Volume : 2 | Issue : 1 | Jan 2013 • ISSN No 2277 - 8160

Research Paper | Engineering

Safty Engineering Practices in Processing Industries: An Analytical Survey

MOHAMMED AQUIL RESEARCH SCHOLAR CMJ UNIVERTSITY SHILLONG,MEGHALAYA

ABSTRACT

The dynamic influence of enhancing occupational safety and health (OSH) engineering systems at the organization level, both on the deduction of hazards and risks and on productivity, is now recognized by the public and private sector entity, employers and workers. While this standard was adopted with gusto in Europe and Asia, in India it received a lukewarm response compared to Quality and Environment standards. This paper discusses the authors' experience of implementing the safety engineering systems in the entire gamut of processing industries in india.

KEYWORDS: OSH, OHSAS, BSI, ASPL, SME, PLETHORA, OSH AUDIT

HPCL VIJAJ KILLED 57 INJURED 31

OHSAS- 18000 was developed by a group of 13 European certification companies and the British Standardisation Institute (BSI). The Occupational Health and Safety Assessment Series (OHSAS) 18000 correspond to the structure of ISO 14000 and thus can be implemented without conflicts where this is already being used. India has published IS 18001: 2007 Indian Standard on Occupational Health and Safety Engineering Systems— Requirements with Guidance for Use, which is based on OHSAS 18000 and adapted to the Indian needs.
IS 18001, similar to the other standards, names four phases of the improvement process: planning, implementation and operation, measurement and evaluation (checking and corrective action in OHSAS 18001), and engineering review.
Essential is the risk assessment process, which is described comprehensively in Annex C of IS 18001.
It comprises of six steps: Classifying work activities, identifying hazards, determining risks, deciding if risk is tolerable, preparing risk control action plan, and reviewing adequacy of action plan.

In India there are no authentic statistics on the number of companies certified for OHSAS orIS18001.

Information collected from various certification bodies indicates that approximately 3000 organizations have currently adopted these standards to benchmark their OH&S activities.

The reaction to introduction of any new system to control the existing activities is always the same.

Engineering view it as a method to bring discipline and bring in effective control and review.

Getting certified against a standard is an assurance to various stakeholders that OHS issues are addressed in a systematic manner. Middle engineering view it as some more amount of paper work.

Operators, Technicians and contract work men view it more as a hindrance in executing their work rather than as an improvement of their overall well being. A recent survey on Safety climate conducted in one of the leading refineries indicated the perception difference among different section of employees. Out of 17 elements surveyed for Acceptable Safety Perception Level (ASPL) as per top engineering 13 elements are above ASPL. As per Middle engineering only 6 elements are close to ASPL and when it came to Operators, Technicians and Contract workmen only 3 elements are close to or above ASPL.

Further analysis yielded plenty of actionable points for top and middle engineering. One of the main observations of the field level personnel was the inflexibility of the system or the system not being modified to meet local conditions. In the absence of a proper approach the system is not followed.

In the same survey it also came out that many field level personnel were sceptical about the utility of introduction of systems without proper hardware to support. For example, as per the permit a full body harness with fall arrester needs to be worn by all workmen. However if the contractor provides only safety belt the field level personnel view it as non implementation of OHS system properly.

Similar sentiment was expressed for accident investigation and training. Implementation of OHS system in service sector has its own challenges. As most of the work is outsourced (erection, commissioning, maintenance)spreading the message about the standards and making the madopt the standards has its limitations. Most contractors view adoption of standards as an additional cost. With high attrition rate among workmen, contractors face difficulty in implementing systems in a meaningful way. The system over a period of time deteriorates into just maintenance of records without implementation at the field level. Engineerings are not in a position to strictly enforce for a variety of reasons. At many remote places(Tier 2 and Tier 3 cities) it is very difficult to locate trained manpower.

OHSAS is also not popular among corporates (SME Sector) as it is a voluntary standard and the derived benefits of implementing OHS system are not clear. Many corporates do not see it as a competitive advantage. As one CEO described – it falls under the category of "Desirable but not essential"!

In India, so far no serious research was carried out by any academic institution on benefits of implementing OHS systems. Take for example the research carried out by HSE UK. In its recent report it chronicled how companies are getting benefited by effectively implementing the OHS systems.

