



INSTRUCTIONAL NOTES

PART 1: OVERVIEW OF OCCUPATIONAL SAFETY, HEALTH & ENVIRONMENT.

1.1 Historical Perspective

POWERING AMBITIONS

Learning Objectives

- ▶ To describe the historical development of OSH management over the centuries.
- ▶ To explain the development of OSH Management System

Early Recognition Of Occupational Diseases

- ▶ Security-related laws and industry have existed since the reign of Hammurabi, around 2000 B.C.
- ▶ In 1473 a German physician, Ulrich Ellenborg, published the first known pamphlets on **occupational disease from gold miners**.
- ▶ In 1556 the German scholar, Agricola, described the diseases of miners. He noted the need to provide ventilation for miners and describe **“asthma”** among workers

Early Recognition Of Occupational Diseases

- ▶ In 1713 Bernardino Ramazzini, who is regarded as the father of occupational medicine, suggested that in diagnosis doctors should ask patients about their occupations.
 - ❖ Publish book “The disease of Workmen”
 - ❖ Advice physician to learn about occupational disease.

Emergency Of Industrial Accident

- ▶ During middle ages, death due to disease is much higher than industrial accidents as most people work on farms.
- ▶ Industrial accidents arose out of the Factory System during the Industrial Revolution in Britain in 18th Century (1700s).
- ▶ Women and children worked as heavy labourers under unsafe and unhealthy workplaces.



Emergency Of Industrial Safety Legislation

- ▶ In 1833 **English Factory Act** was the **first effective industrial safety law**. – (restricted child labour)
- ▶ It tends to provide **compensation** for accidents from controlling the source.

Emergency Of Industrial Safety Legislation

- ▶ Insurance company inspect the workplace and suggest preventive measures.
- ▶ Problem: **Safety became injury and insurance oriented**

Emergency Of Safety Management

- ▶ Role of Herbert W. Heinrich (1930's),
 - ▶ Developed **Domino Theory** and **promoted control of workers behaviour.**
- ▶ Problem:
 - ▶ Focused on **worker behaviour** and not management
 - ▶ Caused people to think that **safety is about policing worker**

Emergency Of Safety Management

- ▶ Frank Bird (1970) developed **Loss Control Theory**.
- ▶ Suggested that underlying cause of **accidents are lack of management controls and poor management decisions**.
- ▶ Problem:
 - ▶ Not so popular: **blames management** (responsibility and control).

Emergency Of Safety Management

- ▶ In 1980's, **Behavioural Based Safety** (BBS) was introduced;
- ▶ Based on Heinrich's findings.
- ▶ Work by recognizing safe work habits and offering rewards and punishment.
- ▶ Problem:
 - ▶ Focuses on **workers** and not on hazard or management
 - ▶ **Reward and punishment system have flaws**

Emergency Of Safety Management System

- ▶ Current development of Occupational Safety And Health management system was driven by **two parallel forces**:
 - A. **Self-regulatory legislation** in the United Kingdom (1974),
 - B. **Quality management movement**

A Self-Regulation Legislation

- ▶ **Lord Robens**, Chairman of a Royal Safety Commission Report that:
 - ▶ there was too many OSH legislation,
 - ▶ was fragmented,
 - ▶ limited in coverage (specific hazards & workplace),
 - ▶ out of date and difficult to update,
 - ▶ inflexible,
 - ▶ people thought that safety was what government inspectors enforced.

A Self-Regulation Legislation

- ▶ Lord Robens recommended
 - ▶ Self regulation
- ▶ Report resulted in the Health and Safety of Workers At Work Act in the UK in 1974 – This law is ahead of his time (Eg. USA at that time still using “command & control” concepts.)

A Self-Regulation Legislation

- ▶ Similar legislation was enacted in Australia in 1984
- ▶ Enacted in Malaysia in 1994 after the 1992 **Bright Sparkler accident** in Sungai Buloh

A Self-Regulation Legislation

- ▶ Features of “Robens style” legislation:
 - ▶ General **duties of care** by:
 - ▶ Employer, employee, manufacturer, designer, supplier
 - ▶ Duty of employer to make the workplace safe
 - ▶ **Consultation** with employees through **Safety and Health Committees**
 - ▶ **Safety and Health Officer as advisor and coordinator**
 - ▶ **Improvement and prohibition notices**

A Self-Regulation Legislation

Legislation follow major accidents and reinforce need for management system

ACCIDENT

Flixborough (1974)

Bhopal (1984)

Piper Alpha (1988)

REGULATION/PROGRAMME

CIMAH regulations 1996

“Responsible Care” /
Process safety

Risk Assessment /
Management system

Quality Management Approach to Occupational Safety & Health Management

- ▶ There are similar issues in safety management as in quality management
- ▶ Example:
 - ▶ Productivity
 - ▶ Worker involvement
 - ▶ Proactive approach
 - ▶ Customer and human rights



Quality Management Approach to Occupational Safety & Health Management

- ▶ Management system standards:
 - ▶ ISO 9000 QMS was proven successful and ISO 14000 EMS was introduced in 1996

Quality Management Approach to Occupational Safety & Health Management

- ▶ International and auditable OHSAS 18001 OSH Management System published in 1999
- ▶ ILO approved an OSH management system for governments to adopt during 2000

