

Making the Business Case for Process Safety

CCPS identifies the criteria that separate the top performing companies from the rest by studying its member companies. The essential feature is the rigorous adoption of process safety philosophy. The summary of the industry wide study suggests that industry can be benefitted in four ways 1) Corporate Responsibility 2) Business Flexibility 3) Risk Reduction and 4) Sustained Value. Thus process safety is essential in achieving excellence and increasing the profitability no matter the size of the company.

THE BENEFITS OF PROCESS SAFETY

Corporate Responsibility

Process Safety helps to display corporate responsibility through actions. Process safety principles helps first to plan things right, then doing it right.

Risk Reduction

The core of process safety is to prevent catastrophic events. However by adopting PSM programs it helps to prevent the likelihood of human injury, environmental damage, and associated cost in less severe events also.

Business Flexibility

When you openly display responsibility through implementing process safety program, your company achieve greater freedom and self-determination.

Sustained Value

When process safety is properly implemented, it helps to ensure a reliable process that can produce high quality products on time thus sustained value creation over time.

QUALITATIVE BENEFITS

QUANTITATIVE BENEFITS

However, business decisions in the early phase of the projects are solely based on the economic analysis. For example, Cost Benefit Analysis (CBA) is a systematic approach of assessing the life-cycle costs and benefits of public or private projects. In reality, every chemical process may also involve factors such as creating job opportunity, damaging environment due to accidental events and various other technical and social effects. As mentioned before, the benefits of adopting rigorous process safety program, other cost such as environmental damage, and inefficiency of management can be significantly reduced, it is necessary to establish a framework for considering these benefits during the early economic analysis so that decisions may be consistent with economical and process safety objectives. However, proper tool to convert the benefits of process safety to equivalent monetary value is non-existent.

The purpose of this research is to conceptualize of value process safety to evaluate technical and social advantages and disadvantages of a chemical plant. Fang (2004) used the value of risk (VaR) as an indicator of value of process safety based on the consequences and significances (Fang, Ford, and Mannan, 2004). He also suggested including various stochastic factors such as pegging a

market variable on it and how stock prices would be affected. He demonstrated with few examples that using (VaR) tool allows management to make better informed decision.

Future work in this area involves, extensive study of the proposed tool, finding drawbacks and implementing more useful realistic ideas for the complex process, validation and verification of the tool.