Aryatech SACS Intermediates Training Program

Aryatech Provide the training for SACS Software. Training session is 5 Days.
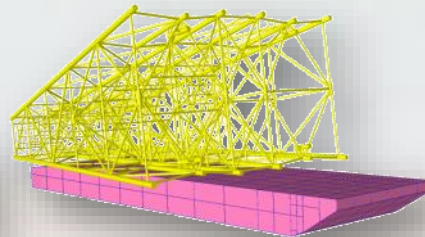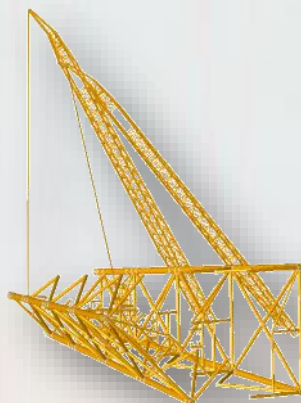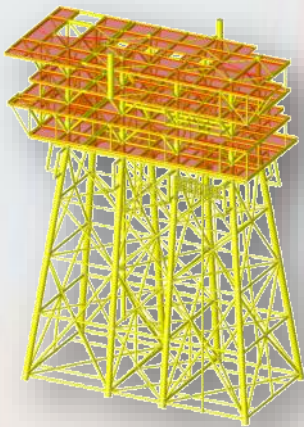
The training session provides a broad overview of the software and show new users where to find answer to questions and how to get started. The later session goes into more detail and show users how to solve specific problem. The software will be provided to the candidates on the course of training.

Certificates:

Upon completion of training, training certificates will be provided by Aryatech & Bentley

Training Material:

Software access and Training Material to each individual candidate will be provided by Aryatech Marine & Offshore.
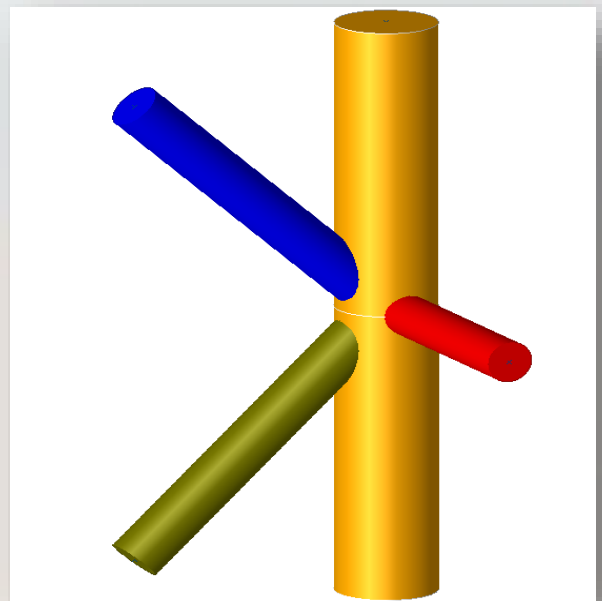
SACS TRAINING SCHEDULE

- Determine the system capabilities & the new features of SACS & be able to explain its system configuration.

- Introduction

- Fixed Platform Nomenclature

- Platform Concepts

- Analysis techniques

- Codes and Standards

- SACS Software Modules

- Module arrangement

- Global Settings

- File naming convention

- Setting up project, run files etc..

- Precede, Data Generator and Editor

Creating Structural models with SACS using the graphical interface and be able to demonstrate the method of creating a new model using the wizard & also inputting the Member properties.

Creating the Model

- Using Precede and Structural Wizard
- Members
- Wish bones
- Main piles
- Conductor Modeling
- Inputting Material Properties
- Plate Groups
- Local and Global Coordinate Systems
- Loading

SACS

SACS TRAINING SCHEDULE

Defining the Design Parameters

- Joint Connection Design
- Define Beam Offsets
- Define Member Code Check Properties

Loading the Model

- Dead Load
- Applied Loads – Joint and Member loads
- Over rides (Member and Group)
- Simulation of non-structural elements such as anodes, walkways, stairs etc…
- Loading the Structure (Using the Weight feature): Surface Loads, Equipment Footprint Loads, Appurtenant Structure Loads, Inertia Loading

Understand the user-defined loading & be able to input environmental loading from waves, wind, current etc… Define the Load Combinations. Performing the Static Inplace Analysis based on the model that has been created. Also understand about the various factors to be considered for doing the Inplace analysis.

