

OPTIMI Engineering



Structural Engineering

- Ships
- Airplanes
- Automotives
- Industrial Systems

www.optimi-engineering.com

Finland / Germany

Optimi Structural Engineering

We provide **the full spectrum of strength calculations ranging from traditional hands-on approach to Finite element method (FEM) and beyond**. Our experts have several years of hands-on experience covering aerospace, marine and civil engineering.

A few of the highlights are discussed below.

Lightweight structures

The background of the lightweight structures is in aerospace but often there are benefits for other industries as well. Transportation in general is one such industry. Any vehicle, be it ship, car or train, benefits from reducing weight. Therefore being mass conscious is not essential just for aeronautical engineers but for the whole engineering community.

Utmost efficiency is clearly needed on part of design, manufacturing and operating the vehicle. **In short we search again for the optimum in terms of performance and costs**. Optimi Engineering can get you there!

FEA

As with all our offers, **Optimi Engineering strives to respond fast and provide customer with quick and accurate analysis**.

We can provide customer **assistance through the structural analysis or even take the overall responsibility**. Customer can outsource the whole program. In such a case Optimi Engineering act as integrated unit of the customer. Optimi Engineering provides project management planning, reporting, technical completion, documentation and project closing actions.

Fatigue & Damage Tolerance

Fatigue can influence any structure but the phenomenon is most likely to affect light weight structures. Here **a proper analysis is needed** to find out the extent of susceptibility to fatigue and to establish an inspection regime. We are committed to defining the optimum inspection threshold and the following inspection intervals with due regard on cost and product safety.

Fatigue is clearly a safety issue but it has economical implications as well. Ability to keep operating with known damage is beneficial given that one can show that the machine makes it to the next scheduled repair. This is where detailed Damage Tolerance analysis really pays off. **Hall marks of damage tolerant design are multiple load paths and predictable damage propagation**.

Together with our customer we determine **design service goal (DSG)**, modify blueprints -if necessary- and make sure that safety and economical issues are addressed.

The best part is that we can combine design and structure analysis into one package. Customer has one stop solution.

R&D on Contract

Summing the individual chapters together results in framework **for high quality research and development program on behalf of our customers**. The cooperation is based on your needs! Let us discuss in detail our next venture.

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Summary

A number of important topics have been touched in above chapters but to tie it all together, a few more lines follow.

Customer really comes first at Optimi Engineering. We are uniquely positioned to harness the scales of two home markets in Finland and Germany. The high quality of our engineers, coupled with excellent IT-infrastructure, allow us to take almost any kind of challenge.

Our goal is to provide **top notch technical solutions** to complex problems employing the state of the art tools. **We aim at fast response times and thorough understanding of our customers needs.**

Our goal is partnership where customer can trust us to deliver accurate solutions reliably in time and on cost.

The logo for Optimi Engineering is positioned on the left side of the page. It features a large, red, curved shape that resembles a stylized 'O' or a partial circle. The word 'OPTIMI' is written in a bold, red, sans-serif font, with the letters 'O', 'P', 'T', 'I', 'M', and 'I' stacked vertically. The word 'Engineering' is written in a bold, black, sans-serif font, with the letters 'E', 'n', 'g', 'i', 'n', 'e', 'e', 'r', 'i', 'n', 'g' stacked vertically. The red shape is positioned behind the text, creating a layered effect.

OPTIMI
Engineering



OPTIMI Engineering

Our Design—Your Success

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