News & Journal Published by ZJEWT in association with Institution of Safety Engineers (India), Govt. Reg. No. 5240 IJISEI, Vol. No. 3, Issue 3, July-September 2020 Available online at www.ijournal.iseindia.in



International Journal of Institution of Safety Engineers (India) IJISEI

Volume-3, Issue-3, July – September 2020

Published by ZJEW Trust, in association with Institution of Safety Engineers (India) (Govt. Reg. No. 5240)

> Available online at **www.ijournal.iseindia.in** www.iseindia.in



International Journal of Institution of Safety Engineers (India



Accident,

Plan Prevent Protect



np sessol

Plan Prevent Protect

International Journal of Institution of Safety Engineers (India) np sessol (IJISEI)

Plan Prevent Protect

Accide

Volume-3, Issue-3, July - September 2020; Available online at www.ijournal.iseindicint Protect www.iseindia.in



Institution of Safety Engineers (India)

"Aim to prevent Accident, Protect Environment & Minimises Losses during disaster"



www.iseindia.in

About us: Institution of Safety Engineers (India) is Non - Profitable organization set up in year 2012 under ZJEW Trust, Govt. Reg. No. 5240 and working with objective to prevent accident, protect environment & minimize losses during disaster. Institution of safety engineers (India) imparting safety, health, environment & quality related training to needy & provide similar services to industries, organization, institution to achieve zero harm.



News & Journal Published by ZJEWT in association with Institution of Safety Engineers (India), Govt. Reg. No. 5240 IJISEI, Vol. No. 3, Issue 3, July-September 2020 Available online at www.ijournal.iseindia.in

Accident

www.iseindia.in



www.ijournal.iseindialinotect







This Issue Journal Include:

- IJISEI-V3-I3-1 ¹ Waste Management: A Review
- IJISEI-V3-I3-2 ² Study of Respiratory System illness in Process Industries
- ³The Occupational Safety, Health And Working Conditions Code, 2020 summary
- ⁴Industrial Relation Code, 2020 Summary
- ⁵Wordwide Corona Case Update

www.iseindia.in





www.ijournal.iseindia.inotec

News & Journal Published by ZJEWT in association with Institution of Safety Engineers (India), Govt. Reg. No. 5240 LJISEI, Vol. No. 3, Issue 3, July-September 2020 Available online at www.ijournal.iseindia.in

¹Waste Management: A Review Vishwash Goyal



Email id: vishwashgoyal@gmail.com

Abstract: The problems of waste generation and management have become a serious issue of concern to many countries. Although some countries are working in the direction of reducing it to the maximum. Examination of waste disposal and management should be administered by the key personnel to address such kinds of problem existed in the society. The Information such as the various classes of waste, frequency of waste disposal and methods of waste evacuation should be known to all so that they will find themselves in the state of managing such kind of activities which is called as waste management. The research and surveys conducted across the world clearly indicating that waste management practices adopted by any country needs to be upgraded and provide the result oriented output. Influential factor which may boost reduction waste generation could be the commitment towards providing a waste free environment. Besides, environmental enlightenment, industrial operation cannot be overlooked in this context. This aspect will enforce us to think about people's attitude towards waste generation and management in this specific area. At present time, waste management is requiring a holistic approach which will integrate all the technical, economic, social, cultural, and psychological factors that are often ignored in waste management programs.

Keyword: Waste Management, Waste Disposal Method, Waste Related Hazard and their control measure, 5R's

1. Introduction

Accide

Sesso

Plan Prevent Protect

At present, **"Waste Management"** is not a new word for anyone who is living in the 21st century. It is because of the fact that with the growth of industrial sectors and development in the technologies, an inevitable harassment of the environment is done by all of us. This could be converted into the ambience of environment if everyone on this earth thinks about the preservation of the environment from waste management point of view. In India, such kind of activity is generally governed by the government and other legislative parties like municipal committee but not effective to the extent which it has to be. So, it is crucial to think about it and take some step to manage it soundly.

Need of Waste Management: There is a need for a complete rethinking of "waste" - to analyses if

A holistic approach is needed to manage the waste with the use of technology and analysis of waste. For example waste could be act as the source of income if mould into other valuable items

and nowadays such kind of items are finding their values in the national as well as in international market significantly.

- A clear approach dealing in recycling that involves public-private partnerships, aiming force eventual waste minimization - driven at all level, and using low energy/low technology resources is needed and should be adopted by all the technocrats to manage the waste. Some of the defining criteria for future waste minimization programs will include deeper community participation, understanding economic benefits/recovery of waste, focusing on life cycles (rather than end-of-pipe solutions), decentralized management of waste.
 - 2. Types of waste generated: There are so many categories available but major categories in which waste can be broadly classified may be given as follows:



Fig. 1, Waste Categorisation

3. Hazard associated with the waste: Hazard may be defined as the situation or the thing which

has the potential to cause harm is known as the hazard.

www.iseindia.in

Hazards broadly classified into four main categories as per following chart:



Accident



Fig. 2, Hazard Classification

- Mechanical Hazard: Mechanical hazard associated with the waste management may be defined as the cut, abrasion or bruise formation on the body while handling the sharp edge materials like metal scrap. Mechanical hazard sometime result in the critical injury while handling different kind of waste related to metal and others. Immediate care must be provided upon happening of any accident related to mechanical. Personal protection must be taken in due consideration of safety like gloves, goggles and helmet.
- Electrical Hazard: Electrical hazard may be defined as the hazard which may pose the risk to the person by electrocution or shock while disposing of the electrical waste. It may be due to charge stored in the discarded items which is sometime also known as the static charge or may be due to charged batteries which are not discharged fully before disposing. Electrical hazards sometime become disastrous for the waste handler if not properly handled. Due to such kind of hazard present in the electrical waste, care must be taken. Personal protection should never be overlooked while handling such kind of waste by wearing face shield, electrical resistant gloves, shock proof covering and safety shoes.
- Chemical Hazard: Chemical hazard may be defined as the presence of chemical in the discarded container which may attack on the body and harm the person who is handling the same. Critical care must be taken while handling such kind of waste and ensure that all the celdent discarded or waste containers are free from the residue. Along with it, personal protection must be worn while handling such kind of waste like gloves, goggles, apron, gumboots, respirator and others as applicable.