Environmental Loading

- Wind Area Definitions
- Wind Loads
- Wave and Current Loading
- Buoyancy Loads
- Marine growth
- Hydrodynamic Coefficients
- Wave Kinematics and Current Blockage Factor
- Hydrostatic Collapse check

Preparing for Analysis

- Load Combinations
- Allowable Stress Modification factor
- Unity Check Partition Table
- Code Check &other Analysis options
- Defining Boundary Conditions
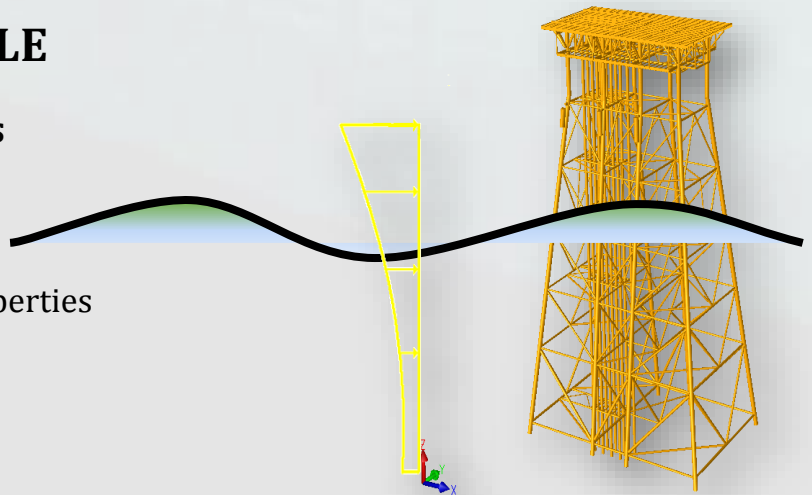
SACS TRAINING SCHEDULE

Creating Joint Can Data File

- Joint Check Options
- Joint Can File

Analysis Results

- Codes and Standards
- Analysis and review of results
- Interpretation of List files
- PostVue Files
- Viewing Results in 3D
- Member Unity Checks and Unity Check Plots
- Member Review and Redesign
- Joint Design Review and Redesign
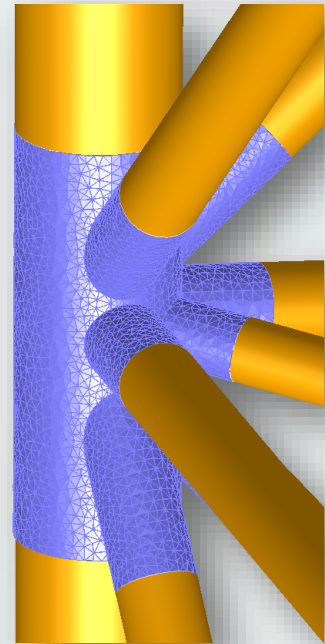- Data Extraction and Report Preparation
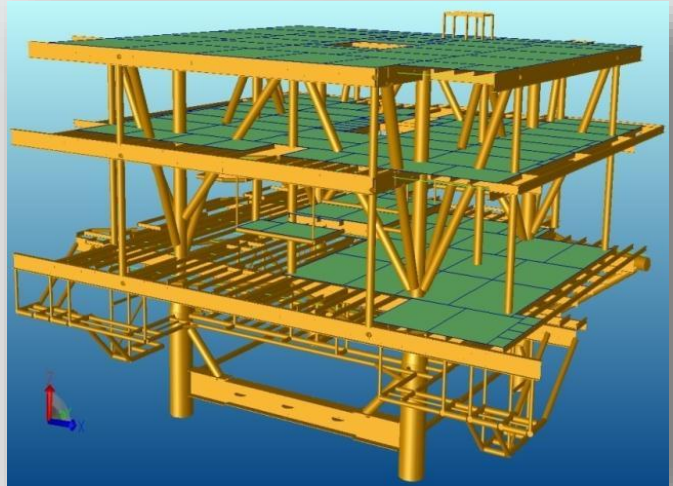
Understanding the Boundary Conditions of Soil.

