

MACHINE SAFEGUARDING

GRANTEK

CONSULT
DESIGN
DELIVER

Whether safeguarding one machine or developing a program to safeguard a hundred, documentation is just the first step in protecting your team. Having a deep and intimate knowledge of the machinery and how its used is key to creating a solution which maximizes efficiency and operability of the machine.

WHY YOU SHOULD DEVELOP A SAFETY PROGRAM



PROTECT EMPLOYEES

- Protect employees from unsafe conditions and hazards by providing a safe work environment



ACHIEVE COMPLIANCE

- Meet and exceed regulatory compliance
- Follow best practices established by your company



REDUCE COSTS

- Prolong your machines life by meeting safety standards
- Avoid medical and litigation expenses



"BEST-IN-CLASS"

- Becoming Best-In-Class with safety practices is a competitive advantage



FOLLOW STANDARDS

- Driving standardization in cross-functional disciplines



IMPROVE PRODUCTIVITY

- Limited machine shut down vs. full stop
- Reduced occurrence for full system lockout

ADDITIONAL BENEFITS

- Increase time-to-market by working directly with OEMs before the machine gets to you
- Safer asset utilization
- Enterprise Risk Management
- Improve resolution time and increase OEE
- Minor servicing exceptions to safely reduce maintenance downtime
- Fewer accidents & repeat incidents

WHAT SERVICES WE PROVIDE



OUR SAFETY & LOGISTICS TEAM HELPS EVERY STEP OF THE WAY



CORPORATE LEVEL OFFERINGS

Developing and implementing a best-in-class, sustainable corporate machine safety program is much more than just creating a set of internal documents; it requires a deep understanding of interconnections between manufacturing, engineering, operations, safety, and ultimately your business. Grantek's Safety & Logistics team can help your company develop a personalized Safety Program that includes the following:

01 CORPORATE MACHINE SAFETY POLICY AND PROCEDURE DEVELOPMENT

05 DOCUMENTATION STORAGE AND CHANGE MANAGEMENT PROGRAM IMPLEMENTATION

02 SAFETY REQUIREMENT SPECIFICATION

06 BUSINESS CASE JUSTIFICATION AND ROI CALCULATIONS

03 CORPORATE INITIATIVE AND ROLL-OUT PLANNING

07 BUILD PROCESS AND PROJECT STAGE GATE DEVELOPMENT

04 AUDITING, ASSESSMENT, AND EVALUATION TOOLS

08 SAFETY CHECKLIST, FORMS, AND TEMPLATE CREATION

PLANT LEVEL OFFERINGS

Most manufacturing plants contain various machine types; some are stand-alone, and others are part of a production line or an integrated work cell. These machines will vary between vendors and vintages, which can lead to a great disparity in project costs and ROI benefits. Grantek's Safety & Logistics team offers the following assessments and evaluation services, either as a stand-alone service or as part of a larger integration project:



RISK ASSESSMENTS

The process by which the intended use of the machine, the tasks and hazards, and the level of risk are determined.



COMPLIANCE EVALUATIONS

Part of the risk assessment process where the machinery is evaluated for compliance to a specific set of regulations or standards.



RISK REDUCTION PLANS (RRP)

Risk reduction measures and protective devices are selected to reduce the identified risks and compliance deficiencies to acceptable levels.



CONTROL OF HAZARDOUS ENERGY PLANS (CHE)

A complementary section to the RRP that is solely designed to help assess the proper use of the equipment as it applies to control of hazardous energy.



LOCKOUT/TAGOUT EVALUATIONS (LOTO)

A subset of a CHE that evaluates energy isolating devices and lockout/tagout procedures to ensure compliance with OSHA 1910.147.



SAFETY REQUIREMENT SPECIFICATIONS (SRS)

A set of design and performance requirements for implementing the risk reduction plan.



BUDGETARY ESTIMATES (BE)

A preliminary BE (+/-30%) for implementing all elements described in the RRP. The purpose of this BE is requesting an allocation of funds.



SITE SURVEYS (SS)

High-level overview of a large grouping of equipment or an entire facility to help prioritize where additional safety efforts may need to be applied.



ANNUAL/BI-ANNUAL SAFETY AUDITS (AA)

Regularly scheduled audits that usually occur after a machine safety remediation project to ensure no new hazards have been created.

MACHINE LEVEL OFFERINGS

Contact info@grantek.com to learn more about our program

OUR SAFETY & LOGISTICS TEAM WILL ALWAYS ENSURE:

- Peace of mind that your equipment and production lines are safeguarded correctly the first time, every time
- All equipment is compliant with regulatory requirements and applicable safety standards
- Overall Equipment Effectiveness (OEE) is considered in all safeguarding solutions to ensure optimal productivity
- All aspects of the project are formally documented and provided upon final acceptance
- Your teams are properly educated and trained on the exposed hazards, safeguarding system functionality, and residual risk levels

ASSESSMENTS & ANALYSIS

- Full Risk & Compliance Assessments
- Risk Reduction Plans
- Pre-start Health & Safety Reviews (Canada)
- Safe Work Procedures
- Lockout/Tagout Assessments
- Stop Time Measurements
- Arc Flash Hazard Analysis
- Safety Circuit Analysis



SAFETY & DESIGN

- Safety Requirement Specifications
- Safety Control Integration
- Safety System Design
- System Verification and Validation
- Component Sizing and Selection
- Alarming and Event Notification
- Safety Network Design
- Control Panel Design & Fabrication

GUARDING YOUR MACHINE



Safety & Logistics
GRANTEK

HOW GRANTEK APPROACHES SAFETY PROJECTS

PROJECT
START

ASSESSMENT PROPOSAL

PHASE 1: PLANNING

Conduct a Risk Assessment

Using ISO 12100, ANSI B11.0, and CSA Z432 as guidance, Grantek systematically identifies and evaluates all hazards associated with the machinery, assesses the adequacy of existing safeguards, and documents compliance gaps to recognized regulations and standards.

Create a Risk Reduction Plan

A formal document that outlines the selection and application of protective measure(s) and safeguard(s) to reduce the identified risk(s) to an acceptable level. This step is a collaborative effort between Grantek and the customer and establishes the plan for the project.

Develop Safety Requirement Specifications

Develop the design and performance requirements for the safety system and each individual safety function.

REMEDIAL PROPOSAL

PHASE 2: EXECUTION
AND DESIGN

Design Safety Solution

Full Engineering and Design, including hardware design, software design, applicable interfaces, integration into existing systems, circuit diagrams, bill of materials, etc.

Verify Design

Following the requirements of ISO 13849-1, Grantek uses IFA's SISTEMA program to verify the performance level of each safety function. In addition, Grantek's verification process includes verification of safety-related electrical and mechanical aspects.

Build, Install, & Commission

Typical services include: Project Management, scheduling, materials management, procuring and managing subcontractors, etc.

Validate Installation & Performance

Validation is a specific safety process which confirms the correct performance of each safety function through inspection, testing, and fault injection. Grantek's Validation plan is based off of ISO 13849-2.

Train Affected Personnel

Training is provided to ensure all affected personnel understand the associated hazards, safeguarding solutions, residual risk, safe operating procedures, testing, and maintenance.

SIGN OFF &
PROJECT CLOSE