

Pressure Vessel and Piping Analysis

Stress Engineering Services, Inc. is an employee owned professional engineering consulting company. Founded in 1972, Stress Engineering successfully completes over 3,000 projects per year for more than 800 clients worldwide. Our engineers have an average of 20 years experience, many of them with advanced degrees. Because a large number have previously worked directly for oil and gas companies, our engineers have an extensive understanding of operating equipment and plants.

PRESSURE VESSELS, ASME

Boiler and Pressure Vessel (BPV) Code, Section VIII, Division 1:

Vibration, wind, seismic, and other calculations to complete a Code design report that will comply with the owner's specifications and Code requirements.

BPV Code, Section VII, Division 2:

Thermal, fatigue, vibration, wind, seismic, and other calculations to complete a Code design report that will comply with the owner's specification and Code requirements. Linear and non-linear Finite Element Analysis (FEA) is used when required.

BPV Code, Section VIII, Division 3:

Stress Engineering serves on the Special Working Group on High Pressure Vessels continuing to develop the ASME Code, Section VIII, Division 3. We can help you in these applications, generally over 10,000 psi.

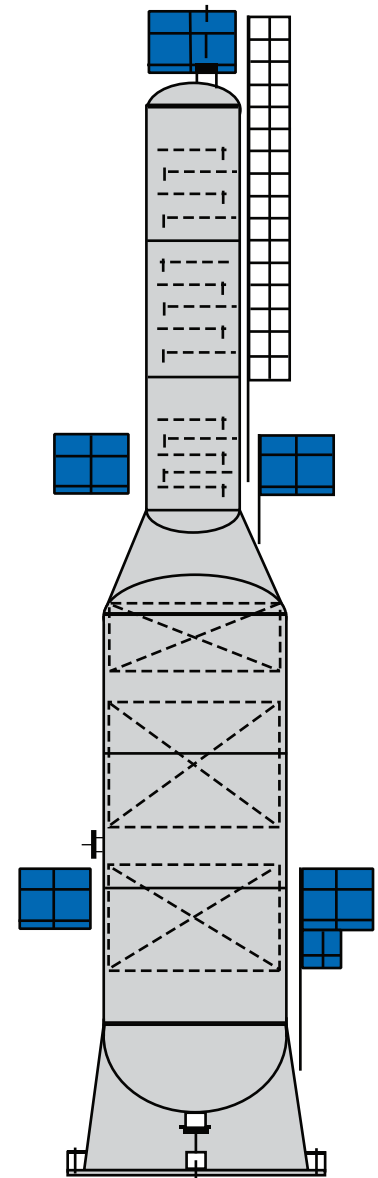
Pressure Vessel Design:

Metallurgical expertise and intimate knowledge of structural performance gives Stress Engineering the capability to perform design-by-analysis for diverse applications.

PIPING SYSTEMS

Codes for Pressure Piping. ASME B 31.1, B31.3, B31.4 and B31.8:

Thermal dynamic, seismic and other piping system design calculations are offered for industrial installation. Our experience in numerous piping research projects have validated our analysis techniques.



Multi Chamber Pressure Vessel

STRUCTURAL INTEGRITY

Complex Existing Vessels:

Stress Engineering can use finite element analysis or testing to evaluate your existing vessels and provide guidance for continued use. We use the National Board Inspection Code (NBIC) and API-510, API-570, and API-653 Codes for analysis and reconstruction. Full scale testing of damaged vessels has given our engineers expertise with residual stresses and local thin area effects.

Existing Piping Systems:

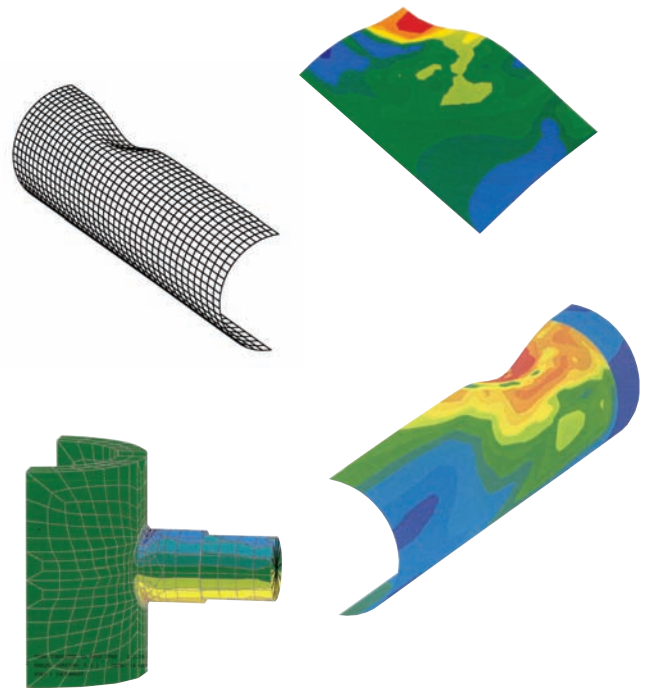
Fitness for Service, and remaining life evaluations can be provided. Numerous field pipe testing projects have given SES the experience needed for interpretation of test results on equipment suffering from corrosion or vibration.

Fitness for Service - API 579:

Stress Engineering's mechanical integrity services are based on the principles of structural analysis, fracture mechanics, metallurgy, and an understanding of inspection realities. Strain gage testing, field metallography, material testing, and acoustic emission testing are often used to supplement stress analysis.

High Temperature Analysis:

We are experienced in high temperature applications where creep and stress rupture are important. We have performed several research projects for the Pressure Vessel Research Council in this area.

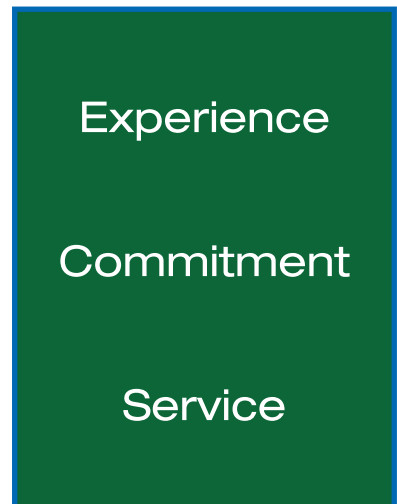


WHY SHOULD YOU USE STRESS ENGINEERING SERVICES?



At Stress Engineering Services we utilize our vast experience to assist you in solving problems in a timely fashion. We pride ourselves in our ability to help keep your plant components safe to operate - both now and in the future.

We are committed to serving you in the most efficient capacity possible. Our goal is to help you find the core of your problems and then recommend solutions that are financially feasible and structurally sound. Through these solutions, we are able to help you improve safety, reliability and profitability.



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