

Machine Safety Services

What Are Your Challenges?

- ▶ Who is responsible for machine safety?
- ▶ What regulatory and safety standards are applicable?
- ▶ We've had an incident. What should I do?
- ▶ How can I keep our people safe?
- ▶ Will implementing safety measures reduce our machine productivity?
- ▶ Do I need a risk assessment?
- ▶ We're buying new machines. How do I know they're safe?

Resources and Solutions

Applying years of machine safety engineering expertise in manufacturing, we help your company reach its safety program goals by meeting you where you are. You have made significant investments in both your people and plant assets. We will help you protect these assets and your productivity.

Our Safety Practice leads hold certifications in global safety competency as Functional Safety engineer – TÜV Rheinland and Certified Machine Safety Expert – CMSE® – TÜV NORD. These certifications validate that your safety projects will be delivered with proven competency and expertise in best-in-class machine safety practices and thorough understanding of safety standards.

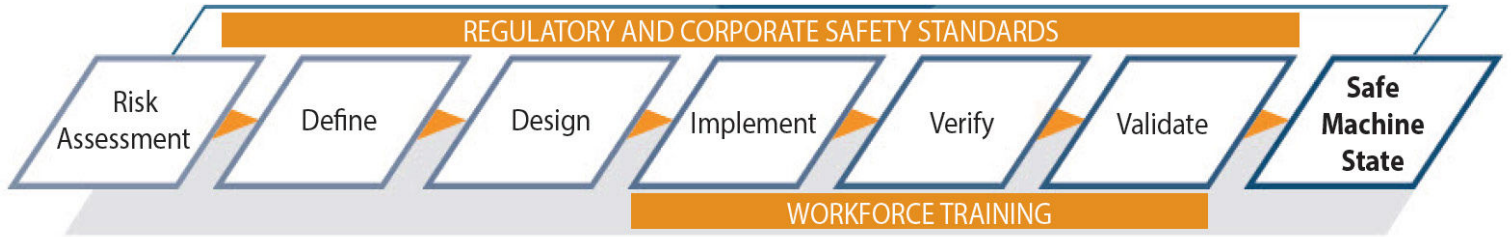
Machine Hazards

Some machine hazards are easily identified, while others may not be as obvious. Key indicators that your machine may be unsafe:

- ▶ History of accidents or near misses
- ▶ No lockable isolators for all energy sources
- ▶ Missing guarding, so hazards are accessible
- ▶ No modern safety control system
- ▶ No risk assessment on file for the machine
- ▶ Operators or maintenance resources do not feel safe performing certain tasks



Polytron's Proven Roadmap to Machine Safety



© 2022 Polytron, Inc.

Standards Compliance

Overview

Our machine safety group verifies each machine's compliance with applicable regulations and machine safety standards, as well as customer-specific safety standards. We document our findings and recommendations in an easy-to-understand Standards Compliance report.

Results

- ▶ Delivers highest value prior to Factory Acceptance Testing (FAT)
- ▶ Provides advanced identification of safety issues for resolution at the factory
- ▶ Optimizes the startup curve

*Recommended for all new and repurposed machines

Risk Assessment

Overview

Polytron performs machine safety Risk Assessments based on current safety standards including ISO 12100. This process identifies all hazards and associated tasks, and then estimates the risk for each. This risk estimate is used to establish the Performance Level required (PLr) for each safety function. The process then evaluates the current risk reduction measures and establishes a residual risk level. Guidance is provided on any risk reduction measured necessary to achieve an acceptable level of risk.

Results

- ▶ Serves as a guide for our Define, Design, and Implement phases, when applicable
- ▶ Accompanies the machine throughout its lifecycle and should be updated when modifications are made to the machine, after updates to safety standards, and following any safety incidents

*Recommended for all new and existing machines

Validation

Overview

Validation involves analysis and functional testing of the safety control systems and machine guarding. Using SISTEMA, we determine each safety function's Performance Level (PL) and compare that to the PLr established in the Risk Assessment. Our Validation process follows current safety standards including ISO 13849-2 and ISO 14120 for safety control systems and machine guarding, respectively.

Results

- ▶ Confirms alignment between the design and the implementation of the safety system
- ▶ Validates all functions of the safety control system
- ▶ Verifies the design and construction of machine guarding

*Recommended for all new machines and any existing machines when the safety system has been modified

Protect Your Most Valuable Assets

Protecting your most valuable assets - your people - is important to you. Our portfolio of safety services can be tailored to meet your needs and help ensure the safe operation and maintenance of your equipment.

Consulting

- ▶ Corporate & plant safety initiatives
- ▶ Procedures & documentation support
- ▶ Machine safety training
- ▶ Accident or near miss response

Standards Compliance

- ▶ Regulatory requirements
- ▶ Regional standards
- ▶ Global standards
- ▶ Corporate & plant standards

Risk Assessment

- ▶ Plant risk classification
- ▶ Machine risk assessment
- ▶ Machine guarding assessment
- ▶ Energy isolation & lockout audit

Risk Reduction: Define & Design

- ▶ Functional design specification
- ▶ Safety system design
- ▶ Machine guarding design
- ▶ Automation & safety programming

Risk Reduction: Implement

- ▶ Integration services
- ▶ Hardware procurement
- ▶ Contractor management
- ▶ Installation & startup support

Validation

- ▶ New or modified equipment
- ▶ Machine guarding verification
- ▶ Safety system analysis
- ▶ Safety system validation

What are your next steps?

Polytron offers complete machine safety project delivery, from Risk Assessment to Risk Reduction and Validation to Workforce Training, to ensure the safe operation of your machines.

Contact us for a consultation.

