



## Design

Ensuring that a mechanical engineering structure is safe, efficient and successful is all dependent on the design process. Here, it is vital to ensure that the best expertise is utilised to provide a state of the art solution, prepared to function to its highest capacity, and also built to operate safely over a long period of time.

Whether this is a power plant component, defence structure, bespoke tooling system or more, EASL can provide bespoke design solutions to challenging engineering problems with the added advantage of in-house stress analysis capabilities. With a highly qualified and specialist team of mechanical engineers and scientists, ranging from entry level graduates through to experience PhD, we have a wealth of knowledge that can deliver to clients reliable, clear and cost-effective design services.

### What is Design?

EASL's services relate to a wide range of tasks involved in the process of designing engineering components and structures. With our expertise, EASL can fully project manage the whole design project or provide support to an existing project in specific areas where required.

Often within an organisation it may be that the resources required for aspects of, or whole design work are either too great a strain, or as part of a contract framework necessary to be delivered by a separate company. Whether it is a full design, or analysing and assessing the work provided by another company, EASL are able to expertly provide our assessment and services.

A full range of design services are available, for example;

- initial concept creation;
- production of prototype models (part or full scale, metal or rapid prototype);
- creation of 3D CAD models;
- creation of manufacturing drawings;
- design analysis (including qualification to any relevant standards).
- part or manufacturer sourcing;
- site installation and testing, and
- ongoing maintenance or operational support.

EASL specialise in mechanical design and have experience of a range of design, analysis and installation projects from large safety critical steel restraint systems (currently installed at two UK nuclear power stations) to a bespoke remotely operated drilling rig (for use in a particularly challenging confined space envelope).

With an ability to deliver full and part design capability in house, we are proud to give our clients a wide range of design possibilities.

### EASL's Design Services

Our engineering experience in a wide range of disciplines means we can consider all aspects of a problem. EASL's approach is always to ensure a full understanding of the project constraints and desired outcome to ensure the right solution is identified early in the process.

We are specialists in stress analysis and are able to carry out own in-house stress and computational fluid dynamic analysis. This can be done in real time as part of the design process to avoid costly rework and an excessive number of design iterations. We use the latest industry software but also have the experience to fully understand the underlying theory and ensure correct application.

This ability also allows us to ensure that designs are qualified to appropriate standards or codes where required.

We have a track record of excellent working relationships with clients and are more than willing to spend time on site if needed to work with end users and ensure a full understanding of the environment in which our designs will be implemented.



With a comprehensive understanding and knowledge of engineering, we not only have the capability for complete design solutions, but also vast experience of assessing the potential design issues of existing structures, components and materials. Whether you have a large scale design project, the need for a single component or require third party analysis of design work, EASL can deliver a clear, trustworthy and cost-effective service.

#### Related Services

- Design Substantiation
- Design Code Assessment
- Regulatory Compliance