SIS System Gap Assessment and Closure Plan

Armando Lara, Sumesh Bhaskaran and Danh Tang
LyondellBasell
Armando.Lara@lyondellbasell.com

Abstract

This paper explores the different elements of a plan to revamp an existing SIS system including the state of installed SIS technology, new market alternatives, maintenance procedures, work practices linking the Process Hazard Analysis to hardware and logic requirements, management of change processes, level of expertise and people development, nature of response to unplanned activation of SIS systems, and SIS culture.

The process to revamp the existing SIS system starts with a Gap Assessment. What are the best in the industry doing on these elements? What are the best practices within our own network of manufacturing sites? Who are the dominating suppliers, and what are the features of their SIS offering? What is the consistency between the PHA, associated SIL levels, and the ensuing hardware and logic requirements? These are questions that must be answered and then used to develop an understanding of the gap between current site practices and what the industry's best are currently doing.

Once the Gap Assessment has been performed, the closure plan must address these categories based on the magnitude of the gap and the relative priority the site places on each element.

This paper provides an overview of the approach recently used to assess the current gap on SIS systems and develop a plan to close this gap.