In identifying the health impacts of chemical and biological agents, the possible obstructing factors include the following: the long period before the effect becomes manifested, the Plan Prevent Protect inficity of causes of diseases (which makes it difficult to distinguish occupational et diseases from diseases caused by, e.g., unhygienic living conditions); the lack of knowledge mechanisms involved in the pathogenesis of human chronic diseases; and a wrong classification of diseases. Chemicals that pose risks include chlorine, fluorine, paper bleaching, deinking, pulping agents, plastic additives and equipment cleaning solvents, and insecticides and herbicides. Contact with skin or inhalation or even ingestion of these chemicals can cause dermatitis, disorder to the central nervous system, and possible liver and kidney damage. Excessive heat generated from the metal melted may produced the dangerous gases which can cause the ill health condition. Exposure to chemicals can also cause irritation to the skin and respiratory tract and potential damage to the liver and central nervous system. Inhalation of metal, glass, paper, or plastic dust from shredding, damaging, and detaining can cause or aggravate chest discomfort, bronchitis, or asthma. Respiratory tract may get damage or fail to operate while working in the chemical prone area. Chronic exposure to some heavy metals may cause cancer and adverse effects to the central nervous gastrointestinal system. Disposal of old batteries and electronic and electrical appliances such as cell phones, radios, computers, televisions, digital satellite decoders, and fluorescent tubes may pose danger as these contain toxic substances such as mercury, lead, and cadmium.

- Environmental Hazard: Environmental hazards may be defined as the release of unwanted chemicals or other material in the environment and has direct or indirect effect on the environment. It may be consider as the accidental release of the chemical or used black oil from the discarded containers while disposing. Special care must be taken to avoid such kind of hazards. Usage of personal protective equipment is highly recommended while handling such kind of waste and spill response material must be available in the vicinity of storage of such kind of waste.
- Ergonomic Hazard: Ergonomic hazards in the informal enterprises result from carrying or lifting heavy loads, repetitive movement and work, that is, shoveling, muscular-skeletal disorders resulting from handling heavy containers, heat stress resulting from exposure to excessive temperatures, and hearing loss due to too much exposure to excessive noise.

Development of fatigue due to repetitive and cumbersome job like pick and keep down of the material continuously also consider as the source of development of musculoskeletal diseases i.e. MSD. Waste collection workers must lift, twist, and dump heavy bins and bags

www.iseindia.in

Sessol

and during curbside sorting the lifting can exceed guidelines recommended and hence is

Plan Prevent Manual sorting tasks often require reaching, lifting, and twisting and this can cause workerset pain, soreness, general fatigue, tendonitis, and musculoskeletal injuries of the feet, arms, shoulders, hands, wrists, and lower and upper back. The factors contributing the ergonomic hazards are mainly considered as the way of doing things, sitting gesture, movement of arm or wrist and stress taken.

Bio-logical Hazard: Biological hazards associated with waste generated and disposed of in the informal sector enterprises include water borne diseases resulting from flies and mosquitoes breeding in dumping sites around the enterprises. Various infections transmitted by insects while handling the different kind of waste generated and collected. Disease like diarrhea is also cause by the contaminated water in the various form viz. stagnation into small pools. Workers may be infected by biological agents such as bacteria and viruses that contaminate waste, which are usually formed from the decomposition of matter and result in infections. Cuts or puncture wounds from broken glass, metal edges, or needles become the site of infection following exposure to bacteria and viruses and the infections include hepatitis B, fungi, or parasites. Common health problems associated with exposure to certain bacteria, fungi, and viruses include contact dermatitis infections, diarrhea, and skin diseases. Long-term occupational exposure to contaminated air in composting operations can include allergic responses such as asthma, chronic bronchitis, and hay fever. There is some others ill effect of waste on the health of worker which contribute in the deterioration of their health. Workers in paper sorting operations have the highest incidence or chances of lung infections compared to all other waste workers and this is a result of high levels of organic dust and end toxins (poisonous substances produced by bacteria in the air). Contaminated and polluted and stagnated water is also responsible for developing so many disease like malaria and dengue among the waste handlers. Dermal and blood infections from direct contact with waste and from infected wounds, zoonosis resulting from bites by stray animals feeding on waste, and enteric infections transmitted by insects are the other biological hazards.

4. Hierarchy of control in the waste management

- a. Elimination: Elimination is the best possible solution if feasible in terms of the generation
 - the headache of managing it.

burstitution: Substitution means the adoption of the technology which may produce the sessoless waste. This will help us to manage it properly with less difficulty.

- Plan Prevent Engineering Control: Implementing the technology and design engineering print theer machinery may reduce the waste and helps in managing the waste. For example: if a machine is producing a material by removing the material in the form of chip and chip is spreading everywhere. Then it will become difficult to manage such kind of waste and may encounter with some kind of accident. To control this, a collector of chip can be mounted on the machine to collect such chips so that it will manage easily.
 - d. Administration Control: Administration control may be applied to the machines which are continuously running without having a break. This will reduce the performance of the machine and will generate the waste in the form of oil and others. To reduce such kind of waste, machine should be operated and provided with the pre-defined breaks for resting. It will helps in presenting such kind of leakages and other problems.
 - e. **Personal Protective Equipment:** Personal protective equipment while handling different kind of waste is highly recommends. This is because, it has been seen that various hazard are associated with the waste generated due to different kind of activities. So, the preventive measure must be taken to avoid the encounter with such kind of problem.

5. Waste Disposal

Waste can be disposed in the different forms and could be explained as follows:

5.1. Composting and Vermi composting

This method is useful for the disposal of biodegradable waste. It may be defines as the waste which is easily decompose and can be remold into other useful product. Different biodegradable waste can be dumped in a pit for conversion into useful product which is known as composting.

The process of decomposition may take around 2 to 3 months. To make the process fast, red worms may be used for composting. This method is called vermin composting. Vermi composting is the high-quality manure.

5.2 Land Filling

The garbage used for filling a deep pit or hole or a ground is known as landfill. The garbage is loaded into the truck and dumped in the landfill. When that area is fully covered with the garbage is it is covered with layers of soil. Now it can be converted into a park or a playground.

It is used to manage and disposing the medical waste generated in the industries or hospitals or any the plan Prevent Protect other concerned area of operation. Waste burning at high temperature is called at incineration. It will help in the reduction of wastage and could be disposed of easily.

6. 5Rs of waste disposal

5.3. Incineration

It is necessary to adopt/focus on 5Rs principles (Refuse, Reduce, Reuse, Repurpose and Recycle) of waste management for sustainable development.

Refuse: The first element of the 5 R's is Refuse. A practice to refusing the waste will help us to some extent but will be helpful if corporate in our industrial routine then it will be more effective and result producing in terms of waste management. Always try to decline the usage of non-recyclable or waste product in terms of refusing. While working with stake holders always keep sustainability the prime concern and purchase the sustainable packaging material only which will environment friendly and harmless. Revise procurement policy for the material and goods for preserving the environment from waste point of view. Set a standard SOP for the waste management in the business and organization context so as to minimize the usage of such product which could not be degraded after use then just refuse to use it.

