



## DIGITAL SOLUTIONS

# NAUSICUS HULL CARGO HOLD FE ANALYSIS - CSR BC & OT

Course code: NA-17

Duration: 3 days

### Prerequisite:

Basic understanding of ship structures and use of FE analysis for hull strength calculations.

Knowledge in Nauticus Hull as covered in NA-02 Nauticus Hull rule check analysis. Basic knowledge in Sesam for fixed structures as covered in SE-01 Concept based FE modelling and analysis using Sesam - Introductory.

## DESCRIPTION

The course is an introduction to programs for FE analyses of the cargo hold area in accordance with the IACS Common Structural Rules for Bulk Carriers and Oil Tankers (CSR BC & OT).

- Prepare cargo hold model
- Transfer of rule loads, boundary conditions and corrosion additions
- Hull girder load adjustment
- Verify model
- Yield strength assessment - coarse mesh
- Buckling assessment
- Screening
- Reporting
- Local structural strength
- Fine mesh models
- Hot spot fatigue

The course will be a combination of lectures and hands-on training. The hands-on example consists of applying loads to a cargo hold model, analysing it and carry out stress and buckling assessment including hot spot fatigue, according to CSR BC & OT. The course will also provide a brief presentation of the IACS Common Structural Rules for Bulk Carriers and Oil Tankers.

## LEARNING OBJECTIVES

After the course you should be able to use Nauticus Hull for cargo hold analysis and execute FE analyses and code check for direct strength, buckling and fatigue assessment.

## TARGET GROUP

Naval architects, designers, hull structural engineers and approval engineers with no or limited experience using Nauticus Hull for CSR BC & OT.