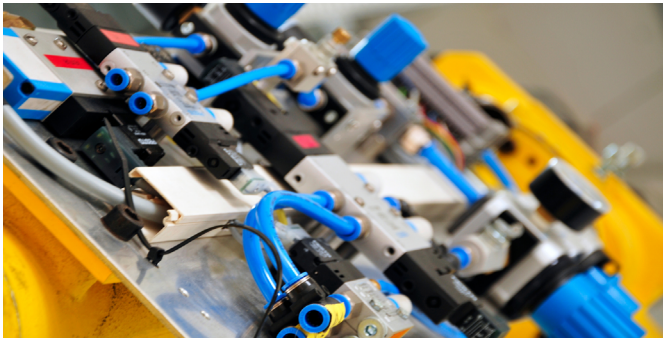


Certified Machinery Safety and Security Specialist



Overview

Machinery requirements have been significantly enhanced on a regular basis to match the need of the ever evolving industry. With automation playing a key role in this evolution, there is the additional need for intelligent machinery safety strategies. Legislation have also played their part in the design, manufacture, operation and maintenance of machinery. Organisations are required to ensure that their relevant personnel possess the necessary expertise of machinery safety in order to design, manufacture, operate and maintain the equipment. The course is delivered in four modules and covers fundamental topics providing extensive technical expertise in Risk assessment, Safety and Security for Machinery.

Who should attend?

The course is aimed at professionals involved in machine specification, design, construction, maintenance and/or upgrades, such as Automation, Electrical, Mechanical Engineers, Machine Designers, Maintenance Personnel, Project Engineers, Safety Engineers and Health and Safety Managers.

Course Contents:

The CRASS training is well designed and split into 4 modules to impart structured inputs to the participants. Module wise details are as follows:

- Module 1 - Legal framework
 - The legal requirements are clearly described in laws.

In this module, the interrelationships between legal and normative requirements are examined in detail and the possible consequences of non-compliance are pointed out.

- Module 2 - Risk Assessment
 - Origin and background
 - Methods and tools
 - Documentation obligations and options
 - Choosing the right protective device
 - The safety concept
 - Special requirements

■ Module 3 - Functional Safety
The design of functional safety measures must fulfil the requirements resulting from the risk assessment. In particular, this module deals with

- Safety-related parts of control systems
- The Performance Level (PL)
- The Safety Integrity Level (SIL)
- Functional safety in
 - Electrical Systems
 - Pneumatic Systems
 - hydraulic Systems
 - Mixed Systems
- Validation of the PL
- Software as a part of functional safety
- Validation of safety-related Software

■ Module 4 - Cyber Security
Machines and their components are increasingly being analysed and process data is recorded, from which conclusions can be drawn and changes made

to processes. The last module deals with measures to prevent cyber attacks.

- Aspects of cyber security in connection with the functional safety of safety-related control systems
- Relation to ISO 12100: Guidelines for machine manufacturers to consider the associated IT security (cyber security) aspects
- 62443-2: Security requirements for operators and service providers
- 62443-3: Safety requirements for automation systems Security Levels (SLs) - Target SLs / Achieved SLs
- Assessment of security risks

Examination

- 90 minutes multiple choice examination
- Attending all sessions of the training is compulsory for taking the exam

Certificate

Certificate of successful completion shall be issued to all the delegates/participants who attend entire, duration of the course, in all the sessions and qualify in examination.

Duration

3 Days

About Us:

TUV India Pvt. Ltd. (TÜV NORD GROUP) is a customer-focused, innovative, and independent, technical, quality & safety services organization, dedicated to providing future-proof solutions through technological excellence for the success of its customers with the highest level of integrity. With a presence at over 40

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We are proud to provide increasing levels of services to the best known, largest global and national companies as well as medium and small industries in diverse sectors like Oil & Gas, Petrochemical, Nuclear, Renewables, Infrastructure, Food, Power, Manufacturing, Chemicals, Pharma, Paper, Automobiles, Railways, Aerospace, Defence, IT, Health, Hospitality, Retail, etc.

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