Reduce: Lowering the generation of waste is also enable us to manage the waste indirectly but would be a good practice if maintained on routine basis. It will decrease the amount of toxic and dangerous product usage. Reduction will also depend on the end user what kind of the product they are going to purchase and what is the life cycle of it. It should also be consider and would help in reducing the waste. Environmental impact from such kind of activity can't be ignored or over ruled because the positivity and negativity of such impact will help us decide the waste management existence. It is always recommended while using the product tries to reduce the waste generated due to it. It could be done in the various ways by taking small initiative. For instance like printing a paper a one side and not utilizing the other side is indirectly generating the waste, try to utilize the both side to maximum so that less waste generated.

Re-Use: The product which has one time use is now the old fashioned. It is the time to purchase the product which is versatile in nature and could be use in the multi ways so that life cycle of that product could be fully utilized. Nowadays we are seeing the trend of multiuse plastic in the industry which is quite commendable for all of the environmental preservers because it opens the different ways to manage the plastic. Remold yourself into new person by procuring the stuff which could be used again and again. It will create a positive impact on the environment and society in the

productive manner and the outcome of it could be experience by all. It will be an intangible change that could only be experienced by the persons who are doing the same.

Redefine: Defining a product or thing in terms of its usage is called as the redefine in context of waste management. In broad way, it means a lot to someone who knows the potential in this definition for example a canister bought by someone which is full of the liquid that must been consumed by the customer there after the throwing of can is not good it could be used as the storage container for keeping other thing that would give it a new purpose. Similarly there are many ways to define the product or thing into other translation. It is the time to drive the kind of culture across the community to make them aware regarding the environment preservation by managing the waste. This will help us to preserve the world for our upcoming generation. Common station for pick and drop of such product that could be taken by the someone who need will provide the better result in terms of redefine the product.

Recycle: It is the only option we are left with after applying all the method of managing the waste it would be helpful only when it is impossible to manage the waste by applying the above mentioned method. Transforming a product into other useful product by some means is called as the Recycling. For illustration: transformation of the plastic into granules and then these granules will be heated and in molten form could be converted into the meaningful product. There are many companies in the society which are recycling the waste into useful means and approved from the pollution control board. The government is providing the grant and subsidy on setup of such kind of facility for managing the waste on national level. There are many in India who are currently working and some are involve in the projects given by the government bodies such as engineering departments run by government.

These are the key method to manage the waste as of now and many are under development once developed will be shared.

7. Training & Awareness:

Training and awareness regarding the waste management must be imparted periodically by the qualified trainers and staff to the waste collector and segregators. Training & awareness plays an important role in improving the morale of the workers who are handling different kind of waste.

8. Safety Precautions while handling different kind of waste:

- Never attempt any suspicious waste which is not known.
- Always wear protective equipment prior to handling of any kind of waste.
- Always collect the waste in the segregated form like Solid, Liquid and others.
- Always try to pack the waste in the tight packing so that it will not spread.

Disposal of waste should be at the authorized disposal agency and should not be left openly after collection.

www.ijournal.iseindialinotect

Acciden

Hazardous waste like sludge, used black oil, e-waste and others must be disposed with care

- Plan Prevent Protect d housekeeping must be ensuring after collecting the waste from the area. Plan Prevent Protect
 - Sanitization of the area must be done properly after collecting the vulnerable waste such as food scrap, vegetable remains and others.
 - Storage of waste must be done where there is no possibility of fire or explosion and must be provide with the adequate fire safety measure like fire extinguisher, fire hydrant and sprinkler systems.
- **9. Conclusion:** In India, the major problem associated with the development is the population growth. The current situation is that due to inadequate waste infrastructure, the informal sector and waste dumping sites are facing so many problems to deal with different kind of waste. Lack of interest and participation towards building a waste free community can be experienced by anyone who is seriously concerned about the waste management. There is utmost need for running the seminars and campaign for the public and community wellness towards changing the attitude for handling the waste and some fundamental training session could be act as the initiator in such kind of the activities. Sustainable and economical way of managing the waste will help us to lower the waste generation and disposal of the same will be less cumbersome for any managing company or agency. One can think about the generation of the energy by utilizing the waste into useful mean such as extraction of oil from plastic waste. In India, it's a war like situation to manage this huge amount of waste generated every hour whether it is domestic or industrial. Till these fundamental requirements of managing the waste are met, India will continue to suffer from poor waste management and the associated impacts on public health and the environment.

Reference:

- Fourie, A. (2006) Municipal solid waste management as a luxury item. Waste Management 26, 801–802.
 European Environmental Agency (2015b) Waste prevention in Europe the status in 2014. European Environment Agency. Available at: http://www.eea.europa.eu/publications/ waste-prevention-in-europe-2015
- Rahman, Md. Atiqur., Hassan, Dr. Khondoker, Mahbub., "Scenario of Market Waste Management and Environmental Degradation: A Case Study in Khulna City Area," Proceedings of the Waste Safe 2013 -3,d International Conference on Solid Waste management in the Developing Countries 10-12 February 2013, Khulna, Bangladesh.

Areole. A. Taiwo., "Waste management towards sustainable development in Nigeria. A case study of Lagos state: International NGO Journal Vol. 4 (4), pp. 173-179, April 2009 Google Wikipedia and other reference Books.

www.iseindia.in

²Study of Respiratory System illness in Process Industries Rozi Firdos, BHMS (Scholar) from MHMCH, Muzaffarpur

Email id: <u>firdosrozi@gmail.com</u>

Abstract: In Process industries, every year several peoples suffer with respiratory system illness and such respiratory illness also results death of people in severe cases. Human body is made of different organ system in which one major organ system is respiratory system. Respiratory system work of breathing and it is known as inhalation and exhalation. Respiratory system can be effects due to exposure of poor air quality or generated hazardous agents of workplace. In industries, several type of occupational health diseases occur in which one major types of diseases is respiratory illness. In this study, function of respiratory system covered, potential sources of harm to respiratory system are also identified and how such illness occurs due to exposure is described. In this study, effective control measure including health study of employees also included to prevent disease related to respiratory system or minimize respiratory illness related risk. Therefore, this paper is very helpful to control respiratory illness that occur due to exposure of hazardous agent or poor quality of air that generates during process facility or operation in process industries.

Keyword: Occupational health, Hazardous agent, workplace poor air quality, Respiratory system illness or disease, Respiratory system illness prevention, Risk control

Objective

Plan Prevent Protect

Objective to conduct this study and publish paper is to identify potential sources of respiratory system illness of workplace and ensure their effective control measure to eliminate or minimize such risk and to prevent occupational respiratory disease or death. To prevent such respiratory illness or diseases, increase organization reputation and improve occupational health safety performance in process industries.

1. Introduction

Occupational health safety is major parameter to grow business of any process industries. In process or chemical industries, availability of different sources or situation or release/emit fumes or gases or dusts during material storage and process facility, results health disease due to their hazardous nature and these sources has also potential to cause harm to environment. Few sources have potential to cause harm to human respiratory systems due to exposure of such gases or vapors or dust that are present at workplace in industries. Exposure to employees may be several ways/routes such as inhalation, skin contact, ingestion or injection but majority of respiratory illness occurs due inhalation of poor air quality or hazardous agent.

