

**A Live Online Course**

# **PRODUCTION SAFETY SYSTEMS**

Presented by Dr. Maurice Stewart

**This production safety systems course incorporates the new 2017 8th Edition of API RP 14C, the new API RP 17V 1st Edition, API RP 14J, API RP 500/505, API RP 520/521/2000, IEC 61508-2 and IEC 61508-3.**

## **Introduction**

This Production Safety Systems live online training presents a systematization of proven practices for providing a safety system for onshore and offshore production facilities. Thousands of oil and gas professionals have attended this course since it was offered by Dr. Maurice Stewart more than 20 years ago.

This production safety systems course has been updated to reflect the changes provided in the new API RP 14C and the API RP 17V. In this course, you will learn the latest concepts, methods, and practices that will make your facility operationally safe.

Participants will learn directly from Maurice Stewart in this training. Maurice will answer participants' questions related to production safety, and oil and gas surface production facilities.

## **What You'll Learn**

- Provisions for designing, installing and testing both safety and non-marine emergency support systems (ESSs) on both onshore and offshore

production facilities.

- Concepts of a facility safety system and outline production methods and requirements of the system.
- Guidance on how safety analysis methods can be used to determine safety requirements to protect common process components from the surface wellhead and/or topside boarding valve and for subsea systems including all process components from the wellhead and surface controlled subsurface safety valve (SCSSV) to upstream of the boarding shutdown valve. (Note: The shutdown valve is within the scope of API RP 17V for gas injection, water injection, gas lift systems, and chemical injections.)
- The importance of “Safety Concept,” “Safety Reviews,” and “EB-HAZOPs.”
- A method to document and verify process safety system functions, i.e., safety analysis function evaluation (SAFE chart).
- Design guidance for ancillary systems such as pneumatic supply systems and liquid containment systems.
- A uniform method of identifying and symbolizing safety devices.
- Procedures for testing common safety devices with recommendations for test data and acceptable test tolerances.
- The Principles of Safe Facility Design and Operation, specifically, how to Contain Hydrocarbons, Prevent Ignition, Prevent Fire Escalation and Provide Personnel Protection and Escape.
- The Principles of Plant Layout Partitioning and how to partition a plant into Fire Zones, Restricted Areas and Impacted Areas thereby minimizing the Risk to Radiation, Explosion, Noise and Toxicity.
- How to determine Electrical Hazardous (Classified) Locations and determine what Electrical Equipment should be installed in these locations,
- The purpose of Surface Safety Systems, specifically, the Emergency Shut-down System, Emergency Depressurization System, Fire and Gas Detection Systems and High Integrity Protection Systems,
- The Objectives, Types, Location, and Placement of Fire and Gas

Detection Systems.

- The Objectives, Types, and Performance of Active and Passive Fire Protection Systems.
- The Function, Types, Selection and layout of Vent, Flare and Relief Systems to minimize the effects of Radiation, Flammable Gas Dispersion and Toxic Gas Dispersion.
- The function and design considerations of Liquid Drainage Systems
- How to determine piping “spec breaks”.
- How to evaluate the workplace and operating/maintenance procedures for “hidden” hazards.
- How to effectively design facilities and work areas to reduce human errors and improve performance.

### **Course Content**

- Principles of safe facility design
- Ignition prevention
- Fire escalation prevention
- Personnel protection and escape
- Installation layout
- Electrical installations in hazardous (classified) areas
- Safety systems
- Pressure ratings and Specification breaks
- High Integrity Pressure Protection Systems (HIPPS)
- Safety system and ESS bypassing
- Onshore gathering station safety systems
- Fire and gas detection systems
- Active and passive fire protection
- Relief, vent and flare systems
- Liquid drainage systems
- Electrical Area Classification

## About Dr. Maurice Stewart



Dr. Maurice Stewart is internationally respected for his teaching excellence and over 45 years of experience in all aspects of facilities engineering.

He has provided consultation and/or instruction to tens of thousands of professionals in numerous companies in virtually every oil and gas production sector in the world.

Maurice has authored or co-authored 12 books, including the widely acclaimed “*Surface Production Operations*” series which continues to be the standard for the industry.

Dr. Stewart also has published numerous technical articles in industry publications, co-authored multiple chapters in the “*Facilities and Construction Engineering, Volume III of the Petroleum Engineering Handbook*”.

Maurice Stewart taught numerous short courses for the Society of Petroleum Engineers (SPE), and was on the Petroleum Engineering faculty of Tulane University and Louisiana State University where he developed and taught eight graduate-level courses in surface production operations.

## Who Should Attend

This training is targeted for professionals and engineers who are involved in safety or production operations and who want to:

1. Develop a better understanding of the effectiveness of existing Production Safety System initiatives at existing oil and gas facilities.
2. Appreciate the main steps contemplated in the Safe Design of a plant or facility,
3. Better understand the scope and functioning of the various safety-

related equipment installed onshore, offshore and subsea.

4. Review or broaden their understanding of how to conduct a safety analysis, Experience-Based HAZOP and how to install electrical equipment in hazardous (Classified) locations.

5. Other professionals who want to develop a better understanding of how to conduct a Safety Analysis, EB-HAZOPs and install electrical equipment in hazardous (Classified) locations.

### **Course Materials**

- Each participant will receive a comprehensive set of worksheets and checklists to aid them in conducting a safety analysis
- Each participant will receive a comprehensive set of lecture notes for after course reading and reference
- An extensive set of practical in-class “case study” exercises specially designed by Dr. Maurice Stewart that emphasizes the design and “trouble-shooting” pitfalls often encountered in the industry.

### **Daily Webinar Hours**

Session 1 – 8:00 – 9:30

Session 2 – 10:00 – 11:00

Session 3 – 11:30 – 12:30

Jakarta Time WIB

### **Registration Information**

Course date: July 26-30, 2021

Cost: IDR 29,000,000. per person

### **Two ways to register:**

1. Email your registration message to LDI Training at [lditrain@indo.net.id](mailto:lditrain@indo.net.id)
2. Register online on [www.lditraining.com](http://www.lditraining.com)

## **Contact Information**

If you need more information about this training, please contact PT Loka  
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