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Institution of Safety Engineers (India)

“Aim to prevent Accident, Protect Environment & Minimise Losses during disaster”

www.iseindia.in



About us: Institution of Safety Engineers (India) is established in year 2012 under ZJEW Trust, Registered under Public Trust Act in India, **Govt. Registration No. 5240** with objective to prevent accident, Protect Environment & minimise Losses during Disaster. Institution of Safety Engineers (India) is An ISO 9001:20015 certified institution and working to save Natural resources & control pollution. ISE (India) imparting EHS related Training to society and needy people for creating employment opportunities.

Services: Institution of Safety Engineers (India) provides Services to Industries, organization, Institution or needy related to Safety Health Environment & Quality. Such Services help to Control Risk at work place, Protect environment, improving Quality & Safety performance in Organisation. Highly Qualified, Skilled & Experienced Professional perform such Task from Institution of Safety Engineers (India) ends. Services Provide by Institution of Safety Engineers (India) is here under:

- Services for ISO Auditing & Certification (ISO 9001:2015, ISO 14001:2015, BS OHSAS 18001:2007, ISO 45001:2018) etc.
- Developing safety Manuals, poster, banner, sticker, Pocket booklet.
- 3rd Party Safety Health Environment Quality (SHEQ) Audit, Training, Inspection, Environmental monitoring, Testing & examination of Tools, Tackles, equipments, structures etc.
- Consultation services for Emergency Plan, DMP, QAP, EIA, EMP, EC, Waste Mgt. Plan, HAZOP Study, Fire Load calculation & survey, Safety Mgt. Plan etc.

Training: Institution of Safety Engineers (India) Conduct Short Term Training to create awareness among people to work for Preventing accident, Protecting Environment, minimizing losses during Disaster and create employment opportunities as EHS professional. Job oriented and short term Training Courses conducted by Institution of Safety Engineers (India) are:





- ISE-SM (Safety Management at work place), 24 Hours Duration.
- ISE-ICCOHSEM (International Certificate Course in Occupational Health Safety & Environmental Plan Prevent Mgt.), Duration 96 hours.
- ISE-IDOHSEM (International Diploma in Occupational Health Safety & Environmental Mgt.), Duration One year.
- ISE-TQM (Total Quality Mgt.), Duration 24 hours.
- Integrated Lead Auditor (OHSAS 18001:2007, ISO 14001:2015, ISO 9001:2015), Duration 6 days & Lead Auditor (ISO 18001:2007), Lead Auditor (ISO 14001:2015), ISO 45001:2018 & Lead Auditor (ISO 9001:2015), Duration 30 hours each.
- Post Diploma Industrial Safety, Duration One year.
- Diploma in Industrial Safety/ Fire/ Environment, Duration One year.

Apart from this Institution of Safety Engineers (India) conduct Training on Topics like BBS, HAZOP Study, SHE legislation, First Aid etc. For more Details visit www.iseindia.in

Membership: Institution of Safety Engineers (India) also invites application for Membership. Member will be eligible to use Title SMISE/MISE/JMISE/IMSE/CMISE/OMISE before their Name and receive quarterly published Journal, newsletter and latest information related to Safety, Health, Environment & quality. Different research paper will also share with member that will help to identifying and improving Occupational health, Safety, Quality & Environmental performance in organisation. Member will be eligible to publish their article/ journal free of cost.

For more Details visit www.iseindia.in

Journal & Publication: Institution of Safety Engineers (India) published Journal Quarterly online and share with member and needy. Institution of Safety Engineers (India) accept Article / Journal from professional and editing team review to article and in case of shortlisted, it published in **International Journal of Institution of Safety Engineers (India)**. Institution of Safety Engineers (India) issue Journal publication certificate to author. For more details mail editor@iseindia.in

Award: To promoting Safety Health Environment & Quality Management System in organization, Institution of Safety Engineers (India) accept application and reward to elected person, organisation & Institution.