15

Plan Prevent Protect

Human body structure is same as machine. Human body are made up of different components such as cells, Tissues, organs, Systems. A organ system is major components units of human body. There are protected by the system work with different component of body together to alive. Integumentary entropy of second skeletal, muscular, cardiovascular, endocrine, nervous, respiratory, lymphatic, digestive, urinary, and reproductive systems are major organ system of human body. Organ systems are the most complex component units and perform complex functions for the human body.



Fig. 1, Inhalation & Exhalation

Respiratory system is a group of organs and it is responsible for breathing. Lungs is primary organ of respiratory system and it includes nasal passage, pharynx, oral cavity, larynx, trachea, bronchi and bronchioles. Respiratory system exchange to oxygen and carbon dioxide between the human body and air, acid-base balance regulation, phonation. Respiratory system work with different human body components to fulfill human need to alive.

There may be several causes of person death in industries in which one causes are respiratory disease. Respiratory system disease may be allergy, asthma, bronchitis, lungs cancer or other and such disease are notified in respective state or country legislation. In India, few respiratory diseases that concerned with factories are notified in schedule of III of The factories Act 1948. Respiratory illness may be results breathing problem, allergies, bronchitis, asthma, Pneumonia, lungs cancer and damage to any components of respiratory system due to inhalation of Poor quality air or mixed hazardous agent with air. Respiratory system can be subdivided into upper respiratory track & lower respiratory track (**Fig. 2**).







Fig. 2, Respiratory System

2. Function of Respirator System

Respiratory system is group of organ and tissue that help us to breathe. Respiratory system helps to absorb oxygen from air and transmit to lungs, organs, bloods, and remove to waste gases such as carbon mono-oxide (CO) from blood and organ through exhalation. Respiratory system works for respiration (breathing). This is major components of human body. Respiration process divided in two parts

- Inhalation (Inspiration)
- Exhalation (Expiration)

External respiration is also known as breathing and it involve bringing air into lungs (inhalation) and release air to the atmosphere (Exhalation) from body. In Internal Respiration, Oxygen and Carbon Dioxide (CO₂) are exchanged between the cells and blood vessels of body. Major function of Respiratory System is gas exchange, Acid base balance, Phonation, Pulmonary defense and the handling of bioactive materials. Respiration starts from nose or mouth.









Table 1, Functions of Respiratory System

Primary Function	Secondary Function		
Primary Function of Respirator Systems are:	Secondary Function of Respirator Systems are:		
 Provide oxygen for metabolism in the 	 Facilities sense of smell 		
Tissue	 Produces Speech 		
 Remove Carbon-dioxide, the waste 	 Maintain Acid-Base Balance 		
products of Metabolism	 Maintain Heat Balance 		
In simple, Primary function of respiratory	 Maintain body water level 		
system is breathing			

3. Potential sources or agents that create respiratory illness

Many substances or agents found at workplace in process industries that can harm to respiratory system and it results respiratory illness or disease. Such diseases occur due to exposure of hazardous gases (toxins) or dusts or fumes and it irritate to the lining in human lungs. Few major potential sources that results respiratory system illness or diseases include:

www.ijournal.iseindialinotect

Fumes, Fine particles and similar hazardous sources that emits during welding, gas cutting, brazing, furnace work, manufacturing of plastic and rubber operation, pottery making and others, we Plan Prevent Protect Work can result respiratory illness.

- Coal dust, cotton dust, wood dust, silica and asbestos particles harmful for lungs. Pesticides, enzyme or drug powders and fiberglass can also harm to lungs.
- Inhalation of smoke that generates from burning materials harm to lungs. Smoke contains a variety of particles, vapors and gases and it increase the risk of respiratory illness.
- Mists or sprays from paints, varnish, hair spray, pesticides, cleaning products, acids, oils, and solvents create respiratory illness.
- Gases such as formaldehyde, ammonia, chlorine, sulfur dioxide, and nitrogen oxides emits/release during chemical operation may results respiratory illness. Several chemicals use in lab can also harm to lungs.

Several liquids form vapors and such vapors have potential to cause harm to lungs. In cement or metal industries there may be several sources lead to cause of respiratory illness due to inhalation of lime stone dust or coal dust or cement dust or other similar hazardous dust or fumes or vapours.

4. Factor that Effect to respiratory system

Respiratory illness in industries depends upon several factors. Few factors that contribute to increase or reduce risk to respiratory illness are:

- ✓ Availability of Hazardous agent/ poor Air quality at workplace
- ✓ Route of exposure
- ✓ Human body susceptibility
- ✓ Health Surveillance
- ✓ Use of Personnel Protective equipments (PPE's)
- ✓ Work rotation and duration of work/ limit of exposure

5. Type of effect & Symptoms of un-healthy respiratory System

Exposure of hazardous agent may be acute or chronic effect. Acute effect means short-term exposure of hazardous agents. Such effect occur due to inhalation of hazardous gases/dust/fumes or poor quality air and it immediate effects to organ and tissue of respiratory system. Chronic effect means long-term exposure of hazardous agents and harm or effect to organ and tissue of respiratory system. In case of infection or un-healthy respiratory systems below symptoms can be seen

Shortness of breath/ difficulties in breathing

SossoWheezing or Cough

Plan Prevent Protect tightness

Accide

- Sensation or minor pain in chest
- Weakness/ Lack of energy
- Frequent respiratory infections
- Unintended weight loss (in later stages)

In Few case, un-healthy respiratory system symptoms shows fever, minor pain in head, running nose or vomiting. A chronic cough that may produce mucus (sputum) and it may be clear, white, yellow or greenish. In Severe stage of respiratory illness, it may results lungs cancer or failure of respiratory organs and person can die. Lungs manage required oxygen level to body organ and If person unable to receive adequate Oxygen/air then he feel shortness of breath or cough or wheeze and such symptoms showing stage of respiratory illness.



Fig. 4, distinguish between healthy lungs & un-healthy lungs

6. Major respiratory illness or disease occur in industries are

Major Respiratory Illnesses and diseases in industries may be:

- Occupational/work related asthma.
- Chronic Bronchitis.
- Cystic Fibrosis/Bronchiectasis
- Chronic Obstructive Pulmonary Disease (COPD)

Emphysema.

Pleural Effusion.

