) | 8 |
| 8.6.1 | General | 8 |
| 8.6.2 | Method | 8 |
| 8.6.3 | Acceptance criterion | 8 |
| 8.7 | Number of elements out of specification | 8 |
| 8.7.1 | General | 8 |
| 8.7.2 | Method | 9 |
| 8.7.3 | Acceptance criteria | 9 |
| Bibliography | | 10 |