Safety Audit

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ABSTRACT

At current scenario, Safety Management system is very important tools of any organisation to manage safety at workplace. It help to grow business opportunities and increasing productivity to control organisation losses that arises due to accident. Poor Safety management system also effect to organisational performance. Causes of organisational losses are such sources that have potential to cause harm which is known as hazard or any unsafe practices that is carried by people. Different techniques used to identify hazard and ensuring suitable control measure to prevent any type of organisational losses or harm.

Safety Audit is Types of examination help in seeking opportunities to improve safety performance. In another way Safety Audit is defined as a techniques that is used to identify hazard and control them. This study indicate positive safety impacts to control organisational loses proactively and ensure safe work place. It focuses to identify Non-conformance and ensuring their compliance.

1. Keywords:

Safety Audit, Non-conformance identification, Risk Control, Risk Management.

2. Introduction:

Safety Audit is detailed examination of effectiveness, efficiency & reliability of organisational Safety performance. Safety Audit is proactive approach to identify organisational deficiency and correcting them. Safety Policy, Planning, Implementation & Operation, Measure & Evaluation, Management review and continual improvement are main element of safety management system and compliance of its all parts are checked and verify during Safety Audit.

Non-conformance means any deviation from work standard or rules or norms. **Auditee** is an organization or part of an organization that is being audited and Person or Team that have nominated or selected to conduct audit is known as **Auditor**.

External & Internal are Two Types of Safety Audit. External Audit is conducted by third party and internal audit is conducted by organisational people.

3. Purpose of Safety Audit:

- To check & verify Safety system of organisation that meet legal requirements or not.
- To ensure Zero organisational Loss.
- To Ensure Statutory requirements.
- To Identify & Control workplace risk.





To determine non-conformity or gaps where is opportunities to improve organisation Safety performance.

4. Element of Safety Audit;

Element of safety Audit depend on nature of organisation. Auditor identify Element before starting audit and they check and verify compliance of identified element that is applicable for that organisation. Main Element of Safety Audit are:

- Safety Policy
- Safety Manuals
- Organisation Charts with clear defined Role & Responsibility
- Safety Committee formation as per respective state and country legislation and compliance of Minutes of meeting.
- Safety Budget
- Health surveillance record
- Safety Training & Awareness Program and its Records
- Testing & Examination of Tools, Tackles & Equipments by competent person and its record
- Personnel Protective Equipments & its inspection record
- Work Permit System including procedure.
- Welfare Amenities (Toilet & Urinals, Rest Room, Drinking water, Canteen etc.)
- Operation control Procedure (OCP)/ Safe work Procedure (SWP)
- First Aid Record
- Accident investigation & Reporting
- Emergency preparedness and plan (Assembly point, Rescue Team & Equipments etc.)
- Mock Drill demonstration & its record.
- Safety Statistics Report
- Tools, Tackles & Records
- Safety Induction & Safety Training
- Safety Signage
- Housekeeping Inspection record.
- Fire Safety Management (Fire Detection & equipment, Emergency door, Emergency Sirens, availability of Fire Extinguishers. Display of emergency contact no. etc)

▪ Chemical Safety (MSDS, Safe Storage etc.)

▪ Occupational Health Centre (OHC)

▪ Safety Inspection procedure & record





Environmental monitoring & its record etc.

Auditor identify safety audit elements, check and verify their compliance. They Develop Standard format and write all observation and make effective safety audit report. Simple format of Audit report are

Safety Audit Report				
Name of Auditee: Date of Audit:			Name of Auditor:	
Sl. No.	Elements	Observation	Recommendation	Remarks