Pneumonia.



np sessol

Plan Prevent Protect

www.iseindia.in

www.ijournal.iseindia.inotect

6.1 Occupational Asthma: Occupational asthma is respiratory system disorder, caused by Plan Prevent Protect breathing in hazardous fumes, gases, dust or other substances at workplace. Asthma can be develops in person due to single exposure (Acute effect) or multi exposure (chronic effect). Reactive airways dysfunction syndrome (RADS) and it is also known as acute irritantinduced asthma. Work related asthma can be categorized in below way:



Fig. 5, work related Asthma

6.2 Chronic (Industrial) Bronchitis: Bronchitis is inflammation of the large airways of the lungs that occurs in employees who work in poor quality area of process industries. Inflammation is also known as swelling. Similar above illness disorder to respiratory system and symptoms may be varies as per nature of diseases. Presence of asbestos particles at workplace may lead to cause of asbestosis, silica particles can result silicosis and other several particles found at workplace of process industries that may results respiratory illness due to personnel exposure. Apart from this cough, shortness of breath, minor fever like symptom also seen in case of respiratory illness. In Severe stage, it may cause of lungs cancer, failure of respiratory system and

its results death.

Accident,

Lung Cancer.

6.3 Study Results

To know and identify respiratory system illness symptoms among working personnel of process industries, lungs function test conducted on 173 employees including workers of different age

group and found symptoms of illness, age above 45 is more respect to age below 45 year of employees. Lungs function test conducted through spirometer and this is known as pulmonary function test. In total 173 employees, 14 employees found symptom of respiratory illness inect which 11 were very mild symptom. On based on symptoms, we can't confirm that person is sustaining from respiratory system illness/disease till deep examination/investigation not conducted by specialist doctor. Counseling also conducted of employees to know their breathing condition and based on this analysis, chart drawn (Fig. 6 & Fig. 7).



Fig. 6, Healthy and unhealthy lungs (on based on symptoms of illness) age wise



Question asked during counselling of employees	Result status			
	Yes	No	Remarks	
Shortness of breath (breathlessness) during any times in days				
Shortness of breath (breathlessness) during sleeping only?			~	
Shortness of breath to long time continuously?				
Have you feel cough?				
Have you feel new and persistent Cough?				
Have Cough up mucus, phlegm or blood?				
In change in breath as per age changing?		3		
Chest tightness and wheezing?		$\langle \rangle$	D	
Have u faced frequent chest infections?				
Chest sensation and chest pain?	<u> </u>			
Have u feel Fatigue or observed sudden weight loss?	. 3			
Are you a smoker or ex-smoker?				
Have you worked in dusty or availability of fumes or gases or poor air quality area?)			
Work limit of exposure considered, if workplace air quality is poor (Un-healthy)?				
Were you wear respirator/ suitable mask to reduce severity of harm of exposure?				







A

 \geq

Fig. 7, Pulmonary (lungs) function Test



ent Accident, A

www.ijournal.iseindialinotect

7. How can occupational respiratory illness/ disease diagnosed?

Any person feeling symptoms of breathing difficulty or suspecting respiratory illness, Need to so of the plan Prevent Protect company doctor. Doctor will review symptoms and conduct counselling to ask such Protect

question:

- When you feel/appear first Symptoms?
- How often do you symptoms?
- Your nature of work, working time, duration of work on daily basis and have you contacted with any chemical or Hazardous agent?
- Have you face any breathing problem during work?
- Earlier any of your team member that are working with you, infected or sustained any respiratory illness?
- Are you smoker?

Doctor will also ask question about previous job history including respiratory illness, existing Safety control measure at work place, were you wearing safety mask etc.

For this, company doctor should deep knowledge about work environment, presence of hazardous agent in work environment and knowledge about Material safety Data sheet (MSDS). Record to symptoms and completed in Occupational Health history form. On based on this, doctor will study patient history as per presence of hazardous agent in work environment and potential risk of exposure to health and recommend for test. Doctor may order a breathing test can listen to your lungs and see how they are performing. Doctor can recommend for pulmonary function tests, chest X-ray or CT scan (Thorax), bronchoscopy to detect actual cause of respiratory illness/ Disease. CT scan will help to detect masses, fluid, or inflammation of lungs. Bronchoscopy helps to diagnose lung problems, look for blockages, take out tissue or fluid samples for further test or remove a foreign body.

Doctor will carried out depth study and conduct testing to determine types of respiratory disease and severity. On based on this, doctor will start to give treatment or recommend to patients for consultation with specialist for better diagnosed. Other test such as blood gas can also conduct to measure amount of carbon dioxide and oxygen in the blood. Doctor can recommend or conduct test as required to look possible infections and other problems.

8. How can prevent to respiratory disease in Process industries

Respiratory disease can be prevented through effective safety control measure including reduce exposure limit to minimize risk related to respiratory illness up to tolerable level. Carry out workplace air guality Assessment of storage and process facility area, evaluate to associate risk and if risk is not tolerable then need to take adequate control measure. Following are few methods to

control respiratory illness/ disease

- Plan Prevent Protect
 - ✓ Identify Potential source of harm to respiratory system illness and assess the risk.
 - ✓ Ensure Effective Engineering control measure.
 - ✓ Workplaces should have respiratory illness prevention plan/ programs to monitor and limit exposure.
 - \checkmark Health monitoring must be conducted on regular interval.
 - ✓ Wear suitable and standard respirator to avoid severity of harm of exposure.
 - ✓ Increase ventilation in work area, whenever require.
 - ✓ Avoid eating or taking rest at workplace area.
 - \checkmark Take healthy diet.
 - ✓ Need to plantation at workplace area, whenever required
 - ✓ Know about job, workplace hazard and take adequate safety measure accordingly
 - ✓ Time to time conduct workplace air quality test.

9. Occupational respiratory disease treatment

There is no effective cure for occupational respiratory disease. Treatment can only help reduce symptoms and prevent further damage. It can also help to improve health condition. Treatment types include use of medicines, inhalers, and/or oxygen, avoid or limit exposure and take dietary food. Severe conditions may require a lung transplant. In case of any difficulties in breathing, contact with company doctor, doctor will examine and give treatment as per based on symptoms and illness.

10. Conclusion

Respirator system is major organ of human body that work as inhalation and exhalation. It brings oxygen from air and transport to lungs. In process industries several sources presence and effect to respiratory system due exposure. Respirator system can be effected due short term effect or long term effect. Respirator system can be prevented to ensure effective engineering control measure and respiratory illness program and reduce limit of exposure. Identify Potential risk and effective control measure to minimise risk upto tolerable level.

Organic dust found in the agriculture, food packaging, and weaving industries can create respiratory diseases such as farmer's lung, allergic alveolitis, occupational asthma, byssinosis, Accident chronic bronchitis, chronic airflow limitation, and organic dust toxic. Dust, fumes or vapours emits from cement industries, metal industries or chemical industries may lead to cause of respiratory illness risk due to exposure and such risk can be control through adequate safety measure.

