

Piping design engineering



A major focus of the process industries is currently on the sustainability of the plant infrastructure and ensuring containment is not compromised by aging plant systems. With 40% of all major plant losses being attributed to piping, this area needs careful consideration.

Increasing stakeholders' expectations and relentless economic pressures are often compounded by the difficulties of managing an aged asset base. Operators are continually being stretched to meet safety, reliability and plant integrity targets on their existing assets. Today's environment demands a leading approach from operators of process plant in planning, design, construction and maintenance of plant piping systems. An integrated approach is vital for piping design and engineering requirements in order to produce technically sound and economical results. Strong conceptual analysis and design solutions, innovative material selection and new technology applications need to be applied at all times so as to meet these requirements.

What we offer

As part of our asset management portfolio we offer a full range of piping engineering services for new and existing assets. We can also provide technical assistance on client-managed projects, either on an individual basis or as part of an ABB project team. We have extensive experience of working on operating plants, assisting client engineers in both executing new projects and safely maintaining and modifying existing piping systems. Proven design methods are backed up by our leading experts in the field of plant and piping system integrity.

Our approach

Services include:

- Front-end engineering layout and piping studies using 3D computer modelling
- Piping design for new plant and up rate projects for existing plant
- Pipe stress analysis of new design piping systems or modifications
- Independent assessment of piping system design by a piping verification engineer
- Production of design, material, fabrication and erection estimates from conceptual stage up to full project sanction
- Fitness for service assessments of older piping systems to establish suitability for continued operation
- Dead leg surveys to check existing piping systems for low points and no-flow locations where problems may occur due to various internal corrosion mechanisms
- Site surveys of plant piping systems to check and update existing P&I diagrams
- Production of AutoCAD isometric details of existing pipe-work to aid inspectors / operators carry out their work

Benefits

Our specialist piping engineers have considerable multi-sector experience and knowledge that can be focused to provide technically robust solutions for your engineering requirements.

The design and maintenance of piping systems and their associated support structures is a key activity in any manufacturing organisation and we offer to provide an efficient, well organised, cost-effective and innovative capability that can address all your piping requirements.

Why ABB?

As a core service provision, our piping engineering capabilities are at the forefront of design, build and repair. As such, we continue to evolve our technical services to meet the new challenges faced by the process industries including protecting the environment and creating a sustainable future for your operations.

Our services are proven to deliver improvement and we seek to enter performance-based contracts where we share the bottom line business improvements that we deliver. We prefer to work in partnership with our customers where we deliver benefits together and we transfer relevant skills to our customer for ongoing improvement.

We have extensive experience of introducing improvements in organisations and in managing the necessary changes so prefer to work alongside customers in fully implementing sustainable change.