5. Procedure of Audit:

Procedure to conduct safety audit is

- **Select the team:** Select Team to conduct Audit. Auditor should be competence (Qualification & experience), Knowledgeable (Knowledge of Process), Knowledge of Legislation & Codes and they should have leadership quality.
- **Define role:** Define Clear Role and responsibility of Team member.
- **Identify Audit element:** Identify elements of Safety Audit that is applicable for organisation. It will help to Check and verify the system and to identify non-conformance in easy manner.
- **Conduct opening meeting:** Conduct opening meeting with Auditee before starting Audit.
- **Start Audit:** Start Audit and check the system, documents & examine work place physically.
- **Prepare Report:** Prepare Effective report with observation, Recommendation and good practices. Mentioned Legislation & Codes with observation that is applicable to ensure compliance on based non-conformance. Include introduction, Executive summary, Objective, Organisation Profile, Observation & Recommendation with Conclusion in effective manner in Report.
- **Closing meeting:** Organised closing meeting and Share Conformance and non-conformance with client/ Auditee and submit Safety Audit report to ensure compliance for improving organisational safety system.

6. Recommendation:

Select competent Auditor for safety Audit. Safety Audit will be effective if Audit is carried out by competent auditor. Competent Auditor means A person that have Process knowledge, Leadership





quality Knowledge about legislation & Codes, Enough experience & Qualification. Make Report in effective and simple manner to include introduction, Executive summary, Objective, Organisation Profile, Observation & Recommendation with Conclusion. Mention legislation & codes with observation in safety audit report. Such parts of legislation and codes will help to understand to management regarding their obligation related to safety.

7. Conclusion

Safety Audit help to identify Non-conformance and control work place risk. Safety audit is effective techniques used to control hazard. It is type of hazard identification procedures. Its effectiveness depends on safety Audit report and management commitment. Safety Audit always help to prevent organisational losses and improving safety culture within organisation. It is best method to measure safety performance of organisation and seeking gap where are possibility of improvement. Auditor check & verify compliance of identified Safety audit element that is applicable for that organisation. So Safety Audit is major tool used to ensure safety compliance to control work place risk.

References

- Study & Analysis of Occupational Health Safety Management System (OHSMS) in a organisation: Vol. 04, Issue 01, JAN- FEB, 2017 Pg. 34 – 39
- OSHA—Occupational Safety and Health Administration, “Occupational Safety and Health Guidelines,” 2009.
- IS 14489, Code of Practice on Occupational Safety & Health Audit





General- Law Related to Environmental, Health & Safety in India

The Factories Act 1948: Central government passed The Factories act for ensuring safety, Health and welfare of workers. The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)), serves to assist in formulating national policies in India with respect to occupational safety and health in factories and docks in India. It deals with various problems concerning safety, health, environment and well-being of the persons at work places.

The Act is administered by the Ministry of Labour and Employment in India through its Directorate General Factory Advice Service and Labour Institutes (DGFASLI) and by the State Governments through their factory inspectorates. DGFASLI advises the Central and State Governments on administration of the Factories Act and coordinating the factory inspection services in the States.

The Act is applicable to any factory whereon ten or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on, or whereon twenty or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on; but this does not include a mine, or a mobile unit belonging to the armed forces of the union, a railway running shed or a hotel, restaurant or eating place.

Major Contents of the Factories Act 1948: Various provisions are described in following chapters:

- Chapter I- Preliminary
- Chapter II- The Inspecting Staff
- Chapter III- Health
- Chapter IV- Safety
- Chapter IVA- Provisions relating to Hazardous processes
- Chapter V- Welfare and Grievance
- Chapter VI- Working hours of adults
- Chapter VII- Employment of young persons
- Chapter VIII- Annual leave with wages
- Chapter IX- Special provisions
- Chapter X- Penalties and procedure

• Chapter XI- Supplemental





General- Law Related to Environmental, Health & Safety



1986 - The Environment (Protection) Act authorizes the central government to protect and improve environmental quality, control and reduce pollution from all sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds. Environment Protection Act, 1986 is an Act of the Parliament of India. In the wake of the Bhopal Tragedy, the Government of India enacted the Environment Protection Act of 1986 under Article 253 of the Constitution. Passed in March 1986, it came into force on 19 November 1986.

1986 - The Environment (Protection) Rules lay down procedures for setting standards of emission or discharge of environmental pollutants.

