



SL SCC-I3 Spring Constant Loading Device



Features:

- Accuracy
- Long-term stability
- Repeatability
- Convenience
- Economy
- Safety



Description:

Advance Instrument's SL SCC-I3 Spring Constant Loading Device and accessories, for testing of stress corrosion cracking in accordance with NACE Test Standard TM-01-77-90. The AI's SL SCC-I3 Spring Constant Loading Device provide an economical but effective way to accurately determine the Stress Corrosion Cracking (SCC) susceptibility of metals in different environments.

Testing with constant-load devices ensures that susceptible materials will separate completely. This result clearly identifies the material as susceptible and does not rely on finding part-through cracks.

Advance Instrument's SL SCC-I3 Spring Constant Loading Device are widely used in the production of high quality materials testing and research. The use of stress ring test available oil exploration, aerospace aviation, welding seals, sea shipping, food processing and other materials in a variety of acid, alkali materials corrosive effects of corrosive environments, and accurate understanding of the material load capacity, for the adjustment of a variety of professional and special metal materials provide a scientific basis.

SL SCC-I3 Spring Constant Loading Device is designed to meet the American Association of Corrosion Engineers (NACE) standard designed specifically due to high quality specialty materials, so under normal circumstances, can almost be reused many times.

AI's SL SCC-I3 Spring Constant Loading Device is to accurately determine the metal sulfide stress corrosion cracking due to the sensitivity of the most cost-effective means of testing under H₂S effect. In the purchase, maintenance and operation, the load device is much more economical than fixed. At present, this compact, economical, reliable, unique testing devices are increasingly favored by professionals and attention.

Each individual calibration SL SCC-I3 Spring Constant Loading Device are corresponding with a load cell, for the accurate determination of the loading of the sample. Constant Loading Device provides enduring uni-axial tensile load of the specimen. Stress measured by the load indicator. Entire method conform NACE TM-01-77 testing standards, and provide information to NACE MR-01-75 standard materials needed.

In order to accurately meet the needs of users, AI's SL SCC-I3 Spring Constant Loading Device using precision machining, with alloy steel, can be used for four kinds of load range, the maximum load of up to 250000psi (based on the diameter of 2mm sample); can using a standard wrench to adjust the bolts and nuts to quickly and easily change the tensile stress force on the ring, the ring by a thrust bearing stress load dispersion, prevent jamming.

In order to provide accurate test results, Advance Instrument's SL SCC-I3 Spring fixture on Constant Loading Device made of stainless steel to withstand the test environment can be completely corrosion. Standard test environment chamber with a transparent, well-made of durable polypropylene, the observer can always be directly observed on the specimen. Heat-resistant glass containers can be used as standard equipment. Environmental test chamber is sealed with O- ring gasket can completely prevent leakage.



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The AI's High Temperature Vessel is delivered complete with thermocouple, o-ring seals, and vessel heaters. Precise temperature control is achieved through a Control. Specimens being tested are electrically isolated by means of nylon bushings, and all tube fittings are wrapped with Teflon® tape to positively prevent leakage.

Record software can automatically record the stress on the test specimen, Elapsed Time Monitors and automatically end after specimen fracture timing.

Base Instrument :

1. SL SCC-I3 Spring Constant Loading Device
 - Available Model : SL SCC-I3-xxkN-xxmm
 - xxkN : max load 10 / 20 / 30 / 50 kN
 - xxmm : 50% load elongation 9 / 15 / 30 mm
 - include Specimen breaker detector switch
 - Load cell, total error 0.05%, repeatability 0.03%
2. SL-MM Spring Loading Monitor
 - Load Indicator
 - Elapsed Time Monitors and Controls
 - Load record software, USB 2.0



Options :

- Standard Acrylic Vessel or Pyrex Containment Vessel
- High Temperature Vessel, 316 stainless steel, Hastelloy C-276® or Custom vessels
- Gas distributor
- Linear displacement transducer or extensometer for specimen elongation measurements.
- Datum-acquisition to computer for load, displacement, temperature, pressure etc.
- Customized electrochemistry measurements e.g. potential control and/or measurement system, including pH and redox.
- Glass and polymer cells with different kinds of heating systems.
- Other instruments and other AI's products can be integrated with loading units.



All options are integrated to work with the same PC at Windows environment.

Testing system applications can be contingent on clients requirements or e.g. NACE TM-01-77-90 and ASTM G44. Integrated SL SCC-I3 Spring Constant Loading Device test system

Instrument and gas distributor can complete the connection and begin using in minutes. Standard control unit can use 110V / 220V-60 / 50Hz power supply. No maintenance during system operation.

It can be a number of tests simultaneously in a safe and accurate basis and without specialized personnel on duty throughout.

