

STUDY OF HAZARD IDENTIFICATION TECHNIQUES ADOPTED BY OIL AND GAS INDUSTRIES FOR RISK ASSESSMENT

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ABSTRACT

Risk management in oil and gas industry play vital role in preventing accidents. In oil and gas industry risk assessment is carried out in conceptual stage to end of life cycle of the plant. Accidents in oil and gas industry give catastrophic result to the industry and affect the country's economy. Fire, explosion and toxic gas release from the oil and gas industry kills huge number of employees, publics and damage assets and impact the environment. Major accidents such as Bhopal, Flexibrough, Pipher Alpha, Seveso, BP Blow out, Indian Oil Terminal fire, Texas City, Deep water horizon, Macondo were results in many people died; damaged assets; impacted the environment. Over the last four decades management of risk, from the operation of hazardous facilities are being increased focus. These major accidents emphasize the importance of process safety in oil and gas industries. Risk management is used by oil and gas industry to manage the threats & risks in their operation. Risk management has many steps. The first and key step of risk assessment process is hazard identification. In this research an attempt is made to study the various techniques used by oil and gas industries to identify the hazards and their advantages and limitations. HAZID, HAZOP, SAFOP, Fire and Explosion Index, Mond Index, FMCA, LOPA, FTA are used by various companies to identify the hazards or causes of major incidents.

KEYWORDS: Hazard, HAZID, Risk, Accident, HAZOP, HACON, FMCA, LOPA etc