Sesso

Plan Prevent Protect

News & Journal Published by ZJEWT in association with Institution of Safety Engineers (India), Govt. Reg. No. 5240 ISEI, Vol. No. 3, Issue 3, July-September 2020 Available online at www.ijournal.iseindia.in

References

Accider

E. E. Koehn and N. K. Datta, "Quality, environmental, and health and safety management systems for

- Plan Prevent Protect 569,2003.
 - Topuz, E., Talinli, I., & Aydin, E. (2011). Integration of environmental and human health risk assessment for industries using hazardous materials: A quantitative multi criteria approach for environmental decision makers. Environment International, 37, 393–403.
 - Sese', A., Palmer, A.L., Cajal, B., Montano, J.J., Jime'nez, R., & Llorens, N. (2002). Occupational safety and health in Spain. Journal of Safety Research, 33, 511–525.
 - DOSH. (2014). Gas Contractor (Petroleum pipeline) Company. Retrieved from Department of Occupational Safety and Health: 18 Aril 2014 http:// www.dosh.gov.my/index.php?option=com
 - Mishra, G. P. 1991. "Impact of industrial pollution from a cement factory on water quality parameters at Xymore."Environment & Ecology 9(4): 876-880
 - World Health Organization. Hazard prevention and control in the work environment: Airborne dust. 1999. Available from: http://www.who.int/occupational_health/publications/airdust/en/. Accessed on: [June 12, 2017].
 - Alemu K, Kumie A, Davey G. Byssinosis and other respiratory symptoms among factory workers in Akaki Textile Factory, Ethiopia. Ethiopian Journal of Health Development. Issue. 2010;24(2):133-140.
 - O'donnell DE, Hernandez P, Kaplan A, Aaron S, Bourbeau J, Marciniuk D, et al. Canadian Thoracic Society recommendations for management of chronic obstructive pulmonary disease–2008 update–highlights for primary care. Canadia
 - Yang CY, Huang CC, Chiu HF, et al., Effects of Occupational dust exposure on the respiratory health of Portland cement workers. J. Taxicol. Environ. Health. 1996; 49: 581-588.
 - ISEI Manuals







RNSN SERIATE (P) LIMITED

About Us: RNSN Seriate (P) Limited is private company limited by share. RNSN Seriate (P) Limited is Engineering, Procurement, Construction, Manpower supply & multi solution Engineering Company. RNSN Seriate (P) Limited is an ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 certified company. Corporate Identification No. (CIN) of RNSN Seriate (P) Limited is U93090CT2018PTC008917. RNSN Seriate (P) Limited also provides Consultancy, Chartered engineering, ISO Auditing & Certification Services.

RNSN Seriate (P) Limited vision is to deliver world class best services and Products to our customer as per their expectation.

Sustainability: For sustainable business, RNSN Seriate (P) limited is committed to fulfil Social, Economic & Environmental requirements and ensure compliance as per applicable law, norms & codes. RNSN Seriate (P) limited will take all necessary steps to achieve zero harm, save natural resources and protect to environment.



Health, Safety & Environment (HSE) Policy

RNSN SERIATE (P) LIMITED is committed to ensure Safe healthy work environment to protect human being as well as Environment. In Order to achieve Health Safety & environment related objective, Policy is:

- Ensure compliance on based on relevant National, International Rules, Regulation, Norms & Codes
- To main high Safety Standard at workplace, we adopt best Safety Practices & Conduct Safety Program regularly.
- To Plan & effective implementation of Safety Health, Environment management system
- Being new organisation, always seek opportunities and Continual improvements in products, process, Services and Peoples to ensure compliance & standards.

RNSN Seriate (P) Limited takes all necessary steps to achieve zero harm & increase stakeholders satisfaction.



Quality Policy

RNSN SERIATE (P) LIMITED is committed to Manufacture, Supply products, Provide Engineering & Consultancy Services conforming to customer's quality standards and meet their requirements on time through effective planned activity and continual improvements of products, process, Services & Peoples to ensure compliance as per relevant national and International Norms, Codes & Standard.

RNSN Seriate (P) Limited take all necessary step adopt standard practices to maintain quality of Products, services & increase stakeholders satisfaction









For any information/ query call +91-7509487141 Or mail <u>Info@rnsnseriate.com</u> For more details visit www.rnsnseriate.com

Date: 03/12/2018



www.ijournal.iseindia.inotec

Director

The Occupational Safety, Health And Working Conditions Code, 2020

The Occupational Safety, Health And Working Conditions Code, 2020 is a code to consolidate and Plan Prevent Protect among the laws regulating the Occupational safety and health and working conditions of the Prevent Protect persons employed in an establishment. The Act replaces 13 old central labour laws. The bill was passed by the Lok Sabha on 22 September 2020, and the Rajya Sabha on 23 September 2020. The bill received the presidential assent on 28 September 2020, but the date of coming into force is yet to be notified in the official gazette.

The bill was formulated according to the Report and Recommendations of the Second National Commission on Labour.

It amalgamated The Factories Act, 1948, The Plantations Labour Act, 1951, The Mines Act, 1952, The Working Journalists and other Newspaper Employees (Conditions of Service and Miscellaneous Provisions) Act, 1955, The Working Journalists (Fixation of Rates of Wages) Act, 1958, The Motor Transport Workers Act, 1961, The Beedi and Cigar Workers (Conditions of Employment) Act, 1966, The Contract Labour (Regulation and Abolition) Act, 1970, The Sales Promotion Employees (Condition of Service) Act, 1976, The Inter-State Migrant workmen (Regulation of Employment and Conditions of Service) Act, 1979, The Cine Workers and Cinema Theatre Workers Act, 1981, The Dock Workers (Safety, Health and Welfare) Act, 1986 and The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.

Please see below given chapter & Sections

CHAPTER I Preliminary

SECTION

- 1. Short title, commencement and application.
- 2. Definitions.

CHAPTER II REGISTRATION

- 3. Registration of certain establishments.
- 4. Appeal.
- 5. Notice by employer of commencement and cessation of operation.

CHAPTER III

DUTIES OF EMPLOYER AND AMPLOYEES, ETC.

6. Duties of employer.







- 8. Duties of manufacturers, designers, importers or suppliers.
- 9. Duties of architect, project engineer and designer.
- 10. Notice of certain accident.
- 11. Notice of certain dangerous occurrences.
- 12. Notice of certain diseases.
- 13. Duties of employee.

Plan Prevent Protect

- 14. Rights of employee.
- 15. Duty not to interfere with or misuse things.

CHAPTER IV OCCUPATIONAL SAFETY AND HEALTH

- 16. National Occupational Safety and Health Advisory Board.
- 17. State Occupational Safety and Health Advisory Board.
- 18. Occupational Safety and Health Standards.
- 19. Research related activities.
- 20. Safety and occupational health surveys.
- 21. Collection of statistics and portal for Inter-State migrant workers.
- 22. Safety Committee and Safety Officers.

