

BOWTIE METHODOLOGY FOR RISK MANAGEMENT

For Oil & Gas Operators

2 Days | Kuala Lumpur

**THIS TRAINING IS
IMPORTANT THING TO
IDENTIFY MAJOR
ACCIDENT HAZARD
AND CAN BE APPLIED
TO DEVELOP
COMPREHENSIVE RISK
ASSESSMENT (BOWTIE)**

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Program Overview

The Bowtie Methodology lies at the foundation of The Hazards and Effects Management Process (HEMP), the latter being originally developed to provide a structured approach to the analysis of safety hazards throughout the life cycle of an installation that has become the International Best Practice for risk management. The Bowtie technique offers a powerful visual tool for analyzing hazard scenarios and communicating to the workforce how hazards are released, how they can escalate and how they can be managed effectively.

This two-day workshop provides participants with a firm grounding of the principles of the Hazards and Effects Management Process (HEMP) and the theoretical and practical aspects of Bowtie applications. Participants will be required to undertake a number of worked exercises in order to gain practical experience with the use of Bowties.

Who Should Attend?

This course is designed for senior-level managers responsible for HSE, Operations, Maintenance, Projects and Enterprise Risk.

Key Modules

Overview of the Hazards and Effects Management Process
The Bowtie Methodology & the BowTieXP Software
Barrier Management
Building Bowtie Models Using the BowTieXP software
HSE MS, HSE Cases and the Bowtie
HSE Cases and Bowties - Syndicate Exercises

Course Methodology

Workshop style
Lectures
Group activities
Case studies
Q&A

Learning Objectives

This course is designed to help participants to:

- ▶ Achieve an understanding of the key principles of HEMP and the Bowtie Methodology;
- ▶ Apply Bowties in a correct manner to manage hazards associated with the client's operations, activities and facilities;
- ▶ Gain a firm grasp of barrier management and acquire practical know-how of it can be effectively achieved.

OVERVIEW OF THE HAZARDS AND EFFECTS MANAGEMENT PROCESS

- Definition, Rationale and Drivers
- HEMP – The Principles
- Risk Assessment & ALARP
- Tools & Techniques
- Hazard Analysis

THE BOWTIE METHODOLOGY & THE BOWTIEXP SOFTWARE

- Principles of Loss Prevention and the Accident Causation Model, Barrier-based Risk Management
- Technical Foundation, History and Current Usage of the Bowtie Technique
- Risk Communication, Advantages & Limitations
- Bowtie nomenclature and definitions:
 - Hazard
 - Top Event
 - Threat
 - Consequence
 - Control Barrier
- Recovery Preparedness Measure
- Escalation Factor Control
- Mini-exercises on nomenclature and definitions and on creating basic Bowtie models using the BowTieXP software – key functions and features

BARRIER MANAGEMENT

- Linking Bowties to the Management System
- HSE Critical Activities and the Activities Catalogue
- Safety Critical Elements (SCEs)
- Assigning Responsibilities and Accountabilities for Barriers
- Barrier Effectiveness
- Key Functions and features in the BowTieXP software for incorporating these elements, including generating reports and presentations

BUILDING BOWTIE MODELS USING THE BOWTIEXP SOFTWARE

- Syndicate Exercises

HSE MS, HSE CASES AND THE BOWTIE

- HSE MS explained
- HSE Case Explained
- The Bowtie and HSE Cases
- When and Where Bowties are used
- HAZID and Bowties
- The HAZID process

HSE CASES AND BOWTIES - SYNDICATE EXERCISES

- Deciding on HSE MS/HSE Case Structure
- Specifying the Scope of the HSE Case
- Identify and Assess Hazards using HAZID technique
- Bowtie analysis of High-Risk Hazards using the BowTieXP software



FAIZAL FARID WAJIDI

Faizal Farid Wajidi is an Independent Principal Consultant, specializing in HSE Risk Management, Health Physics and nuclear applications. He has more than 35 years of professional experience, mainly spent in the major hazard sector.

Faizal has broad experience of applying risk management tools and has applied the software-based Bowtie tool for offshore HSE Case studies. Among the earliest users of the BowTieXP software, he is a qualified and experienced Bowtie workshop facilitator having led several HSE risk- and Enterprise risk-based Bowtie workshops for safety regulators and for major companies in the oil and gas, petrochemical, road transportation, maritime and aviation/aerospace sectors in Malaysia, Indonesia and Singapore.

Faizal has previously worked with Shell, Schlumberger, ICI Physics and Radioisotope Services Group, Enviros, Risktec and DNV GL. He graduated from the University of Reading, United Kingdom, with a B.Sc (Hon) degree in Mechanical Engineering and Mathematics.

COMMENT AND REVIEW

BY PETRONAS CARIGALI MURIAH LTD

"THE TRAINER CAN RELATE THE MATERIALS WITH OUR ACTIVITIES HENCE GIVING US MORE ENTHUSIASM"

"VERY GOOD TRAINING MATERIAL & INSTRUCTOR"

"HE HAS LONG TRACK RECORD IN RISK MANAGEMENT TRAINING"

"GOOD COMMUNICATION, FRIENDLY, ANSWER ALL QUESTIONS"

"HE HAS A LOT OF EXPERIENCE ON BOWTIE TRAINING"