

DIN EN ISO 11782-2:2024-10 (E)

Corrosion of metals and alloys - Corrosion fatigue testing - Part 2: Crack propagation testing using precracked specimens (ISO 11782-2:1998 + Amd 1:2024) (includes Amendment A1:2024)

Contents		Page
Foreword		4
[A1] European foreword to Amendment A1 [A1]		5
Foreword		6
[A1] Foreword to Amendment A1 [A1]		7
Introduction		8
1 Scope		9
2 Normative references		9
3 Terms and definitions		9
4 Test		11
4.1 Principle of corrosion fatigue crack propagation testing		11
4.2 Specimens for corrosion fatigue crack propagation testing		12
4.2.1 General		12
4.2.2 Specimen design		13
4.2.3 Stress intensity factor considerations		13
4.2.4 Specimen preparation		22
4.2.5 Specimen identification		22
5 Apparatus		22
5.1 Environmental chamber		22
5.2 Crack length measurement		22
6 Fatigue precracking		23
6.1 General		23
6.2 Precracking procedure		23
6.3 Precracking for low crack growth rates or ΔK_{th} determination		23
7 Test conditions		24
7.1 Environmental considerations		24
7.2 Stressing considerations		25
7.2.1 Cyclic frequency		25
7.2.2 Stress ratio		25
7.2.3 Waveform		25
7.2.4 Crack tip shielding (closure) effects		25
8 Test procedure		26
8.1 General		26
8.2 Starting procedure		26
8.3 Environmental control and monitoring		26
8.4 Determination of corrosion fatigue crack propagation rates		26
8.4.1 Length of crack		26
8.4.2 Growth rate of crack		27
8.5 Determination of corrosion fatigue threshold stress intensity factor range		28
9 Test report		28
Annex A (informative) Information on methods for measuring crack lengths		30
A.1 Visual methods		30
A.2 Electrical resistance measurement methods		30

A.2.1 DC potential drop method	30
A.2.2 AC potential drop methods	31
A.3 Compliance methods	31
Ⓜ Bibliography Ⓜ	38