Implementation of a QHSE management system, Criteria and Methodologies

Feng Mengting
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Introduction

Nowadays there are many programs on product quality. As a matter of fact the product quality has to be considered not only related to the product or process itself but all the factors that contribute to the final integrating quality taking into account environment and workers health and safety. Later on the ‘Sistema Ambiente’ will be introduced as a management integration program of risk prevention and environmental quality which will guarantee and furthermore enhance the quality of the product as well as process in a comprehensive way.
1. Management systems and their integration

- Quality management systems (ISO 9000 series)
- Occupational Health and Safety management systems (OHSAS 18001)
- Environmental management systems (ISO 14001 series)

**QHSE Management System: Quality, Health, Safety and Environment Management System**

**IMS: Integrated management system**
1. Management systems and their integration

**Possibility of integration:**

Three management systems are in common following the Deming cycle (PDCA cycle) to achieve the continuous improvement of the management system in:

- Top management commitment
- Documentation and records control
- Definition of a policy
- Planning of objectives and targets
- Procedures for training of employees
- Communication procedures
- Audits
- Control of non-compliance
- Corrective and preventive actions
- Management review

**Core of integration:**

- Integrate in a functional and effective way to the objectives of enhancing business productivity, quality of work and the contribution of workers reducing the environmental impact of processes and products, leading technological and organizational innovation.

- Not a superposition of three management systems or simply to reduce the workload and reduce the cost of certification
2. Management system related to different organizational context

**Static Organization:**
- Overlap between ownership and management
- Strong verticalized management
- Workers with prevalent execution role
- Repetitive operations
- Stable technology and procedure
- Increasing autonomy of the manager
- De-centralized management
- Increasing role of the intellectual function and specialization
- Strong fragmentation of the executive work
- Greater availability of innovation
- Strong interaction with the market specialization of products

**Dynamic Management System!**
A dynamic management system is needed so as to recognize the complexity involved in understanding human and organizational system

**Dynamic Organization:**
Procedures Planning and setting

Safety procedures, emergency, hygiene

Environment Budget

Production Site, Public System, Ecosystem

Work Risk Analysis

Quality procedures, maintenance, audit

Register of interventions, measures and non-conformities

Reduction and increase the use of waste, reduction of emissions, Materials from fossil sources, reduction of consumption, environmental compatibility of products, Health and safety at work

Chemical Risk Management

Continuous improvement of procedure’s effectiveness

Ergonomic Analysis

construction management services

Equipment Safety Form

Extraction activities

Emission Origin Analysis

Waste Classification and Origin, Management Plan

Air emissions management

Environment Budget

Production Site, Public System, Ecosystem

Environmental Accounting

Environmental measures internal register

Waste water management

Health Protocols And Planning Setting

Health data biostatistics

Waste Classification and Origin, Management Plan

Accident Register and Statistics

Exploit the knowledge and experience of working groups

Enhancement of internal expertise

Collaboration between business functions on the sharing data

Updated information to be distributed in real time

3. Sistema Ambiente

Work Organization Analysis

Procedures Planning and setting

Safety procedures, emergency, hygiene

Environment Budget

Production Site, Public System, Ecosystem

Work Risk Analysis

Quality procedures, maintenance, audit

Register of interventions, measures and non-conformities

Reduction and increase the use of waste, reduction of emissions, Materials from fossil sources, reduction of consumption, environmental compatibility of products, Health and safety at work

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**Risk analysis**
- Analysis and Assessment of places, work phases, machines and components
- Chemical risks, explosive atmospheres
- Fire risk prevention and classification
- Food hygiene and Haccp

**Safety Plan**
- Procedures Management (safety, quality, maintenance, HACCP, systems measure and intervention planning, reports)
- Event Register
- Authorization, inspection and check management
- Instrument and measurement records and reports

**Sanitary Management**
- Protocol setting and planning
- Management of medical records, chemical analysis and vaccinations
- Statistical processing of the effects on health

**The control and worker’s protection instruments**
- Register data of employees and contractors
- Risk exposure historical files
- Accident records and statistic
- Calculation of equivalent level of exposure (noise, vibrations, chemical agents)
- Training and Information management
- Ergonomic and load risk analysis

**Management of environmental factors**
- Emissions to the atmosphere
- Waste water treatment
- Waste treatment
- Materials treatment
- Energy consumption management
- Automatic environmental accounting and environmental budget
3. Sistema Ambiente

Uniqueness of SA:

Enhancement of the active role of human resources

- Ergonomic Studies
- Homogeneous group risk analysis

Adaptation to the dynamic organization

- Risk individualization
4. Implementation of Sistema Ambiente

Application in an aeronautic company --- On Chemical Risk Evaluation

- Main page of chemicals
- Risk evaluation of chemicals
- Composition and characteristics of chemicals
Conclusion

- The concept of the product quality is not only related to the product or process itself but all the factors that bring an non-ignorable effect on the final integrating quality taking into account environment and workers health and safety.

- The ideology, according to which the Sistema Ambiente is developed, is that the prevention of risks and health and safety protection is the result of analytical work and a concrete methodology instead of trying to simplify things or do some superficial work.

- Collaborating with other systems like ERP and quality management systems in the company, Sistema Ambiente will help the company to realize progressive reorganization and continuous improvement.
Thank you!