CHAPTER V

HEALTH SAFETY AND WORKING CONDITIONS

23. Responsibility of employer for maintaining health, safety and working conditions.

CHAPTER VI WELFARE PROVISIONS

24. Welfare facilities in the establishment, etc.

CHAPTER VII

HOURS OF WORK AND ANNUAL LEAVE WITH WAGES

- 25. Daily and weekly working hours, leave, etc.
- 26. Weekly and compensatory holidays.
- 27. Extra wages for overtime.
- 28. Night shifts.
- 29. Prohibition of overlapping shifts.
- 30. Restriction on double employment in factory and mine.
- 31. Notice of periods of work.
- 32. Annual leave with wages, etc.

CHAPTER VIII

MAINTENANCE OF REGISTERS, RECORDS AND RETURNS



33. Maintenance of registers, records and filing of returns.



Sesso

Plan Prevent Protect

www.ijournal.iseindialinotec

INSPECTOR-CUM-FACILITATORS AND OTHER AUTHORITY

Z34. Appointment of Inspector-cum-Facilitators.

- 35. Powers of Inspector-cum-Facilitators.
- 36. Powers and duties of District Magistrate.
- 37. Third party audit and certification.
- 38. Special powers of Inspector- cum-Facilitator in respect of factory, mines, dock work and building and other construction work.
- 39. Secrecy of information by Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator, etc.
- 40. Facilities to be afforded to the Inspector-cum-Facilitator.
- 41. Powers of special officer to enter, measure, etc., in relation to mine.
- 42. Medical officer.

Plan Prevent Protect

CHAPTER X

SPECIAL PROVISION RELATING TO EMPLOYMENT OF WOMEN

- 43. Employment of women.
- 44. Adequate safety of employment of women in dangerous operation.

CHAPTER XI

SPECIAL PROVISIONS FOR CONTRACT LABOUR AND INTER-STATE MIGRANT WORKER, ETC.

PART I CONTRACT LABOUR

- 45. Applicability of this Part.
- 46. Appointment of designated authority.
- 47. Licensing of contractors.
- 48. Procedure for issue or renewal of the licence.
- 49. No fees or Commission or any cost to workers.
- 50. Information regarding work order to be given to the appropriate Government.
- 51. Revocation, suspension and amendment of licence.
- 52. Appeal.
- 53. Liability of principal employer for welfare facilities.
- 54. Effect of employing contract labour from a non-licenced contractor.
- 55. Responsibility for payment of wages.
- 56. Experience certificate.
- 57. Prohibition of employment of contract labour.
- 58. Power to exempt in special cases.

PART II

INTER-STATE MIGRANT WORKERS

59. Applicability of Part II.

60. Facilities to inter-State migrant workers.



Sess0

Plan Prevent Protect



www.ijournal.iseindia.inotec

61. Journey allowance.

Accider

Plan Prevent Protect

62. Benefits of Public Distribution system etc.

63. Toll free helpline.

- 64. Study of inter-State migrant workers.
- 65. Past liabilities.

PART III AUDIO-VISUAL WORKERS

- 66. Prohibition of employment of audio-visual worker without agreement.
- 67. Managers.

PART IV MINES

- 68. Code not to apply in certain cases.
- 69. Exemption from provision regarding employment.
- 70. Employment of persons below eighteen years of age.
- 71. Exemption to certain persons.
- 72. Establishment, maintenance of rescue services and vocational training.
- 73. Decision of question whether a mine is covered under this Code.

PART V BEEDI AND CIGAR WORKERS

- 74. Licence to industrial premises and person.
- 75. Appeals.
- 76. Permission to work by employees outside industrial premises.
- 77. Part not to apply to self-employed persons in private dwelling houses.

PART VI

BUILDING AND OTHER CONSTRUCTION WORKERS

78. Prohibition of employment of certain persons in certain building or other construction work.

PART VII FACTORIES

- 79. Approval and licensing of factories.
- 80. Liability of owner of premises in certain circumstances.
- 81. Power to apply Code to certain premises.
- 82. Dangerous operations.
- 83. Constitution of site appraisal committee.
- 84. Compulsory disclosure of information by occupier.
- 85. Specific responsibility of the occupier in relation to hazardous processes.
- 86. National Board to inquire into certain situations.
- 87. Emergency standards.
- 88. Permissible limits of exposure of chemicals and toxic substances.
- 89. Right of workers to warn about imminent danger.



Sesso

Plan Prevent Protect



www.ijournal.iseindia.inotec

90. Appeal against the order of Inspector-cum-Facilitator in case of factory.

91. Power to make rules to exempt.

PART VIII PLANTATION

- 92. Facilities for the workers in plantation.
- 93. Safety.

Accident

Plan Prevent Protect

CHAPTER XII OFFENCES AND PENALTIES

- 94. General penalty for offences.
- 95. Punishment for causing obstruction to Chief Inspector-cum-Facilitator or Inspector- cum-Facilitator, etc.
- 96. Penalty for non-maintenance of register, records and non-filing of returns, etc.
- 97. Punishment for contravention of certain provisions.
- 98. Punishment for falsification of records, etc.
- 99. Penalty for omission to furnish plans, etc.
- 100. Punishment for disclosure of information.
- 101. Punishment for wrongfully disclosing results of analysis.
- 102. Punishment for contravention of provisions of duties relating to hazardous processes.
- 103. Punishment for contravention of provisions of duties relating to safety provisions resulting in an accident.
- 104. Special provision for contravention of order under section 38.
- 105. Failure to appoint manager in mine.
- 106. Offences by employees.
- 107. Prosecution of owner, agent or manager of mine.
- 108. Exemption of owner, agent or manager of mine or occupier of factory from liability in certain cases.
- 109. Offences by companies, etc.
- 110. Limitation of prosecution and cognizance of offences.
- 111. Power of officers of appropriate Government to impose penalty in certain cases.
- 112. Jurisdiction of court for entertaining proceedings, etc., for offence.
- 113. Power of court to make orders.
- 114. Composition of certain offences.

CHAPTER XIII SOCIAL SECURITY FUND

115. Social Security Fund.

CHAPTER XIV MISCELLANEOUS



- 116. Delegation of powers.
- 17. Onus as to age.

18. Onus of proving limits of what is practicable, etc.

119. Common licence for contractor, factories and to industrial premises, etc.



Sesso

Plan Prevent Protect

News & Journal Published by ZJEWT in association with Institution of Safety Engineers (India), Govt. Reg. No. 5240 LJISEI, Vol. No. 3, Issue 3, July-September 2020 Available online at www.ijournal.iseindia.in

- 20. Effect of law and agreements inconsistent with Code.
- 121. Power of appropriate Government to direct inquiry in certain cases.

