

BLUEHILL® FRACTURE – ADVANCED TOOLS

Simplify your Fracture Testing, Analysis and Reporting

Bluehill Fracture is a dedicated fracture mechanics software from Instron. In addition to more common tests, measurement and analysis is provided for standardized methods using direct current potential drop (DCPD) for crack length measurement.

SUPPORTING DCPD MEASUREMENTS



Accepts X or X/Y from any conditioning system as scaled 0-10V transducer input



Live calculation of crack length for precracking and fatigue crack growth experiments



Automatic setting of reference voltage during test



User-defined voltage - crack length relationships

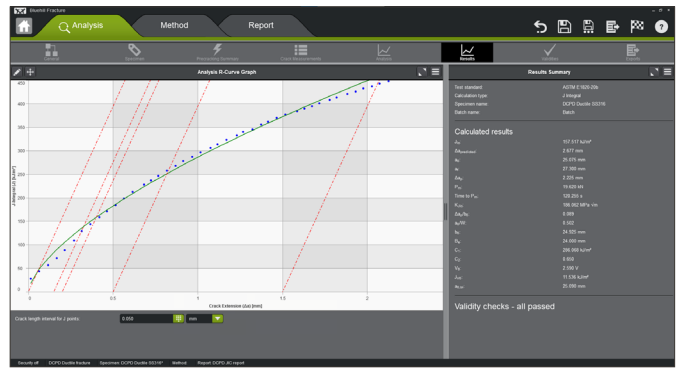
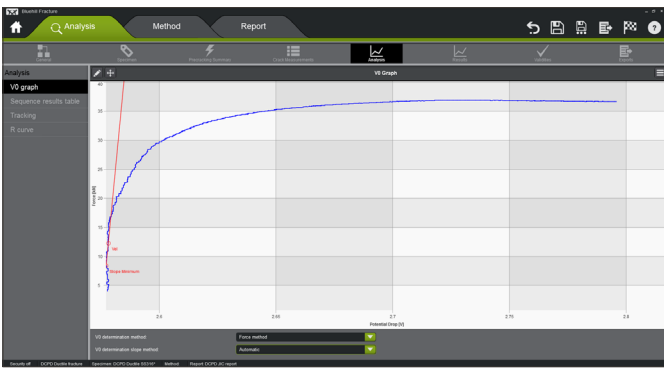


Post-test analysis for J_{Ic} according to E1820 annex 18



Test control and method set up are similar to mechanical compliance-based methods and raw data is stored in the same way. Signal noise depends greatly on the preamplification and conditioning of the DCPD system, so an additional averaging feature is available to stabilize readings during crack growth.

For fracture toughness determination, corrected displacement is calculated from user-specified frame compliance coefficients stored within the method, so that correct analyses can be used for different load strings. Manual and automated methods of V_0 determination are provided, with a configurable interval for generation of J-da plot.



TEMPERATURE MEASUREMENT

Testing at elevated temperature is often an important reason for choosing to move to DCPD crack length measurement. Bluehill Fracture now supports temperature recording from Instron Furnace Controller software and from Eurotherm temperature controllers and monitors used on our other temperature chamber products.

Temperature can be automatically recorded throughout any fracture toughness or crack growth test. For standard analyses, average and variation data are automatically determined and checked against the permitted range for validity. This feature is supported for all test types using C.O.D. gauges or DCPD.

Automatic temperature setting is not supported, but a digital TTL output from the 8800MT controller is available to signal end of test and trigger cool-down of heating systems.



More information can be found on our website at <https://go.instron.com/bluehillfracture>