



Process Safety

Swissi Process Safety GmbH · Mattenstrasse 24, CH-4002 Basel

NEWSLETTER 2016-01

Your HAZOP studies together with Swissi Process Safety

Swissi Process Safety has a large team of experts who have conducted and chaired hundreds of risk analyses (e.g. HAZOP studies, ZHA, fault tree analysis, ...). The risk analysis were performed on single equipment, single facilities, whole plants or even sites, in different industrial sectors. Swissi Process Safety's risk analysis moderators and leaders are valued by customers for their expertise, systematic approach and efficiency. They can assist you with your HAZOP or other risk analyses using either your company's internal tools and guidance documents or using Swissi Process Safety's own tools.

What is a HAZOP?

A HAZOP (hazard and operability study) is a very structured and systematic risk analysis method that can be applied to a defined system, e.g. an equipment, an installation. During a HAZOP deviations from the intended design or from normal operation are analysed with the objective to:

- Identify potential hazards
- Identify potential operability issues and in particular identifying causes of operational disturbances and production deviations.

Once a potential hazard or operability issue has been identified as a result of a deviation, its risk level is determined from the combination of the consequences of the issue and the probability of occurrence of the deviation. If the risk is too high, it is reduced with either existing risk reducing measures, which are then verified and validated during the HAZOP, or by designing new risk reducing measures.

The HAZOP chairman – a leader and moderator

The systematic evaluation of the deviations is the core of the HAZOP study and is based on guidewords (e.g. too low, too high temperature). It is performed by a multi-disciplinary team under the guidance of a study leader, the HAZOP chairman. The chairman ensures that the analysis is performed systematically, i.e. all parts of the equipment or installation are considered, all deviations are considered.

More than just a leader, the HAZOP chairman is also a moderator. Indeed, the quality of the HAZOP will depend on the input of the individual HAZOP team members. Therefore a crucial task of the moderator is to ensure that all HAZOP team members are heard and feel free to give their input. This requires excellent interpersonal skills, as some team members might be more dominant than others.

Stopping discussion that are leading nowhere or allowing others to take place for a longer time as they might lead to the identification of new scenarios is also a decision the HAZOP leader has to perform. This tasks requires good judgment and experience. Hence more experienced leaders tend to be more efficient.

Tasks of the HAZOP chairman

Besides leading the HAZOP, the chairman is fulfilling various other tasks.

Before the actual start of the HAZOP, the chairman will discuss and fix the timelines and scope of the HAZOP with the project manager (for new installations) or plant owner (for existing plants) as well as ensuring that all the data required for the HAZOP is available (e.g. P&ID, SOP, material balances,

design information, instrumental documentation thermal safety data on materials or reactions etc). During the HAZOP, the chairman will communicate regularly the outcomes and ensure a good handover to the owner of the finished HAZOP highlighting the open actions.

In addition the chairman will also prepare the division of the installation and equipment into nodes on which the HAZOP will be conducted. The size of the nodes will affect the quality and timeline of the HAZOP and therefore has to be optimized.

Some HAZOP chairman might also be the secretary, writing down the scenarios and also revising them between sessions. However, the double function can be strenuous.

Conclusion

For a efficient and high quality HAZOP the chairman is key. It is recommended that he is well trained and independent of the project or installation as otherwise his judgment might be biased through his involvement in the plant or project daily business.

Swissi PS can provide experienced HAZOP chairman and leaders in multiple languages like English, German, French, Spanish and Dutch.

In addition Swissi PS provides additional training for future and current chairmans.

For further information please contact

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