

AMSE08 PRINCIPLES OF SAFETY MANAGEMENT

UNIT-1 INTRODUCTION SAFETY

- 1.1 Goals of safety engineering. Need for safety. Safety and productivity.
- 1.2 Definitions: Accident, Injury, Unsafe act, Unsafe Condition,
- 1.3 Dangerous Occurrence, Reportable accidents.
- 1.4 History of safety movement .Theories of accident causation Safety organization- objectives, types
- 1.5 Functions, Role of management, supervisors, workmen, unions, government and voluntary agencies in safety.
- 1.6 Safety policy. Safety Officer- responsibilities, authority. Safety committee- need, types, advantages

UNIT-2 ACCIDENT PREVENTION METHODS

- 2.1 Engineering, Education and Enforcement.
- 2.2 Safety Education & Training -Importance, Various training methods, Effectiveness of training, Behavior oriented training.
- 2.3 Communication- purpose, barrier to communication.
- 2.4 Housekeeping: Responsibility of management and employees. Advantages of good housekeeping. 5 s of housekeeping.
- 2.5 Work permit system- objectives, hot work and cold work permits.
- 2.6 Typical industrial models and methodology. Entry into confined spaces.

UNIT-3 PERSONAL PROTECTION IN THE WORK ENVIRONMENT

- 3.1 Types of PPEs, Personal protective equipment respiratory and no respiratory equipment. Standards related to PPEs.
- 3.2 Monitoring Safety Performance: Frequency rate, severity rate, incidence rate, activity rate.
- 3.3 Cost of accidents- Computation of Costs- Utility of Cost data.
- 3.4 Plant safety inspection, types, inspection procedure. Safety sampling techniques. Job safety analysis (JSA), Safety surveys, and Safety audits. Safety Inventory Technique.

UNIT-4 ACCIDENT INVESTIGATION

- 4.1 Why? When? Where? Who? & How? .Basics-Man Environment & Systems. Process of Investigation –Tools-Data Collection-Handling witnesses Case study.
- 4.2 Accident analysis- Analytical Techniques- System Safety- Change Analysis-MORT Multi Events Sequencing- TOR.

References Books:

1. N.V. Krishnan, Safety Management in Industry, Jaico Publishing House,1997
2. Ronald P. Blake, Industrial Safety:, Prentice Hall, New Delhi,1973
3. David L. Goetsch, Occupational Safety and health, Prentice Hall
4. Ted S. Ferry, Modern Accident Investigation and Analysis, John Wiley & Sons