

# TWO POINT STRESS CORROSION FIXTURE (SS)

## Photo Coming Soon

Specimen:	Width	1/2"
	Length	3" to 6"
	Thickness	1/8"
Fixture:	Construction	Stainless steel
	Temperature	-240 to 600°F (-152 to 318°C)
	Capacity	
	Dimensions	
	Standard	Manufactured in accordance with ASTM G39

#### Model No. ASTM.G0039.10 - Two Point Stress Corrosion Fixture

The fixture consists of a flat retention plate with fixed specimen loading table. The fixed distance between the tabs is determined by the specimen configuration and required stress. Accommodates specimens that measure 3" to 6" long by 1/2" wide and 1/8" thick. Constructed of stainless steel with a protective finish in accordance with ASTM G39. (Does not include stressing jig.)

# **MODEL NO. ASTM.G0039.10**

## **ASTM, PREPARATION, BENT-BEAM,**

### **ACCESSORIES**

ACC.G0039.1001 - Stressing Jig for 2 Point Specimens

ACC.G0039.1002 - Deflection Gauge

### **SPARE PARTS**

Please contact us for spare or replacement parts.

### **REFERENCE DOCUMENT AND TEST METHOD SCOPE:**

<http://www.astm.org/Standards/G39.htm>

ASTM G39 - 99(2011)

Standard Practice for Preparation and Use of Bent-Beam Stress-Corrosion Test Specimens

1.1 This practice covers procedures for designing, preparing, and using bent-beam stress-corrosion specimens.

1.2 Different specimen configurations are given for use with different product forms, such as sheet or plate. This practice applicable to specimens of any metal that are stressed to levels less than the elastic limit of the material, and therefore, the applied stress can be accurately calculated or measured (see Note 1). Stress calculations by this practice are not applicable to plastically stressed specimens.

Note 1—It is the nature of these practices that only the applied stress can be calculated. Since stress-corrosion cracking is a function of the total stress, for critical applications and proper interpretation of results, the residual stress (before applying external stress) or the total elastic stress (after applying external stress) should be determined by appropriate nondestructive methods, such as X-ray diffraction (1).

1.3 Test procedures are given for stress-corrosion testing by exposure to gaseous and liquid environments.

1.4 The bent-beam test is best suited for flat product forms, such as sheet, strip, and plate. For plate material the bent-beam specimen is more difficult to use because more rugged specimen holders must be built to accommodate the specimens. A double-beam modification of a four-point loaded specimen to utilize heavier materials is described in 10.5.

1.5 The exposure of specimens in a corrosive environment is treated only briefly since other practices deal with this aspect, for example, Specification D1141, and Practices G30, G36, G44, G50, and G85. The experimenter is referred to ASTM Special Technical Publication 425 (2).

1.6 The bent-beam practice generally constitutes a constant strain (deflection) test. Once cracking has initiated, the state of stress at the tip of the crack as well as in uncracked areas has changed, and therefore, the known or calculated stress or strain values discussed in this practice apply only to the state of stress existing before initiation of cracks.

1.7 The values stated in SI units are to be regarded as standard. The inch-pound values in parentheses are provided for information.

1.8 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. (For more specific safety hazard information see Section 7 and 12.1.)

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*Material Testing Technology*