

# STRESS ANALYSIS

DOCAN specialises in employing advanced stress analysis methods to identify and overcome the most complex mechanical engineering challenges.

## CORE CAPABILITIES:

- ✓ Linear & highly non-linear analysis
- ✓ Static & dynamic analysis
- ✓ Implicit & explicit analysis methods
- ✓ Fracture & fatigue
- ✓ Thermal creep analysis
- ✓ Pressure vessel collapse analysis
- ✓ Level 3 Fitness For Service
- ✓ Detailed fatigue analysis
- ✓ Fluid-Structure Interaction (FSI)

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## LEARN MORE



## HOW WE CAN HELP

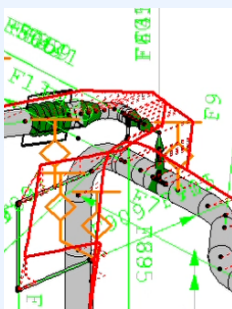
Complex engineering problems require complex analyses and verified solutions, and that's where our stress analysis services come in.

We have unrivalled expertise in the fields of Finite Element Analysis and Pipe Stress Analysis, and can conduct everything from simple linear analysis to the most highly complex non-linear analysis and everything in between.

As a multidisciplinary engineering consultancy working across a multitude of industries, we understand that no two problems are the same. Our highly skilled stress analysis consultants can work with all common design codes, any material and a variety of loading conditions to solve your unique challenges.

## KEY PROJECTS

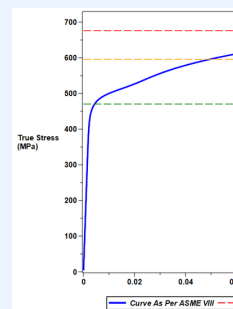
### DYNAMIC PIPE STRESS ANALYSIS



#### POWER GENERATION

- ✓ Validation of high-pressure steam vent line during pressure safety valve (PSV) opening
- ✓ Understanding dynamic piping loads that would be present to verify integrity of the line
- ✓ Combining 1D thermo-fluids analysis and Pipe Stress Analysis to determine transient loads

### STRESS ENGINEERING TOOL DEVELOPMENT



#### SOFTWARE

- ✓ Developing in-house tools that generate the relevant material stress-strain curve data for FEA modelling
- ✓ Production of an interactive document that clearly and reliably calculates material data and imports directly into FE software