HAZOP, retrospective-HAZOP and re-validation HAZOP

Delivering excellent process safety performance across the lifecycle of a process is necessary for any operating company in the hazardous process industries.

To achieve excellence in process safety, companies must be able to answer ‘yes’ to the following three questions:

- Do we understand what can go wrong?
- Do we know what systems we have to prevent this happening?
- Do we have information to assure us that these systems are working effectively?

HAZOP studies primarily focus on identifying what can go wrong and hence what safeguards should be in place. A poorly conducted HAZOP could lead to hazardous events being overlooked. ABB Consulting offer a range of services to assist with HAZOP studies.

What we offer
ABB provides Process Safety Management (PSM) services across the lifecycle of facilities. In terms of HAZOP, ABB have extensive experience in providing the following services:

- Development of company standards and procedures for conducting HAZOP, retrospective HAZOP and re-validation HAZOP studies
- Provision of HAZOP and advanced HAZOP training - both in house and public courses
- Provision of HAZOP study team leaders and team members for the delivery of studies at both the design stage or when retrospectively (or re-validating) the HAZOP technique to existing facilities
- Conducting audits of PSM systems and specialist reviews of HAZOP studies
- Provision of HAZOP study team leaders and team members for the 5 yearly routine re-validation of HAZOP studies
- Prioritising of technical resource to address HAZOP action close out in a timely manner
The HAZOP methodology was invented by ICI in the 1960s. ABB bought the engineering services division of ICI in January 2001 and as such have the details of the ICI HAZOP methodology. The HAZOP methodology, as applied to projects and existing assets, is described in detail in ABB’s EPSHEG 13A and 24C procedures. Such procedures can be used as part of a safety management system as required under the COMAH regulations.

ABB has extensive experience in applying the HAZOP methodology to both projects and existing assets in a wide range of industry sectors. These studies are often conducted to meet regulatory requirements, internationally recognised standards and company requirements.

ABB has an internal accreditation scheme which requires that their HAZOP leaders be accredited as a ‘hazard study leader’. ABB has an 8 stage approach to conducting hazard studies over their lifecycle. A HAZOP study is the most detailed study of the 8 stage approach and is also known as hazard study 3.

ABB’s HAZOP scribes are technical engineers who are required to have passed a typing test for speed and accuracy and to have received training on the use of software. They have extensive experience in conducting large scale HAZOP studies and hence have good working knowledge of HAZOP software.

ABB also has extensive experience in addressing HAZOP recommendation close out. To assist with action close out the HAZOP reports can be set up to include action close out sheets ready for use. This helps to ensure a prompt transition to action closure. Real business benefit of conducting HAZOP studies can only be achieved through effective implementation of action close out.

**Benefits**
- Competent leaders experienced in facilitating multi-disciplined teams to help ensure effective hazard identification and risk assessment
- Use of a structured, rigorous methodology backed up by a long established written procedure to yield a quality report
- Use of best practice approaches to help maximise team effectiveness
- Reports recorded in a manner that are understood for more efficient future re-validations
- Well developed recommendations ready to be acted upon to achieve ALARP demonstration

**Why ABB?**
All our leaders are assessed for competency via our ISO 9000 approved assessment scheme. Many of our leaders deliver training courses both in house and publicly and as such are widely viewed as experts on this topic. To ensure continuous improvement ABB’s approach to HAZOP has evolved by utilising best practice approaches from many years of experience of conducting thousands of studies. On numerous occasions clients have come to ABB as a prior attempt at conducting a study has failed to meet quality expectations or they have struggled to find competent internal resources to support a time consuming study.