



PRISM CONSULTANTS
Risk management solutions
www.prismcon.net

Process Safety Services



Contact

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To remain competitive in today's global business scenario, companies must integrate the Management of Process Safety into their overall Management systems.

An effective process safety management program enables business continuity, reduces costs, and adds significant value to the management, employees, customers and stakeholders. This brochure explains Prism's approach to Process Safety and the services provided to help customers in the oil and gas, fertiliser, refining, pharmaceutical, petrochemical and other chemical companies to implement successful process safety management programs.

Mr B.Karthikeyan, Process Safety Expert and founder of Prism Consultants is a Chemical Engineer from Madras University, with over 30 years experience in the Chemical Industry in Operations, Technical Services, Process Safety, OHS and Environment Management. He has worked in India and abroad. His extensive practical experience includes the implementation and auditing of Process Safety Management System as per OSHA CFR 1910.119 and EPA's 40 CFR 68 Risk Management Program, Environmental Management System as per ISO 14001, and Occupational Health and Safety Management system as per OHSAS 18001.

He has provided consultancy and training services in India, Germany, South Africa and Abu Dhabi.

Process Safety Management - Consultancy services:

- Implementation support for OSHA's (Occupational Safety and Health Administration of USA) CFR 1910.119 Process Safety Management System rule for oil and gas, fertiliser, refining, pharmaceutical, petrochemical and other chemical industries.
- Gap assessment to OSHA's CFR 1910.119 Process Safety Management System rule
- Conducting Hazard and Operability (HAZOP) studies as per Guidelines of Center for Chemical Process Safety, American Institute of Chemical Engineers, USA
- Conducting Layers of Protection Analysis (LOPA) as per IEC 61511 requirements and guidelines of Center for Chemical Process Safety, American Institute of Chemical Engineers, USA
- Confidential Investigations of fires, explosions, runaway reactions, process upsets and asset integrity failures

- Process Safety Audits of integrated management systems as per US OSHA CFR1910.119 and EPA's 40 CFR 68 Risk Management Program requirements
- Process safety culture survey
- Setting up Responsible Care[®] Management System
- Setting up of a comprehensive Incident Investigation system based on Root Cause analysis and Human Factors.
- Establishment of a Mechanical (Asset) Integrity and quality assurance program based on risk based inspection, to ensure safety of critical equipment.
- Setting up a reactive chemicals management program
- Setting up foolproof system for Management of Change
- Setting up Work Permit Systems including the following:
 - Confined space entry
 - Hot work
 - Working at heights
 - Electrical energy lock out and tag out
 - Feeder lock out and tag out
 - Mechanical energy lock out and tag out
 - Cold work
 - Pipeline breaking / equipment opening
 - Fire water system lock out
 - Emergency fire system closure
 - Excavation
 - Working on fragile roofs
 - Sealant injection
 - Hot tapping
- Setting up system to ensure safe working of contractors and their employees, including applicable legal requirements.
- Developing on site emergency response plans

Process Safety Training Services:

PRISM consultants provide the following Process Safety related on site training services, with case studies:

- Developing Process Safety Culture – Lessons for Management (1 day)
- Elements of Process Safety Management (2 days)
- Process Safety for Plant Operators (1 day)
- Management of change (2 days)
- Process incident investigation – root cause analysis (2 days)
- Process Safety in API manufacturing and R & D (1 day)
- Introduction to Process Hazard Analysis and Hazard and Operability Study (2 days)
- Process Hazard Analysis for team leaders (4 days)
- Hazards of non routine operations (including work permit systems) (2 days)
- Learning from incidents (1 day)
- Developing an Asset Integrity and quality assurance program (2 days)
- Writing Effective Operating procedures (1 day)

Customized courses to meet customer's specific training requirements:

PRISM consultants will work closely with customers to deliver a need based process safety training package that meets customer requirements. These customized process safety courses can be held at the customer's site.

CV of Principal Consultant - B.Karthikeyan Process Safety, Environmental & OHS Management System Expert



Mr Karthikeyan is a Chemical Engineer from Madras University, with over 30 years experience in the Chemical Industry in Operations, Technical Services, Process Safety, OHS and Environment Management. He has worked in India and abroad. His extensive practical experience includes the implementation and auditing of Process Safety

Management System as per OSHA CFR 1910.119, EPA's 40 CFR 68 Risk Management Program, Environmental Management System as per ISO 14001, and Occupational Health and Safety Management system as per OHSAS 18001. He has provided consultancy and training services for many organizations India and in South Africa, Middle East and Germany.

