

Changes to FRANC3D from Version 7.0.6 to 7.0.7

Feb 2017

- 1) Changes to FE readers to check for empty first load cases. This eliminates solve time for an empty load case after crack insertion and thus removes set the resulting SIFs that are all zero.
 - i) NASTRAN load step added for .bdf files without a SUBCASE.
- 2) Changes to convert crack face traction from pressures or shear tractions to equivalent nodal forces, which simplifies the ANSYS interface considerably as SURF154 elements are not needed on the crack faces to apply shear. (See additional documentation.)
- 3) ABAQUS .rpt file reader edited to make somewhat more robust. Report (.rpt) files are used to apply mesh-based stress as crack face traction.
- 4) ABAQUS heat transfer element types read and converted to structural elements.
- 5) ABAQUS element type string in session log and command language interpreter fixed.
- 6) ABAQUS first pass reading of *Nset and *Elset data defined after *Boundary or *Dload data that references the sets.
- 7) ABAQUS *Submodel defined within *Assembly processed.
- 8) ANSYS SURF154 element pressure mapped to solid element faces for local model.
- 9) ANSYS load steps include time and additional boundary condition data passed through.
- 10) WriteCOD dialog in the Advanced menu modified to allow specification of the load step.
- 11) Crack growth dialog for the case of Implicit R fixed so that all user edits to the dialog are collected.
- 12) User-defined crack growth increment table access fixed; index into the table was off by 1.
- 13) Reference temperature set as the default temperature (instead of 0.0) when computing SIFs using M-integral if user turns off the "do thermal" flag.
- 14) A number of bug fixes have been made to the crack insertion and meshing library also.