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Spotting the Signs of a Slippery Slope

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ABSTRACT

As an executive when was the last time you took part in any element of functional safety assessment? HAZID, Inherent Safety Assessment, HAZAN, HAZOP, SIL, LOPA? Have you ever been involved in the mechanics of these assessments?

When tendering engineering scopes or responding to tenders, how do you make sure your team is making sure a proven approach to functional safety assesment is undertaken?

The author of this presentation has observed a worrying trend in functional safety assessment becoming a custom and practice approach within the energy industry and the supporting EPC houses. Our teams at Kent routinely conduct scores of each aspect of functional safety assessment each year.

It is an increasingly frequent occurence in these assessments that dispute arises over scenarios being unrealistic, particularly during HAZOP. Consequently, the participants do not see this as unusual. It can also be observed in EPC practice that HAZOP is occuring prematurely during FEED and even pre FEED activity.

HAZOP is a check, not the method for ensuring process safety. HAZID and HAZAN along with the corresponding design should both be complete before HAZOP. If they are not, is it any surprise that discussion over the credibility of scenarios becomes common place at HAZOP?

A central tenet of process safety is considering low probability high consequence scenarios. We should be beyond failing to consider low probability events. The discussion should be about what we do about them.

Another indication of poor practice is an over reliance on safety by addition, creating an illusion of safety by adding a barrier without evaluating if the barrier is more likely to fail than the incident is likely to occur. In turn, this leads to the fallacy of adding additional maintenance to organisations that are not liquidating their current maintenance.

These issues indicate the development of a latent and dangerous approach toward risk management. It is easy to slip into custom and practice over time. Diane Vaughan in The Challenger Launch Decision: Risky Technology, Culture, and Deviance at NASA (1996) describes this as the normalisation of deviance.

We discuss how, as an executive, you can make sure custom and practice is not taking the

place of the necessary disciplined approach to functional safety assessment, how to recognise when debate is taking the place of analysis, and how to create the necessary culture that emphasises mere debate is not enough, good analysis is needed.

KEY WORDS

HAZID, HAZAN, HAZOP, Analysis, Preparation, Normalisation, Deviance

BIOGRAPHY

For the last 36 years, Howard has worked on process plant all over the world, from downstream petrochemicals and refining through midstream to upstream onshore and offshore, from roles as a technician to executive consultancy.

As his seniority increased, he became increasingly involved in technical readiness and technical due diligence assessments, informing corporate acquisitions and recently guiding start ups using new energy technology applications.

Howard is known for his book 'Simplicity from Complexity' and providing clarity where others struggle.

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