

Agenda and report of suggestions & actions of Chemical Profess Safety Group

3rd meeting (rescheduled) at Shroff S.R. Rotary Institute of Chemical Technology Ankleshwar on 17.10.2019 at 5 pm to 6 pm (after council meeting)

Dr T L Prasad (Convener) Prof S C Naik (Chairman) Mr Joy M Shah Mr Vijay Bhujle Mr D M Butala Prof K A Badarinarayan Mr K T Shenoy Prof K S Rajanandam – Invitee Dr G S V Ratnam – Invitee
Spl Invitees: Kiran Ramchandra Golwalkar, Dr MP Jain and nominee of HWB

1. As part of skill development initiative, certificate course on process safety by IChE at all its regional centers. Brief on HQ deliberations on the course content. Draft Brochure preparation and discussion of the same. Deliberation on council suggestions for radiation safety and Electrical safety course contents. Tentative syllabus for radiation safety/Electrical safety is as attached.
2. Suggestion of faculty details with safety expertise under Bangalore region by Prof Rajanandam and under Chennai region by Dr GSV Ratnam
3. Safety articles for IChE News letter for the year 2019. Brief by Mr Joy M Shah on 3rd article published
4. A chapter on industrial safety in the subject Chemical Technology and Inclusion of An elective on Industrial safety for various processes in the UG syllabus. Prepare a note in this regard as per the present day syllabus in VTU and other universities.
5. Daylong seminar in association with Regional Centres of IChE, as suggested by Sh D Butala and Chairman MRC.
6. To take up one or two major incident in India, review its investigation report; go in detail for further analysis like CCPS at US; work out what are improvements required for design and operating practices. If possible, issue revised incident investigation report. To send a letter to govt authorities from IChE for Incident investigation team authorisation.
7. The content generation in vernacular languages for the benefit of semi skilled operators of process plants and to be distributed during Industry-Institute interactions.
8. Explore 'App' development/requirement for process safety and identify projects for developing the same through student chapters of IChE. Sending safety problem statement for Hackthon 2020.
9. Any other issues/MoUs
10. Date and venue for 4th meeting at IIT Delhi on 17.12.2019



Indian Institute of Chemical Engineers

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CERTIFICATE COURSE ON “PROCESS SAFETY”

Organizations with a positive safety culture are characterized by communications founded on mutual trust by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures. As part of “**Skill India Development Initiative**” IICHE believes in nurturing a strong culture on process safety by offering a comprehensive course on Safety, Health, Environment (commonly called SHE) and Risk Management for Chemical and allied process industries. The resource persons are drawn from experienced members of IICHE.

Batch size	20
Duration	15 to 20 hours spread over weekends
Fees	Rs 10,000/- per person
Venue	At all Regional centres of IICHE
Course coordinator	Sh Vijay Bhujle GVS CIBA TECH

Course Contents

- Safety and Risk Management
- Material Hazards; MSDS (Material Safety Data Sheet)
- Hazard Evaluation Techniques
- Risk Identification and Assessment Techniques; Chemical risk and its evaluation
- Storage, Handling and Transportation of Hazardous Substances
- Safety in Utilities
- Environmental Regulations for safer process plant operation in India and abroad
- Safety Devices; Protection of equipment
- Management Practice in SHE and behavioural safety
- Bio-safety; Biohazards
- Typical Case Studies

Contact details for any query:

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1. Fundamental principles of physics and mathematics used in radiation protection, including radioactive processes, nuclear reactions and statistical methods. Sources of radiation and understand the interactions of radiation with matter
2. Understanding of the radiometric, dosimetric and operational quantities of radiation protection and their measurement units, to carry out related calculations. Practical experience to set up and operate different types of radiation detectors, recognize their operating principles, characteristics and limitations and analyze and interpret the measurement data.
3. Awareness of the effects of radiation at the molecular and cellular levels and an understanding of the tissue reactions that can result in stochastic and deterministic health effects.
 4. Understanding of the role played by international organizations in radiation protection, including the ICRP's recommendations on the international system of radiological protection. To provide an overview of the relevant IAEA Safety Standards, including the main components of the legal and regulatory framework for safety, the relevant regulatory control measures, as well as the main principles of safety culture and building competence in radiation safety.
 5. Industrial irradiators and accelerators

Overview of industrial irradiators and accelerators; organizational responsibilities; basic requirements for safety, specific regulatory requirements; features of facility design; safety associated to the equipment; maintenance; radiation protection programme: protection

of the workers; emergency preparedness and response; lessons learned from accidental exposure in industrial irradiators and accelerators; management of disused sources

6. Radioactive waste management

Sources of radioactive waste including medical applications, waste types, waste classification, waste characterization. Basic technical management options: dilute and disperse, concentrate and contain, storage for decay and clearance from control; waste minimization. Pre-disposal waste management: collection, segregation, treatment, conditioning, secure storage Control of effluents: approach to regulatory control, establishing authorized discharge levels. Radiation protection programmes in place at the various types of waste management facilities. Management of disused sealed sources: technical options and safety aspects. Management of waste from decommissioning. Solid waste disposal: disposal options for different waste types, safety principles and technologies for assuring long term safety, safety assessment methods. Management of waste from uranium and thorium, mining and milling

Duration : 5 to 10 hrs