1989 - The objective of Hazardous Waste (Management and Handling) Rules is to control the generation, collection, treatment, import, storage, and handling of hazardous waste.

1989 - The Manufacture, Storage, and Import of Hazardous Rules define the terms used in this context, and sets up an authority to inspect, once a year, the industrial activity connected with hazardous chemicals and isolated storage facilities.

1991 - The Public Liability Insurance Act and Rules and Amendment, 1992 was drawn up to provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident while handling any hazardous substance.

1998 - The Biomedical waste (Management and Handling) Rules is a legal binding on the health care institutions to streamline the process of proper handling of hospital waste such as segregation, disposal, collection, and treatment.

2000 - The Municipal Solid Wastes (Management and Handling) Rules, 2000 apply to every municipal authority responsible for the collection, segregation, storage, transportation, processing, and disposal of municipal solid wastes.

2000 - The Ozone Depleting Substances (Regulation and Control) Rules have been laid down for the regulation of production and consumption of ozone depleting substances.

2001 - The Batteries (Management and Handling) Rules, 2001 rules shall apply to every manufacturer, importer, re-conditioner, assembler, dealer, auctioneer, consumer, and bulk consumer involved in the manufacture, processing, sale, purchase, and use of batteries or components so as to regulate and ensure the environmentally safe disposal of used batteries.





2002 - The Biological Diversity Act is an act to provide for the conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of the benefits arising out of the use of biological resources and knowledge associated with it.

2002 - The Noise Pollution (Regulation and Control) (Amendment) Rules lay down such terms and conditions as are necessary to reduce noise pollution, permit use of loud speakers or public address systems during night hours (between 10:00 p.m. to 12:00 midnight) on or during any cultural or religious festive occasion

1927 - The Indian Forest Act and Amendment, 1984, is one of the many surviving colonial statutes. It was enacted to 'consolidate the law related to forest, the transit of forest produce, and the duty leviable on timber and other forest produce'.

1972 - The Wildlife Protection Act, Rules 1973 and Amendment 1991 provides for the protection of birds and animals and for all matters that are connected to it whether it be their habitat or the waterhole or the forests that sustain them.

1980 - The Forest (Conservation) Act and Rules, 1981, provides for the protection of and the conservation of the forests.

1974 - The Water (Prevention and Control of Pollution) Act establishes an institutional structure for preventing and abating water pollution. It establishes standards for water quality and effluent. Polluting industries must seek permission to discharge waste into effluent bodies.

1977 - The Water (Prevention and Control of Pollution) Cess Act provides for the levy and collection of cess or fees on water consuming industries and local authorities.

1978 - The Water (Prevention and Control of Pollution) Cess Rules contains the standard definitions and indicate the kind of and location of meters that every consumer of water is required to affix.

1981 - The Air (Prevention and Control of Pollution) Act provides for the control and abatement of air pollution. It entrusts the power of enforcing this act to the CPCB.

1982 - The Air (Prevention and Control of Pollution) Rules defines the procedures of the meetings of the Boards and the powers entrusted to them.

1982 - The Atomic Energy Act deals with the radioactive waste.

1987 - The Air (Prevention and Control of Pollution) Amendment Act empowers the central and state pollution control boards to meet with grave emergencies of air pollution.





1988: The Motor Vehicles Act states that all hazardous waste is to be properly packaged, labelled, and transported

The Gas Cylinders Rules, 2004: To ensure Safety measure to prevent losses or harm that arises due to gas cylinder accident.

Electricity Rule 1956: The Central Electricity Board had made IE rules in exercise of the powers conferred by section 37 of the Indian Electricity Act, 1910 for regulating the generation transmission supply and use of electrical energy and generally to carry out the purposes to control workplace risk & maintain standard as per said act.

1998: The BOCW (RECS), The Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Central Rules 1998, Duties of employer is to take all practicable steps to ensure the safety of employees at work and other people in the workplace.





