



TC2S1003
CAESAR II Statics
3 Days

Agenda

CAESAR II Training
January 13, 2023

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Day 1

Introduction to CAESAR II Interface

Setup and Units File Creation

F = Kx Example

- Model Input
- Load Case Editor
- Hand Calculation
- Output Review

Theory and Development of Pipe Stress Requirements

Discussion/Presentation of basics of pipe stress, including basic stress concepts, failure theories and development of code equations

PIPE1 Exercise

- Model Input
- Error Checking
- Load Case Review
- Results Review
- Add a New Material to the Database

Support Location Exercise

- Where to locate supports?
- Adding Supports to model
- Adding Spring Hangers
- Convert a B31.3 job to EN 13480

Day 2

Turbine Piping Exercise

- Further modelling practice
- Combining multiple models
- NEMA SM23 Nozzle Loads

Manifold Piping Example

- B31.3 2014 Edition – Alternate Sustained Load Case
- Further modelling practice
- Multiple Operating Conditions and Load Cases
- API610 Pump nozzle analysis

Improving the Accuracy of Code Calculations

- Well known errors in SIFs
- Flexibilities
- Sustained Stress Indices
- ASME B31J-2017
- PIPE EN 13480 – B31J exercise

Valve Model Exercise

- Sizing and modelling an Expansion Loop
- Generation and customization of reports
- ISOGEN Stress Isometrics

Day 3

Tutor Exercise

- Nozzle Flexibilities

 - WRC297 derived nozzle Flexibilities

 - FEA Derived Nozzle Flexibilities

- Structural Modelling

- Expansion Joint Modeler