Creating PSI Data File

- Soil Data Input
- Pile Design Parameters
- Super Element Simulation

Analysis Results

- Analysis and review of results with PSI Files

Performing the Lift analysis of the Jacket & also the calculation of the COG shift & Sling Forces from the Lift analysis.
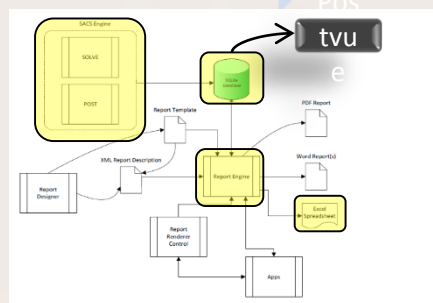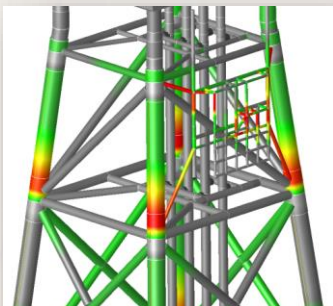
| Modeling	Analysis	Design	Reporting	Collaboration

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SACS TRAINING SCHEDULE

Understand about the Gap element concept for Load out analysis. Also understand about the various steps involved in the creation of the Tow input file for Generation of Inertial acceleration loads.

- Load out sequence
- Gap element concept
- Typical Motion Parameters
- Tow input file
- Single stage method
- Two stage Method
- Review of results
- Discussions
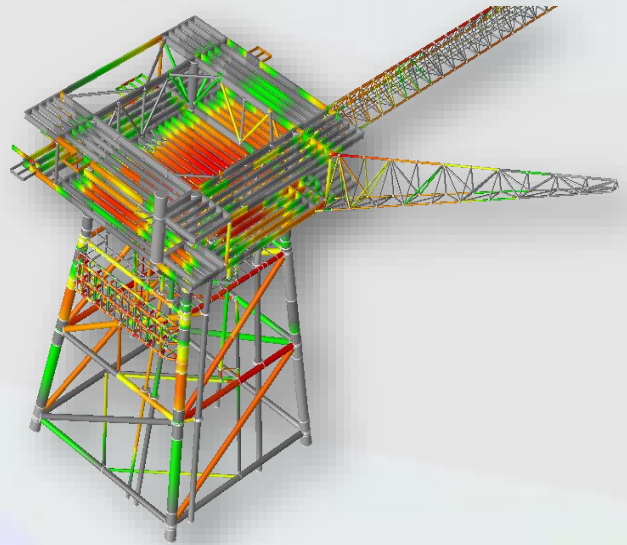
Introduction to Performing the Dynamic analysis & fatigue analysis of the model that has been prepared. Also understand about the various aspects of Dynamic & Fatigue analysis like Added Mass, SCF, Wave Scatter Data, Cyclic Stresses etc.

- **Super Element Simulation**
- **Mass Modeling**
- **Added Mass and entrapped fluid**
- **Dynamic Analysis**
- **Review of results**
- **Wave Scatter Data**
- **Wave Load specification**
- **SCF and S-N Curves**
- **Generation of Cyclic Stresses**
- **Fatigue Damage Calculations**
- **Deterministic Analysis**
- **Spectral Representation of sea state**
- **Wave Selection**
- **Transfer Function Generation**
- **Cyclic Stresses Generation**
- **Spectral fatigue analysis**
- **Review of results**