



# Strength and Competence for Pragmatic Engineering



**DESIGN**



**ANALYSIS**



**WELDING & MATERIALS**



**CODE COMPLIANCE**

# Do business with us at Ekström & Son Engineering!

The team at Ekström & Son Engineering combines strength and competence in order to achieve what we call "pragmatic engineering". By this we mean a complete engineering package based on code compliance and real experience from on-site projects with clients.

We go beyond the office and combine our practical experience from manufacturing and commissioning

with the highest level of theoretical practice based on the latest software and research. We focus on four areas:

- » Design
- » Analysis
- » Welding & Materials
- » Code Compliance

## DESIGN

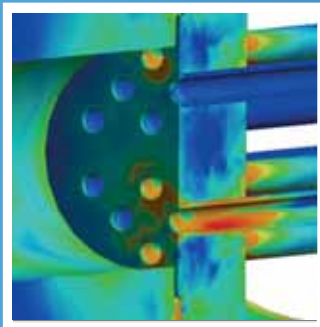


We offer high competence and flexibility within the following design tasks:

- » Design by Formula: mechanical calculations of pressure vessels according to ASME (VIII div II and div 2), EN-13445, and AD-2000. Specialists in TEMA rules for shell and tube heat exchangers.
- » Design by Analysis: wherever construction codes allow for FEA, or in aspects not covered by construction codes, optimisation, checking existing designs for damage mechanisms not provided for in the rules.
- » Combined techniques (DBA/DBF) in high-temperature designs acc. to ASME Sec III NH, RCC-M, SDC-IC or special procedures.

As process experts we can also assist you in product development and improvement of your existing product portfolio. We are used to work with different process media: Air, sea water, fresh water, steam, oils and the whole spectrum of process solutions.

## ANALYSIS



We offer high competence and flexibility within analysis:

- » Analytical verification of existing and current designs.
- » Preparation of acceptance criteria, evaluation of analysis results.
- » Development of material models for high-temperature design.
- » Analysis of complex damage mechanisms, interaction of different physical phenomena.
- » Easy to read and presentation-quality reporting of analyses.
- » Extensive use of Ansys products, coupled with PTC state of the art modelling software.

Supported by the latest technology such as specialised software (ANSYS on the picture), subscriptions to the latest research, and modern equipment we guarantee designs that solve your problems. Our analysts are in constant contact with our workshop staff to ensure a continuous feed-back process. The process often takes place in close collaboration with the client contributing to our high standards in quality assurance of complex projects.



## WELDING & MATERIALS



Our staff include certified welding engineers (IWE) and international welding specialists (IWS) with extensive experience with both practical and theoretical matters.

We can provide you with the following services:

- » Quality assurance and Quality control (QA / QC)
- » Installation support
- » Material evaluations
- » Weld engineering management: WPS, WPQR, PQR, and WPQ

In addition to standard carbon and stainless steel we also offer our experience in a range of special materials like duplex, nickel base alloys, titanium, zirconium and more.

## CODE COMPLIANCE



We have extensive insight and knowledge in worldwide codes and standards together with our long experience in working with specifications.

- » Review of existing designs and specifications, generating a list of requirements to be followed in the construction ("Single source of truth"), implementation of rule-based engineering.
- » Preparing and assisting in preparation of new design documents in accordance to applicable codes and standards.
- » Liaison with jurisdictions, inspectorates, agencies etc. to clarify the interpretation of vague or disputable requirements, adding new rules, modifying existing ones to suit our customer and give advantage over the competition.

[www.ekstrom-eng.se](http://www.ekstrom-eng.se)