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Direct Current Potential Difference (DCPD) System

Choose FTA reversing DCPD instrumentation to run accurate and efficient Fatigue Crack Growth Rate (FCGR) and Non-Linear Fracture Toughness (NLFT) tests on your closed-loop, servo-hydraulic mechanical test equipment.

Advantages of an FTA DCPD Hardware System

- Custom-designed and optimized for use with FTA's leading-edge FCGR and NLFT testing software
- Provides the precision constant-current supply and signal amplification required for crack-propagation and crack-initiation studies
- Supports polarity reversing for increased voltage difference and enhanced durability over pulsed current-control systems
- Offers true differential input, excellent temperature stability and immunity to EMI/RFI noise
- Suitable for use with most test-frame controllers
- Backed by over thirty years' experience of DCPD testing for the aerospace, nuclear, energy, power and transportation industries

System Details

The DCPD instrumentation is manufactured by the FTA division of Laboratory Testing Inc. Major components are supplied by AMETEK Inc. and Ectron Corp. The system is designed to be run in conjunction with a Jäger ADwin Gold and FTA DCPD testing software.

Each system includes the following:

Reversing DCPD Power Supply

- current rating: 20 amps
- voltage rating: 5 volts
- stability: $\pm 0.05\%$ of set point after 30 minute warm-up over 8 hours at fixed line, load, and temperature.

Single-Channel Differential Amplifier

- Gains up to 2,500
- 8x analog gain available on ADwin
- 0.5uV/C inherent temperature stability
- Autozero with front-panel manual control
- 90% relative humidity operation

All required cabling



Reversing DCPD Power Supply



Amplifier Enclosure

Contact us at FTASales@labtesting.com to find out more about the DCPD System and our software solutions.