

ISO 22407:2021 (E)

Metallic materials — Fatigue testing — Axial plane bending method

Contents

	Foreword
1	Scope
2	Normative references
3	Terms and definitions
4	Symbols
4.1	Symbols related to specimen geometry
4.2	Symbols related to testing device
4.3	Symbols related to fatigue test
5	Principle of test
6	Test plan
6.1	General outline
7	Specimen
7.1	Shape of specimens
7.2	Size of specimen
7.3	Preparation of specimens
7.3.1	General
7.3.2	Machining procedure
7.3.2.1	General
7.3.2.2	Alteration of the microstructure of the material
7.3.2.3	Introduction of contaminants
7.3.3	Sampling and marking
7.3.4	Dimensional checks
7.3.5	Storage and handling
8	Apparatus
8.1	Testing machine
8.1.1	Introduction
8.1.2	Force transducer
8.1.3	Displacement transducer
8.1.4	Cycle counter
8.1.5	Instrumentation for test monitoring
8.1.6	Anti-rotation system
8.2	Testing device
9	Stress calculation
9.1	Introduction
9.2	Rectangular cross-section
9.2.1	Angular corner
9.2.2	Rounded corner
9.3	Bevelled cross-section
10	Stress homogeneity check
10.1	Principle
10.2	Measurement method
10.3	Calculations
11	Test procedure

11.1	Mounting of testing device
11.2	Mounting of specimen
11.3	Rate of testing
11.4	Application of force or displacement
11.5	Recording of temperature and humidity
11.6	Criterion of failure and test termination
11.6.1	Criterion of failure
11.6.2	Test termination
11.7	Test validity
12	Presentation of fatigue results
13	Test report
14	Measurement uncertainty
Annex A	(informative) Fatigue notched specimens

Page count: 18