



# Risk Management for Railway Industry

## SECURE YOUR PARTICIPATION!

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### Why Shoud attend this training ?

- To understand and implement the concept of EN50128 and EN 50129.
- To understand and implement the Preliminary Hazard analysis application.
- To understand and implement the HazLog concepts.
- To understand and implement the Functional Hazard analysis .
- To understand and implement the Hardware Hazard Analysis.
- To understand and implement the Software Hazard Analysis.
- To understand and implement the SIL concepts.
- To understand and implement the hardware hazard analysis.
- To understand and implement the software hazard analysis.
- To understand and implement the FMECA concepts.
- To understand and implement the FTA concepts and model.

### Who Shoud attend this training ?

Reliability Managers, Reliability Engineers, Safety Engineer, Asset Managers, Maintenance Managers, Maintenance Engineers..

### Training Outline:

#### Day 1:

- Module 1: Introduction.
- Module 2: EN 50128 and EN 50129 concepts .
- Module 3: Safety program Implementation.
- Module 4: Preliminary Hazard Analysis (PHA).
- Module 5: Preliminary Hazard Analysis (PHA) cases.
- Module 6: System Hazard Analysis and HAZlog concepts
- Module 7: System Hazard Analysis and HAZlog concepts.
- Module 8: Functional Hazard Analysis and SIL.
- Module 9: Functional Hazard Analysis and SIL cases.

#### Day 2:

- Module 10: SIL Analysis.
- Module 11: Hazop Analysis.
- Module 12: FMECA analysis concept .
- Module 13: FMECA analysis hardware and software case .
- Module 14: FTA concepts.
- Module 15: FTA cases.
- Module 16: Safety case concept .



## Trainer : Dr Eduardo Calixto, CRP, CFSE.,

He's Reliability and Safety Engineer Expert with over 18years experiences in Oil & Gas, Railway, Aerospace and Mining Industries. He has Doctoral Degree in Energy and Environmental, Master in safety System Management, Bachelor in Industrial Engineering. Author of the best seller Book Gas and Oil Reliability Engineering: Modeling and Analysis (material content of this training).

