



Client:

Leading manufacturers of pipe fittings for the water, gas and petrochemical industries.

Brief:

A revolutionary system of bolt-less pipe fittings has been developed by GLok. The brief was to develop the design for production. This took into account, detail design requirements, ease of manufacture, large batch quantities and at the same time be cost effective.

Project challenges

Key challenges on this project included:

Mechanical:

- To develop the customers conceptual design principles.
- Produce manufacturing drawings compliant with the design principles.
- Ensure that the design principles were consistent across the entire range of products.
- Manage and develop the design process in conjunction with product testing.
- To ensure that the finished designs comply with relevant international standards.

Key challenges on this project included:

- Identification of the key parameters required to control the product functionality.
- Source appropriate manufacturers against the key parameters.
- Evaluate and develop the capability of selected suppliers.

Solution:

With the support of finite element analysis (FEA) the products were designed to conform to the various national and international specifications. The fundamental design parameters of the products were set up on a spread sheet which was used to generate a database of all the features required for the various types of fittings. From this database it was possible to generate CAD production drawings.

Summary:

This revolutionary concept has been developed by generating detail drawings and supporting documentation, enabling the design to be taken into production.

