IEC 61508 / 61511

A pragmatic approach to implementation
Do you operate automated manufacturing processes?

Could failures in your processes lead to undesirable hazards?

How do you manage the benefits of modern programmable technology?

Can you demonstrate good management of your safety critical systems?

ABB can help reduce capital and operational costs of systems, whilst maintaining safety performance and protecting people, environment and assets.

We provide a wide range of engineering services to a broad spectrum of customers in the America’s, Europe and Asia Pacific. Our strengths are founded on a proven knowledge of engineering issues from an end user / operator perspective and on-going access to the capabilities of the total supply chain.

Capabilities
We have an unrivalled capability in the field of safety-related systems encompassing many different sectors. We offer a unique safety-related systems portfolio to our customers, spanning the complete asset and safety life-cycle, providing consultancy, software and hardware technologies and service support.

We can help you with the practical implementation of all phases of the IEC 61508 / 61511 safety lifecycle on existing and new facilities by applying our proven techniques and working methods including:

- Safety Integrity Level (SIL) assessments
- Software tools supporting the safety lifecycle
- Identification of safety critical elements / functions
- Safety lifecycle audits
- Functional safety assessments
- Independent validation and verification
- Hardware / software design
- System integration
- Support for strategies to implement IEC 61508 / 61511
- Support for in-house training and awareness programmes
Key concepts
There are four key concepts involved in IEC 61508:

- **The safety lifecycle**
  A sequence of phases, which provide a logical path through to commissioning, operation, maintenance and finally decommissioning

- **Safety management**
  A formal safety plan produced to ensure that everything is in place in order to prepare for and manage each phase of the safety lifecycle

- **Design of safety-related systems**
  Comprehensive technical guidance is given on appropriate measures and techniques for achieving specified levels of integrity in the systems, including the safe application of modern programmable electronics

- **Competencies**
  Guidance on the appropriate skills and knowledge for those involved in each phase of the safety life cycle

Supporting techniques for the functional safety lifecycle

Industry is experiencing a revolution in the rapidly evolving safety technologies. Whilst it is important to fully exploit this modern technology to facilitate improvements in both safety and economic performance it needs to be undertaken within an overall safety framework. IEC 61508 has been developed and issued by the International Electrotechnical Committee (IEC) and constitutes the very latest international best practice safety standard.