

# ISO 7539-9:2021 (E)

## Corrosion of metals and alloys — Stress corrosion testing — Part 9: Preparation and use of pre-cracked specimens for tests under rising load or rising displacement

---

### Contents

	Foreword
1	Scope
2	Normative references
3	Terms and definitions
4	Principle
5	Specimens
5.1	General
5.2	Specimen design
5.3	Stress intensity factor considerations
5.4	Specimen preparation
5.5	Specimen identification
6	Initiation and propagation of fatigue cracks
7	Procedure
7.1	General
7.2	Environmental considerations
7.3	Environmental chamber
7.4	Environmental control and monitoring
7.5	Selection of initial K value prior to dynamic loading
7.6	Determination of KISCC
7.6.1	General
7.6.2	Determination schedule
7.6.3	Validation of test results
7.7	Determination of crack velocity
8	Test report
Annex A	(informative) Determination of a suitable displacement rate for determining KISCC from constant displacement rate tests
A.1	General
A.2	Procedure
Annex B	(informative) Determination of crack growth velocity
Annex C	(informative) Information on indirect methods for measuring crack length (see also ISO 21153)
C.1	Electrical resistance measurement methods
C.1.1	Direct current (DC) potential drop method
C.1.2	AC potential drop methods
C.2	Compliance methods