Excellence in Pressure Relief Systems Management through Evergreening Program

Mike Marshall  
Marathon Oil Company  
Findlay, Ohio  
mtmarshall@marathonoil.com

Nitin Talreja  
Oil & Gas Consulting Engineering Services  
Siemens Energy, Inc.  
Houston, Texas  
nitin.talreja@siemens.com

ABSTRACT

Most oil and gas refining and petrochemical organizations have a Process Safety Management (PSM) program that stems from the requirements outlined under OSHA's 29 CFR 1910.119. Some have a very extensive program that covers most of the 14 elements of PSM and is managed via an integrated platform while others follow an ad hoc approach that does not span all of the elements or is disjointed.

Maintaining accurate and current Process Safety Information (PSI) is a cumbersome and difficult task to accomplish due to the numerous sub-elements. One of the key sub-elements of PSI maintenance is the management of the pressure relief documentation. Historically this is an element that has not been given the attention it deserves. However, recent incidents in the industry have elevated the importance of maintaining accurate and current pressure relief systems documentation.

The ultimate goal is to allow all plant personnel to understand the basis of the current plant relief and flare header design and ensure that this current plant relief and flare header design provides adequate overpressure protection for all equipment. Thus, an evergreen program for relief systems documentation is created that is customized to fit the needs and resources of the operating company and has the ability to relate to the other PSI elements. As such, Marathon Oil Company and Siemens have collaborated to develop a best practice program for pressure relief systems evergreening.

This presentation will identify the drivers and the benefits of having an evergreening program for pressure relief systems documentation as well as explore the interdependency of the six proposed evergreening elements listed below:

1) Evergreening Workflow  
2) Resources and Processes  
3) Software and Tools  
4) Training  
5) Key Performance Indicators  
6) Auditing