THERMAL EFFECTS MODULE - BASIC

Recommended for cases with self-heating or thermal gradients.

User gives 2 (additional to FPM-C) temperatures between -40°C & 150°C.

It is required to run FPM-C in order to run this Module.

The basic thermal module produces information useful for computing heat generation rate and crack growth rate law sensitivity to temperature. Use for cases involving significant self-heating and/or thermal gradients (ie $\Delta\theta > 25°C$).

Experiment Overview
- static tearing raw data at 2 temperatures (in addition to the temperature run in FPM-C)
- cyclic stress strain raw data at 1 temp., 1 frequency, 5 strain levels
- number of slabs needed for test: 3

Use with
- Power law strain amplitude hysteresis model
- Terziyski-Kennedy temperature law
- Exponential fatigue crack growth temperature sensitivity

Analysis and Reporting / Deliverables
- heat generation law parameters describing dependence of hysteresis on strain
- tear strength vs. temperature
- crack growth rate law temperature sensitivity coefficient C
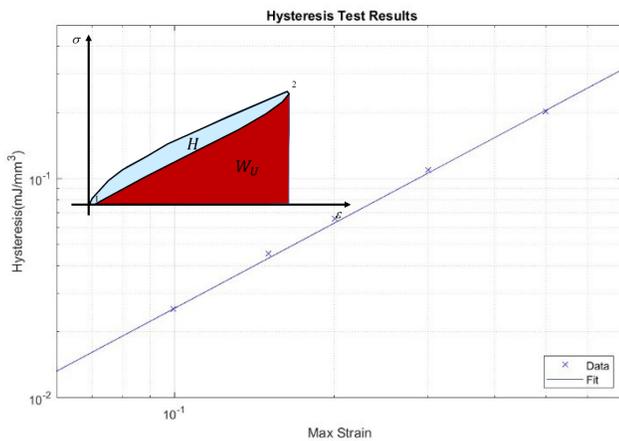
Dependence of hysteresis *H* on max strain.
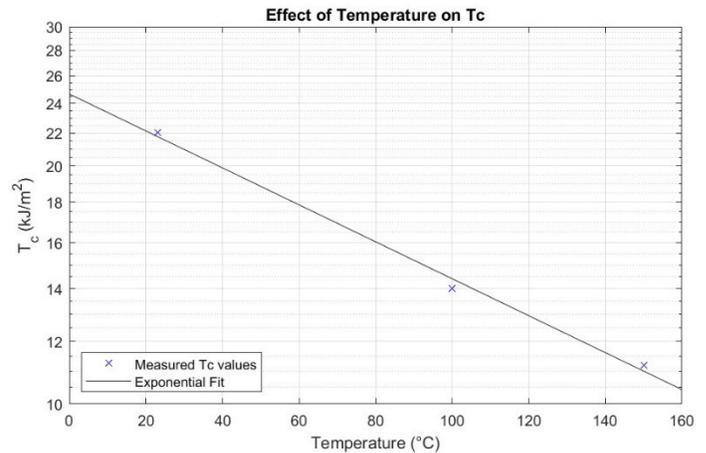
Dependence of tearing energy T_c on specimen temperature.

FPM-TB   **Thermal Effects Module - Basic**   **$6,750**

Additional Options
FPM-THRM Thermal Conductivity, Specific Heat, and Density   **$760**