A

SHORT TERM COURSE

ON

Industrial Safety & Hazards Management (ISHM)

Organizing Department

CHEMICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA

November 04 – 07, 2013

Objectives of the Course

Despite several considerable safety measure and precautions, accidents in industrial premises are quite envitable. These accidents emphasis the concern of appropriate safety measure implementations in process industries. Accidents lead to several consequences like human injuries or loss of life, environment damage, and loss of production, environmental damage, capital equipment, business interruption and work out days. Because of these consequences, now-a-days safety has equal importance to production. Serious accidents like Bhopal gas disaster emphasis the importance of emergency planning and for designing new plant to minimize occurrence the accidents and their consequences. An excellent safety programme strives to identify hazards before they produce an accident.

The major objective of this STC is to encapsulate the technical fundamental of safety in process industries. As the industrial safety and hazards management has opened new avenues for not only for process industries but also for environmental safety professionals. The course will also provide the critical appraisal of Environment, Health and Safety Management in the industries. This STC will explore all safety aspects in chemical process industries including risk analysis and disaster management plan. The participants will be able to effectively assess, plan and implement and evaluate the current problems related to industrial safety and implement the remedial measures in the industries.

Course Contents

Introduction: Safety Programs; importance of accident and loss Statistics; the Nature of the Accident Process; Inherent Safety techniques in process industries.

Toxicology: Toxicological Studies; Dose versus Response; Models for Dose and Response Curves; Relative Toxicity; Threshold Limit Values

Industrial Hygiene: Government Regulations; Identification-Material safety data sheet; Evaluation-Evaluating exposures to volatile toxicant by monitoring, Evaluation of worker exposures to toxic vapors, dust and noise, Control- respirators and ventilation;

Source Models: Introduction to Source Models and material loss calculation; Toxic Release and Dispersion Models,

Fires and Explosions hazards: Fire triangle, ignition energy, autoignition, etc.

Designs to Prevent Fires and Explosions hazards: inerting techniques, controlling of electrostatic hazards, use of explosion proof equipment, sprinkler systems, ventilation and miscellaneous techniques to combat fire and explosion;

Introduction to Reliefs: concept, definitions, relief types, etc.

Designing of Relief system: designing of conventional spring operated relief and rupture disc in liquid & vapor or gas service, combating of over pressuring of process equipment, **Probabilistic Risk assessment:** Hazardous identification techniques, Reliability analysis of the process system, Event trees & fault trees analysis, Case Histories

Principal Course Coordinator

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CONTINUING EDUCATION PROGRAMME
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General Information

Chemical Engineering Department, National Institute of Technology, Rourkela is organizing a short term course on **"Industrial Safety & Hazards Management" from 04.11.2013 to 07.11.2013.** The course is open to industry personnel, researcher working in related areas and teachers of recognized engineering colleges including private one.

Candidates admitted will be provided free lodging facility including breakfast, lunch and dinner. The lodging arrangement for all the participants will be made in NIT Guest House or in the hostel. Those participants not availing this facility will not be entitled to any rebate. Family accommodation is not available on campus. However, one may make his/her own arrangement in city hotels at his/her own expense. No T.A. will be provided to participants coming to attend this STC.

Registration fees: `20,000/-, it includes excellent quality registration kits and goodies such as bags, pen, course material, etc.

Registration form can be down loaded from:

http://nitrkl.ac.in/Academic/1Department/CH/CEP/ISHM.aspx

Mode of payment: Payment should be made through a demand draft/multicity cheque in favour of "Continuing Education, NIT Rourkela" Payable at SBI-Rourkela (Branch code-2109)

Note: Please submit your application form for any of the course listed above in the format as attached at least 20 days in advance from the date of starting of the course.
Applications on attached form should be sent at the address of principal course coordinator.

List of few industrial accidents in recent years plus many more minor (Not shown here)

Place/Country	**Factory/industry**	**No. of fatalities**	**Year of incident**
Jaipur, Rajasthan, India	IOCL depot	12	2009
Navi Mumbai, India	IOC plant	-	2011
Tamil Nadu, India	Sivakasi	39	2012
Bhosari, Pune, India	paint factory	-	2012
Punto Fijo, Venezuela	oil refinery	39	2012
Karachi, Pakistan	clothing factories	283	2012
Lahore, Pakistan	Shoe factory	25	2012
Bhopal (M P), India	Water tank Collapsed	7	2012
UP, India	Fire Cracker factory	8	2012
Chennai, India	Om Siva Sakthi Crackers factory	52	2012
outskirts of Dhaka, Bangladesh	Cloth factory	100	2012
Hazira, Surat, Gujarat	IOCL Plant	2	2013
WEST, Texas (Reuters),USA	Fertilizer	14	2013
China	Poultry Plant	120	2013

Application Form for

Short Term Course (STC)

on

"Industrial Safety & Hazards Management"

ISHM

Duration: Nov. 04 – 07, 2013

(You may get this form enlarged by Xeroxing on A4 Size paper for submission of your application)

1. Name: Ms./Mr.

   (In Block Letters)
2. Designation:
3. Age (Years):
4. Corresponding address with pin code, telephone no., mobile

Tel: Mobile:

4. Name of the Institute where employed:
5. Highest Academic Qualification:
6. Specialization:
7. Teaching/industrial experience in Years:

8. Details of DD/multicity cheque

No. ……Date:

Issued Bank:

Date: Signature of applicant