HETVAL

User subroutine HETVAL:

- can be used to define a heat flux due to internal heat generation in a material, for example, as might be associated with phase changes occurring during the solution;
- allows for the dependence of internal heat generation on state variables (such as the fraction of material transformed) that themselves evolve with the solution and are stored as solution-dependent state variables;
- will be called at all material calculation points for which the material definition contains volumetric heat generation during heat transfer, coupled temperature-displacement, coupled thermal-electrical, or coupled thermal-electrical-structural analysis procedures;
- can be useful if it is necessary to include a kinetic theory for a phase change associated with latent heat release (for example, in the prediction of crystallization in a polymer casting process);
- can be used in conjunction with user subroutine USDFLD if it is desired to redefine any field variables before they are passed in; and

This page discusses:

- User Subroutine Interface
- Variables to Be Defined
- Variables That Can Be Updated
- Variables Passed in for Information

See Also

In Other Guides

Uncoupled Heat Transfer Analysis

Fully Coupled Thermal-Stress Analysis

Fully Coupled Thermal-Electrical-Structural Analysis

*HEAT GENERATION

HETVAL

Products: Abaqus/Standard

User Subroutine Interface

```
      SUBROUTINE HETVAL(CMNAME,TEMP,TIME,DTIME,STATEV,FLUX,
```