122. Publication of reports.

Accident

Plan Prevent Protect

- 123. Powers of Central Government to give directions.
- 124. General restriction on disclosure of information.
- 125. Jurisdiction of civil courts barred.
- 126. Protection of action taken in good faith.
- 127. Power to exempt in special cases.
- 128. Power to exempt during public emergency.
- 129. Power to exempt public institution.
- 130. Persons required to give notice, etc., legally bound to do so.
- 131. Power of Central Government to amend the Schedule.
- 132. Power to remove difficulties.
- 133. Power of appropriate Government to make rules.
- 134. Power of Central Government to make rules.
- 135. Power of State Government to make rules.
- 136. Power of Central Government to make regulations in relation to mines and dock work.
- 137. Prior publication of rules, etc.
- 138. Power to make regulation without previous publication.
- 139. Bye-laws.
- 140. Powers to regulate general safety and health.
- 141. Laying of regulations, rules, bye-laws, etc., before Parliament.
- 142. Laying of rules made by State Government.
- 143. Repeal and savings.

SCHEDULE

 THE FIRST SCHEDULE List of industries involving hazardous process

 THE SECOND SCHEDULE List of matters







Sesso

Plan Prevent Protect

⁴Industrial Relations Code, 2020

Industrial Relations Code, 2020, The Lok Sabha passed the bill on 22 September 2020 and result of the Plan Prevent Protect The Rajya Sabha passed it on 23 September 2020. It was assented to by the President on 28 Prevent Protect September 2020, but the date of coming into force is yet to be notified.

Industrial Relations Code, 2020 consolidates and amends the laws relating to Trade Unions, conditions of employment in industrial establishment or undertaking, investigation and settlement of industrial disputes. The code combines and simplifies 3 Central Labour Laws.

Industrial Relations Code, 2020 introduced more conditions for workers to strike, alongside an increase in the threshold relating to layoffs and retrenchment in industrial establishments having 300 workers from 100 workers to provide more flexibility to employers for hiring and firing workers without government permission.

The proposed legislation provides for a broader framework to protect the rights of workers to form unions, to minimise the friction between the employers and workers and to provide provisions for investigation and settlement of industrial disputes.

Industrial Relations Code, amends the definition of 'strike' to 'mass casual leave'. If over 50 per cent of a company's workers take concerted casual leave, it will be treated as a strike. However, workers cannot go on strike without a 60 days notice.

The bill was formulated according to the Report and Recommendations of the Second National Commission on Labour.

The Industrial Relations Code Bill, 2020 proposed for amalgamating, simplifying and rationalising the relevant provisions three Acts.

- Trade Unions Act, 1926
- Industrial Employment (Standing Orders) Act, 1946
- Industrial Disputes Act, 1947







Table 1, worldwide Corona case update

Total Co	Total Corona Case		Recovered	
3513	35522	1037977	26126909	
Active Cases (Current infected Patients)		Closed Cases (Cases which had an outcome)		
In mild condition	Serious or Critical	Recovered/ Discharged	Deaths	
7,904571 (99%)	66065 (1%)	26126909 (96%)	1037977 (4%)	

Table 1, Sources worldometers.info on date 4 oct. 2020, 05:18 GMT

Corona Case update of Major Five countries



Fig. 1, Sources worldometers.info on date 4 Oct. 2020, 05:18 GMT





www.ijournal.iseindia.inotect

TRAINING CALENDER

+

 \geq

ISE (India) Training Calendar (October-2020 to December-2020)

Training Title/ Course	Duration	Schedule	Location	Remarks	
ISE-SM (Safety Management at work place)	3 day or Min.24 hours Training	02/10/2020 to 05/10/2020	Raipur	E-Learning/ Regular mode	
ISE- ICCOHSEM (International Certificate course in Occupational Health Safety & Env. Mgt.)	Min. 96 hours Training	07/10/2020 to 16/10/2020	Raipur	E-Learning/ Regular mode Exam date 17/10/2020	
Hazard identification, Risk Assessment & Risk Management	2 days	20/10/2020 to 21/10/2020		E-Learning	
Integrated Lead Auditor (ISO 45001:2018, ISO 9001:2015, ISO 14001:2015)	6 days	26/10/2020 to 31/10/2020	Raipur	E-Learning/ Regular mode	
First Aid	1 days	02/11/2020	Raipur		
Lead Auditor ISO 9001:2018	5 day	03/11/2020 to 07/11/2020	Raipur	E-Learning/ Regular mode	
ISE-TQM (Total Quality Mgt.)	3 day or Min.24 hours Training	11/11/2020 to 13/11/2020	Raipur	E-Learning/ Regular mode	
Lead Auditor ISO 45001:2018	5 day	17/11/2020 to 21/11/2020	Raipur	E-Learning/ Regular mode	
Safety Audit in Engineering Industries	2 days	17/11/2020 to 21/11/2020	Raipur	E-Learning/ Regular mode	
ISE-SM (Safety Management at work place)	3 day or Min.24 hours Training	27/11/2020 to 30/11/2020	Raipur	E-Learning/ Regular mode	
ISE- ICCOHSEM (International Certificate course in Occupational Health Safety & Env. Mgt.)	Min. 96 hours Training	02/12/2020 to 11/12/2020	Raipur	E-Learning/ Regular mode Exam date 12/12/2020	
ISE-EM (Environmental Management)	3 day or Min.24 hours Training	15/12/2020 to 17/12/2020	Raipur	E-Learning/ Regular mode	
Lead Auditor ISO 45001:2018	5 day	22/12/2020 to 26/12/2020	Raipur	E-Learning/ Regular mode	
ISE- IDOHSEM (International Diploma in Occupational Health Safety & Env. Mgt.)	One year	Last Date of Registration 29/09/2020	Raipur	E-Learning/ Regular mode Exam Date June 2021 (Proposed)	
Diploma/ Post Diploma in industrial Safety/Fire/Env.	One year	June-July (2020-21)	Raipur/ Rampur	Regular	
The industry seesof selution					

Unp

er + Aime

ent Accident, A

News & Journal Published by ZJEWT in association with Institution of Safety Engineers (India), Govt. Reg. No. 5240 IJISEI, Vol. No.3, Issue 3, July-September 2020 Risk assessment & Control, Behaviour based safety, chemical safety in industries, Safety in construction industries, Scaffolding safety, Petroleum & Gas industries safety, Ergonomics, Mock Sossol and State Protect Like Training also conduct as per Need.

Note: Diploma & ISE-IDOHSEM Courses conducted twice in a year. December-January session known as winter session and June-July session is known as summer session.



For more details visit **www.iseindia.in** or mail **info@iseindia.in** Call +91

Call +91-6266474225, +91-8720831773



"Protect yourself and your family From Novel Corona Virus infection to take adequate precautionary measure"

International Journal of Institution of Safety Engineers (India)







www.ijournal.iseindia.inotec