

# Reliability Academy

Reliability Engineering Training Courses

## EN 13849 Briefing: Requirements and Application

**Goal:** The briefing gives basic information about the design and integration of safety of machinery control and the avoidance of systematic failures. The briefing introduces Performance Levels safety integrity classification, diagnostic coverage and common cause failure. The role of validation, commissioning and fault exclusion is also described. *The 1st session can be complemented with a more detailed session on selected topics which arise during briefing.*

### 1. Introduction: Applicability and Commitment

- EN 13849 application in industry. Do we have to comply?

### 2. Identifying Safety Functions

- Risk Analysis, methods and realization.
- How to start.

### 3. Safety Functions Requirements

- Performance Level PL and SIL.
- Selection and allocation.

### 4. Software Safety Requirements

- Functional safety of software described.

### 5. Safety Validation

- Reliability calculations, Failure rates, basic / dangerous, diagnostic coverage.
- Common cause failures.

### 6. Safety Documentation

- Overview of typical documentation.
- Certification, Requirements, Realization.

### 7. Discussion on how to comply with EN 13849