



TC2D1003
CAESAR II Dynamics
3 Days

Agenda

CAESAR II Training
January 13, 2023

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Hexagon PPM
305 Intergraph Way
Madison, AL 35758

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Day 1

Theory and Introduction

- Presentation and discussion on Dynamic Analysis theory and basics
 - The Dynamic Load Factor
 - Modal Response Multipliers
 - Eigensolver Algorithm
 - Accuracy of the Dynamic Model

Modal Analysis Examples

- Modelling methods to improve the accuracy of the modal analysis
- Modal Analysis Settings
- Dynamic Output processor and results review

Dynamic Load Factor Illustration

- Introduction to the Dynamic Analysis Interface and workflow
- Dynamic Analysis Output and Animations

Fluid Hammer Analysis Example

- Determine Fluid Hammer Input
- Time History Definition
- Results Review

Day 2

Seismic Analysis Example

- Determine Seismic Data
- Seismic Data Entry in CAESAR II
- Results Review
- Analyse Multiple Response Spectra and Independent Support motion

Harmonic Analysis Example

- Identification of an issue in the field
- Accurate Modelling of a System for Harmonic Analysis
- Harmonic Load determination and input
- Settings for Harmonic Analysis
- Friction in Dynamic Analysis
- Fatigue Analysis configuration

Day 3

Relief Valve Operation

- Comparison of Static vs. Response Spectrum vs. Time History Analysis for Relief Valve
- System Modelling for accurate Dynamic Analysis
- Data Input and settings for accurate Dynamic Analysis

Slug Flow

- Derivation of Slug Load
- Comparison of Static vs. Response Spectrum vs. Time History Analysis for Relief Valve
- System Modelling for accurate Dynamic Analysis
- Data Input and settings for accurate Dynamic Analysis