The improvements included reduction in absenteeism, improvement in productivity, reduced insurance premiums and surprisingly ability to attract talent (safe and healthy workplace!).

The report even went to the extent of quantifying the amount companies saved by implementing OHS systems.

Even though there are plethora of laws governing every aspect of work, absence of enforcement mechanism and low punishment track record

makes companies flout all regulations with impunity.

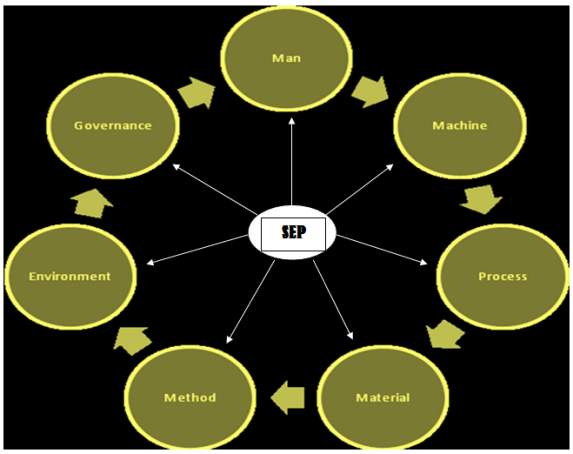
Take for example; Noise induced deafness an important provision in Factories act. So far there is only one case of court conviction in Maharashtra. In reality, there are number of industries where noise is a serious issue An effective health and safety engineering system requires strong leadership. A joint report from the Health and Safety Executive and the Institute of Directors entitled "Leading Health and Safety at Work" noted that those organisations with good systems tended to have leaders who provide visible, active commitment to health and safety, encourage workforce involvement in health and safety issues, and regularly monitor and review performance. Many high profile safety incidents are rooted in systemic leadership failures and a failure to recognise poor health and safety performance as a key risk in the field of industrial engineering.

Traditionally, OSH audit assessment was done only to serve own OSH discipline. It does not take into consideration the organization survival mission as a whole. As a result, the OSH approach and solutions were seen as isolated ones and had difficulty to get along in the mainstream of core functional areas or getting the top engineering attention. This resulted in any improvement on OSH was not taken seriously by the top engineering. Occupational health performance should be measured and integrated with other indusrial functions (Mercer 1998; Saunders & Wheeler 1991).

The OSH auditor should move into the new paradigm to move the OSH measurement into the organization mainstream therefore helping the top engineering to view OSH as part of a survival approach.

In absence of serious research it is difficult to conclude that introduction of OHSAS systems has brought about a reduction of accidents. However, in companies where serious attempt was made to introduce systems as well as sustain it with strong support from top engineering a sea of change in safety performance was witnessed. As always the key to success of any system depends upon close interplay between all stakeholders.

SAFTY ENGINEERING PROCESSES :



CONCLUSION

The Indian industry need to grow.
The aspect of safety assumes paramount importance.
The need of the hour is to change our perception from "Reactive" to "Proactive" in managing the affairs.
The point to be remembered is not to creat anymore opportunities or a chance for an industrial disaster to take place otherwise it would be catastrophic to both mankind and the nature.
We imbibe a culture of due diligence in discharging of our role and responsibilities effectively, cautiously and judiciously

REFERENCES

1. The Factories Act 1948, Madras Book Agency, Chennai, 2000 | 2. The Environment Act (Protection) 1986, Commercial Law Publishers (India) Pvt.Ltd., | New Delhi. | 3. Water (Prevention and control of pollution) act 1974, Commercial Law publishers | (India) Pvt.Ltd., New Delhi. | 4. Air (Prevention and control of pollution) act 1981, Commercial Law Publishers (India) | Pvt.Ltd., New Delhi. | 5. Explosive Act, 1884 and Explosive rules, 1883 (India), (2002), Eastern Book company, | Lucknow, 10th Edition | 6. The manufacture, storage and import of hazardous chemical rules 1989, Madras Book | Agency, Chennai. | 7. ISO 9000 to OHSAS 18001, Dr. K.C. Arora, S.K. Kataria & Sons, Delhi |