BROCHURE

Detailed engineering
Improving your plant capabilities
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Looking for a design organisation with a strong capability across all of the engineering disciplines?

Do your modifications need to be implemented with minimum disruption to plant operation?

Need a designer with tried and tested processes that will ensure your plant modifications work first time?

ABB provides a wide range of detailed engineering services to its clients in the chemical, oil & gas, power and pharmaceuticals industries, helping them to keep their businesses running safely and efficiently. Whether the requirement is to upgrade an existing plant or design and construct a new one, ABB has experienced resources with the deep technical knowledge and experience necessary to develop the optimal solution.

ABB’s heritage, as an engineering department for a large multi-national chemical company, means our engineers have experience of taking a practical and pragmatic approach to the engineering challenges that face process plant operators today. This approach has repeatedly realised cost savings for our clients and is what differentiates our services from others.

Capabilities
ABB has a strong team of experienced engineers and designers in all of the engineering disciplines including:

- Chemical
- Piping
- Control and instrumentation
- Electrical
- Civil and structural
- Vessels
- Rotating equipment
- Fired equipment

Our approach
ABB works closely with its clients to fully understand their objectives before submitting a concise scope of work and commercial proposal for developing a cost effective solution.

We provide detailed engineering designs to our clients on either a single function or multi-functional basis. Where we carry out multi-function design then ABB coordinates all aspects of the design delivery to ensure our clients receive an optimal solution that works first time. We utilise a range of design tools such as:

- AutoCAD
- PDMS - for 3D design
- Amtech
- Digsilent
- STAAD
- TEDDS
- TRAC
- HYSYS

These modern tools allow us to carry out the design quickly, accurately and efficiently, ensuring the completed design is easy to fabricate, install and works first time.
We have tried and tested design processes, accredited to ISO 9001, that ensure that we work to consistently high quality standards and cover issues such as:

- Checking and approval
- Design audits
- Formal competency assessments of our engineers and designers
- Design reviews
- On-line document control
- Compliance with CDM requirements
- Cost control and management of variations

**Engineering studies**
As well as the detailed design of new plant and equipment, ABB also provides a wide range of services to our clients that help them either meet regulatory requirements, keep an ageing plant running, uprate capacity or improve the safety or efficiency of a plant. These services include:

- Term services agreement
- Technology alliances
- Debottlenecking
- Revamps
- Automation hot cut over

**Term services**
Whilst ABB is happy to carry out work on an ad-hoc contract by contract basis we also provide detailed engineering services on a ‘term service’ basis under a framework agreement that allows our clients to have quick and easy access to our services, using agreed engagement arrangements and rates. This allows us to react quickly to our client’s requirements, providing them with the services they need to keep their plants on-line and running safely and efficiently.

**Technology alliances**
ABB has a working alliance with Johnson Matthey that allows us to provide optimal engineered solutions to client requirements, based on Johnson Matthey technologies and ABB engineering and design capabilities.

Revamps and debottlenecking
ABB can carry out all aspects of plant revamps & debottlenecking from conceptual studies through FEED to the detail design of the individual modifications required to achieve the required plant process change or throughput increase. Our experience in working on brownfield sites allows us to design the modifications so that disruption to normal plant operations are minimised during their implementation.

**Automation hot-cutover**
When clients need to replace their obsolete process control system with a modern DCS, it is often not desirable or possible to shut down the plant for the length of time required to migrate the control from the old to the new system. ABB has developed ‘hot cut-over’ processes and procedures for completing this migration without taking the plant off-line or disrupting production.

**Benefits**
Working with ABB’s functional engineers and designers brings a range of benefits to our clients including:

- Access to the full range of technical expertise under the one roof resulting in ‘joined up’ solutions
- Engineering specialists with the knowledge and experience to be able to take a pragmatic, cost effective approach based on engineering judgement
- Efficient design methodology using modern design tools
- Accredited design processes that ensure high quality engineering and design deliverables