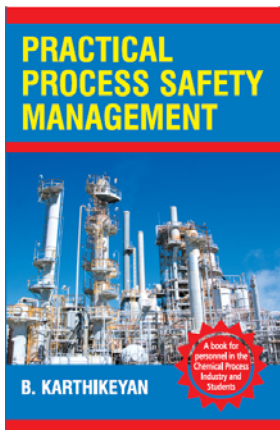
He is a lead auditor for ISO 14001 and OHSAS 18001 systems. He is also an emergency responder for chemical plants and has undergone extensive emergency response and rescue training abroad. He has investigated numerous chemical plant incidents and is an expert on human factors and abnormal situation management.

He has worked at senior management level with leading organisations like Madras Fertilisers Limited, Murugappa Group, (as Dy. General Manager for Process Safety Management at Coromandel International Ltd.) and internationally with National Methanol Co., Saudi Arabia (a SABIC company).

He has carried out over 300 audits of Process Safety, OHS and Environmental Management Systems in both continuous and batch processes, conducted many HAZOP studies and conducted over 250 training sessions on management systems for Process Safety and EHS.

He has published many papers in leading magazines on Process Safety and EHS management and presented many papers on Process Safety Management in national and international seminars.

He is the author of the book "Practical Process Safety Management".



Partial Client List

1. Foskor (Pty) Limited, Richards Bay, South Africa
2. Takreer Oil Refinery, Abu Dhabi,U.A.E
3. IPRO, Germany
4. Essar Oil Limited
5. Reliance Industries Limited
6. Hindustan Petroleum Corporation Limited, Visakhapatnam Refinery
7. Nagarjuna Fertilisers and Chemicals Limited, Kakinada
8. Chambal Fertilisers and Chemicals Limited, Gadepan
9. Coromandel International Ltd, Fertiliser plant, Ennore, Chennai
10. Coromandel International Ltd, SSP and pesticides plants, Ranipet, Tamilnadu
11. Coromandel International Ltd, Pesticides Division, Thane, Navi Mumbai
12. Coromandel International Ltd, Pesticides Division, Ankleshwar
13. Coromandel International Ltd, Kakinada
14. Tamilnadu Petroproducts Ltd, Chennai
15. Jubilant Organosys Ltd, Mysore
16. Indian Additives Limited
17. Chemplast Sanmar Limited
18. Gas Authority of India Limited, Rajahmundry
19. Momentive Performance Chemicals (Formerly GE Plastics)
20. E.I.D Parry (India) Ltd.
21. Silkroad Sugar Limited, Kakinada
22. Cookson India Ltd, Chennai
23. Alpatan Chemicals Pvt Ltd, Tamilnadu
24. Praxair India Ltd, Tamilnadu
25. PPN 330 MW gas/naphtha based power Generation Company, Tamilnadu
26. E.I.D Parry (India) Ltd, Sugar factory, Nellikuppam, Tamilnadu
27. E.I.D Parry (India) Ltd, Sugar Factory, Pudukkottai, Tamilnadu
28. Sakthi Sugars Ltd, Sivaganga, Tamilnadu
29. Sakthi Sugars Ltd, Sakthinagar, Erode, Tamilnadu
30. Tube Products of India (Exports Division), Avadi, Chennai

31. Tube Products of India (Main plant), Avadi, Chennai
32. T.I. Cycles of India, Ambattur, Chennai
33. T.I. Diamond Chain Ltd, Ambattur, Chennai
34. T.I. Metal Forming Ltd, Chennai
35. India Pistons Ltd, Sembium, Chennai
36. Rane NSK Steering systems Ltd, Guduvancherry, Tamilnadu
37. Brakes India Limited, Mysore
38. Lucas TVS Ltd, Padi, Chennai
39. Brakes India Limited, Padi, Chennai
40. Brakes India Limited, Sholinghur, Tamilnadu
41. Sundaram Clayton Limited, Chennai
42. Automotive Ancillary Services (Pvt) Limited, Chennai

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