NV FEA

CAPABILITY STATEMENT

Structural, Thermal & Creep FEA for Pressure Equipment & Offshore Structures

Remote Ansys analysis, worldwide

SERVICES

Pressure vessel design-by-analysis
ASME VIII Div 2 Part 5

Fitness-for-service & creep assessment
API 579-1 / ASME FFS-1

Nozzle loads
WRC 107 / 297 / 537

Thermal & thermal-stress analysis
Steady-state · Transient

Fatigue and modal / vibration
Cyclic service · Natural frequencies

Offshore cranes, structures & skids
AISC 360 · DNV-ST-E273 · DNV

Oilfield equipment
API 6A · API 17D

Storage tanks
API 650 / 620

High-temperature design
ASME III Div 5

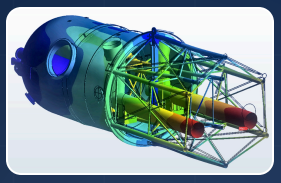
Lifting analysis
ASME BTH-1 · AISC 360 · DNV-ST-E273

Refinery & Energy Equipment

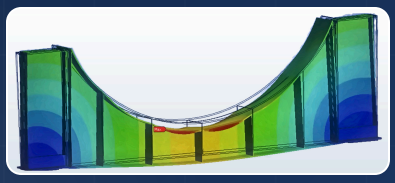
Thermal-stress, creep and fatigue analysis of hot, refractory-lined refinery hardware, backed by hands-on FCC and cyclone experience.

Thermal stress · Creep · Fatigue

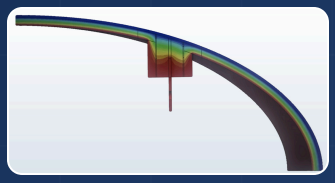
- **FCC regenerators, reactors & strippers**
- **Reheaters** and **TCC** (thermofor catalytic cracking) units
- **Cyclones, plenums & hanger systems**
- **Transfer lines & expansion joints**
- **Slide valves & flue gas systems**, incl. third-stage separators
- **Heaters, furnaces & hot-wall refractory-lined vessels**
- **Coke drums**
- **Heat exchangers & nozzle loads** WRC
- **Piping flexibility & thermal-growth interfaces** B31.3
- **Refinery FFS & creep life** API 579



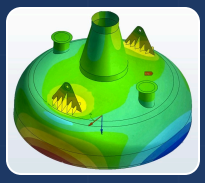
Vessel & support frame stress



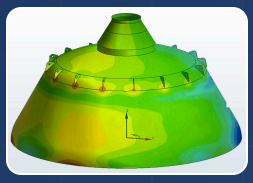
Saddle support stress



Thermal gradient: refractory-lined shell



Lifting lug & head stress



Lifting analysis: cone & lugs

Sample Ansys results from past projects.

ABOUT NV FEA

Led by a senior FEA engineer

Our lead engineer has **17+ years of Ansys Mechanical FEA** in oil & gas and industrial equipment.

LEAD ENGINEER'S PAST EMPLOYERS

GE · Halliburton · TRIYards

Based in the **Houston area**, working fully remote for clients anywhere, including the Middle East.

HOW IT WORKS

1. **Send drawings or 3D geometry, plus loads**
   Materials, design conditions and code basis if available.
2. **Fixed-price quote within 24 hours**
   Scope reviewed and quoted by email.
3. **Clear, code-referenced report**
   Stress plots, linearizations and pass/fail checks.

Overflow work, one-off checks and second opinions welcome.

CODES & STANDARDS

PRESSURE VESSELS & PIPING	ASME VIII Div 1 · ASME VIII Div 2 Part 5 · ASME B31.3 · WRC 107 / 297 / 537
FITNESS-FOR-SERVICE & HIGH TEMPERATURE	API 579-1 / ASME FFS-1 · ASME III Div 5
OIL & GAS EQUIPMENT	API 6A · API 17D · API 650 / 620
STRUCTURES, SKIDS & LIFTING	AISC 360 · ASME BTH-1 · DNV-ST-E273 · DNV

Send drawings for a quote
Fixed-price quote within 24 hours

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Stamping, where required, by the client's PE or certifying engineer.