

DIN EN ISO 11463:2020-12 (E)

Corrosion of metals and alloys - Guidelines for the evaluation of pitting corrosion (ISO 11463:2020)

| Contents | | Page |
|-------------------------|---|-------------|
| European foreword | | 3 |
| Foreword | | 4 |
| Introduction | | 5 |
| 1 | Scope | 6 |
| 2 | Normative references | 6 |
| 3 | Terms and definitions | 6 |
| 4 | Identification and examination of pits | 6 |
| 4.1 | Preliminary low magnification visual inspection | 6 |
| 4.2 | Optical microscopic examination of pit size and shape | 6 |
| 4.3 | In situ non-destructive inspection | 8 |
| 4.3.1 | General | 8 |
| 4.3.2 | Radiographic | 8 |
| 4.3.3 | Electromagnetic | 8 |
| 4.3.4 | Ultrasonics | 8 |
| 4.3.5 | Penetrants | 8 |
| 4.3.6 | Replication | 9 |
| 4.4 | Ex situ examination techniques | 9 |
| 4.4.1 | General | 9 |
| 4.4.2 | Scanning electron microscopy | 9 |
| 4.4.3 | X-ray computed tomography | 9 |
| 4.4.4 | Image analysis | 9 |
| 4.4.5 | Profilometry | 9 |
| 5 | Extent of pitting | 10 |
| 5.1 | Mass loss | 10 |
| 5.2 | Pit depth measurement | 10 |
| 5.2.1 | Metallography | 10 |
| 5.2.2 | Machining | 10 |
| 5.2.3 | Micrometer or depth gauge | 11 |
| 5.2.4 | Microscopy | 11 |
| 6 | Evaluation of pitting | 11 |
| 6.1 | General | 11 |
| 6.2 | Standard charts | 12 |
| 6.3 | Metal penetration | 14 |
| 6.4 | Statistical | 14 |
| 7 | Test report | 15 |
| 8 | Additional information | 16 |
| Bibliography | | 17 |