PRINCIPLE OF SAFETY MANAGEMENT

Safety Management begins with incident management. Accident occurred at site due to unsafe acts & unsafe condition. When both conjugate at one point then accident happened. In other words, Human and mechanical failure are causes of accident.

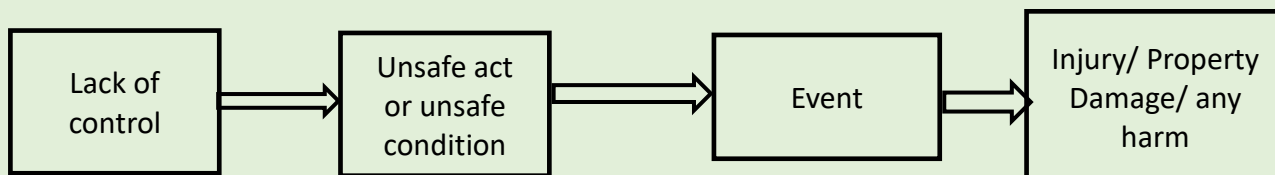
Committing mistake by person or Any act that may lead to accident is known as unsafe act.

Following are example of unsafe act:

- Working without wearing safety helmet & safety Shoes
- Working at height without wearing full body harness.
- Taking Rest in working Areas
- working or Taking rest below Hanging Load
- Over speeding
- Operating equipment without qualification or authorization.
- Lack of/or improper use of PPE
- Operating equipment at unsafe speeds
- Failure to warn
- Bypass or removal of safety devices
- Using defective equipment

Any sources or situation or condition that have potential to create accident is known as unsafe condition. Following are example of unsafe Condition:

- Damage welding Cable
- Mechanical guard not Provided on rotating parts
- Defective sling or lifting equipment.
- Defective work platform
- Floor or platform Opening, Pits
- Poor housekeeping
- Defective tools, equipment or supplies
- Inadequate supports or guards
- Congestion in the workplace
- Inadequate warning systems
- Hazardous atmospheric conditions etc.





Accident prevention Method: Accident can be prevented to control unsafe condition and prevent unsafe practices. Risk can be minimised As Low As reasonable practicable (ALARP) to eliminate hazard or Isolate hazard or Substitute process/ material or Administrative control method or to use of Personnel Protective Equipments (PPE's) or Two and more method together. PPE's is last consideration because it not eliminate hazard. It minimise severity of harm.





Training Calendar

ISE (India) Training Calendar (July-2018 to September-2018)

Training Title/ Course	Duration	Schedule	Location	Remarks
ISE-SM (Safety Management at work place)	3 day or Min.24 hours Training	06/07/2018 to 08/07/2018	Raipur	
IOSH MS	3 days	19/07/2018 to 21/07/2018	Raipur	
Safety Management In Engineering Industries	1 days	30/07/2018	Raipur	
ISE- ICCOHSEM (International Certificate course in Occupational Health Safety & Env. Mgt.)	Min. 96 hours Training	03/08/2018 to 10/08/2018	Raipur	Exam Schedule 11-08-18
IOSH MS	3 days	29/08/2018 to 31/08/2018	Raipur	
Lead Auditor 45001:2018		04/09/2018 to 08/09/2018	Raipur	
IOSH MS	3 days	19/09/2018 to 21/09/2018	Raipur	
ISE-SM (Safety Management at work place)	3 day or Min.24 hours Training	27/09/2018 to 29/09/2018	Raipur	
Diploma in Industrial Safety	One Year	2018-19 (Summer)		

Risk assessment & Control, Behaviour Based Safety, chemical safety in industries, Safety in construction industries, Scaffolding safety, Petroleum & Gas industries safety, Ergonomics, Mock Drill, HAZOP study, Emergency planning, Disaster Mgt., Fire Safety, Environmental Mgt., EIA Like Training also conduct as per organisational Need.

For more details visit www.iseindia.in or mail info@iseindia.in Call [07509487141](tel:07509487141)

