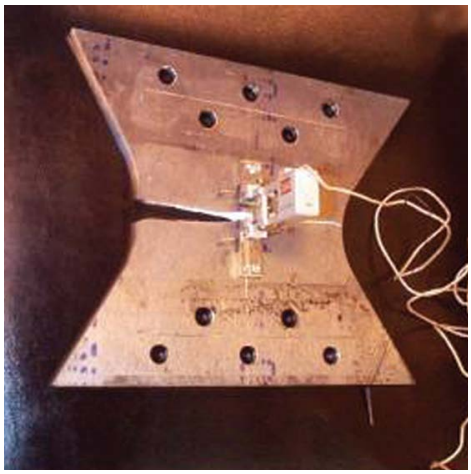
ADVANCING STANDARDS
TRANSFORMING MARKETS

100 BARR HARBOR DRIVE
P.O. BOX C700
WEST CONSHOHOCKEN, PA 19428-2959
USA

TEL +1.610.832.9500
EMAIL MEMSERV@ASTM.ORG
WEB GO.ASTM.ORG

ASTM International Technical Committee E08 on Fatigue and Fracture



SCOPE

The scope of activity within the Committee shall be the advancement of knowledge and understanding of fatigue and fracture phenomena by:

- Promoting research and development of, and education related to, methods to evaluate the fatigue and fracture characteristics of materials and structures;
- Developing standards, proposals, and, when necessary, emergency standards for evaluating fatigue and fracture behavior. The preparation of Standard Practices, Guides, Terminology, and Test Methods is included in this development;
- Sponsoring technical meetings and symposia either independently or cooperatively with other organizations;
- Coordinating the Committee's activities with those of organizations having mutual interests, including other relevant ASTM Committees and non-ASTM organizations.
- The range of Committee interest includes all engineering applications in which materials, processed parts, components or complete assemblies are subjected to loadings that might result in degradation of material or loss of structural integrity. Specific areas of interest include:
- All phenomena related to cyclic deformation, damage accumulation, crack formation, crack growth, and fracture of either materials or structures;
- Physical deformation and fracture mechanisms;
- Constitutive modeling, stress and strain analysis ranging from global to local (e.g., the crack-tip vicinity), and fracture mechanics analysis;
- Models that relate loading, deformation, configuration and damage parameters to life and residual strength behavior;
- Fatigue and fracture behavior of welded, fastened, and bonded components or assemblies of metallic or composite materials;

QUICK FACTS

Established 1993

Number of Members 400+

Number of Standards 36

Global Participation
26 countries represented

The standards are available in
Volume 03.01 in the *Annual Book of ASTM Standards*

Meetings E08 meets twice annually in May and November

STAFF MANAGER

Tessa Llewelyn
ASTM International Headquarters
100 Barr Harbor Drive
West Conshohocken, PA 19428
USA

tel +1.610.832.9542
tllewelyn@astm.org

Learn more about Committee E08
www.astm.org/committee-e08

Join ASTM
www.astm.org/join

ADVANCING STANDARDS
TRANSFORMING MARKETS

100 BARR HARBOR DRIVE
P.O. BOX C700
WEST CONSHOHOCKEN, PA 19428-2959
USA

TEL +1.610.832.9500
EMAIL MEMSERV@ASTM.ORG
WEB GO.ASTM.ORG

- Relationships between fatigue and fracture behavior and: (a) material characteristics (e.g., microstructure; thermo-mechanical history; residual stresses), (2) design details (e.g., stress concentrations; construction methods) and (3) operational details (e.g., quality control procedures; fretting; wear; mechanical, chemical, thermal, and radiation environment); and
- Methods and procedures, including statistical analysis, by which fatigue and fracture characteristics may be described, evaluated, and detected.

TECHNICAL SUBCOMMITTEES

- E08.01 Research and Education
- E08.02 Standards and Terminology
- E08.03 Advanced Apparatus and Techniques
- E08.04 Structural Applications
- E08.05 Cyclic Deformation and Fatigue Crack Formation
- E08.06 Crack Growth Behavior
- E08.07 Fracture Mechanics
- E08.90 Executive
- E08.91 Long Range Planning
- E08.93 ISO/ASTM Fatigue & Fracture Activities
- E08.95 COP Liaison

KEY DOCUMENTS

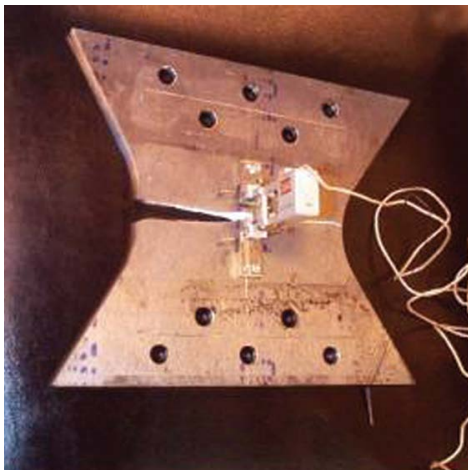
E399 — Standard Test Method for Linear-Elastic Plane-Strain Fracture Toughness KIc of Metallic Materials

E466 — Practice for Conducting Force Controlled Constant Amplitude Axial Fatigue Tests of Metallic Materials

E647 — Test Method for Measurement of Fatigue Crack Growth Rates

E1049 — Standard Practices for Cycle Counting in Fatigue Analysis

E1820 — Standard Test Method for Measurement of Fracture Toughness



QUICK FACTS

Established 1993

Number of Members 400+

Number of Standards 36

Global Participation
26 countries represented

The standards are available in
Volume 03.01 in the *Annual Book of ASTM Standards*

Meetings E08 meets twice annually in May and November

STAFF MANAGER

Tessa Llewelyn
ASTM International Headquarters
100 Barr Harbor Drive
West Conshohocken, PA 19428
USA

tel +1.610.832.9542
tllewelyn@astm.org

Learn more about Committee E08

www.astm.org/committee-e08

Join ASTM

www.astm.org/join