

SERVICES & SUPPORT

Risk Assessments

Identifies potential safety hazards to reduce the risk of injuries and improve productivity

More than Just a Best Practice

Risk assessments are becoming more than just a suggested best practice. Leading safety organizations including TUV, IEC, NFPA, ANSI and ASSE have recognized and promoted the benefits associated with performing risk assessments based on industry published methodologies. Safety-related standards and industry guidelines are being updated to reflect the need for conducting risk assessments.

One trade organization, Packaging Machine Manufacturers Institute (PMMI), has mandated a risk assessment be performed on all machines prior to October 25, 2008. Failure to comply could make the machine manufacturer vulnerable in any future litigation. Many believe risk assessments will soon become a requirement in the United States.

A Rockwell Automation Risk Assessment includes the participation of your technicians, operators, and other appropriate staff members to gain a thorough understanding of machine-operator interaction and your overall operating environment. The assessment is a repeatable process that will help ensure long-term compliance with applicable standards by providing:

- Clarification of safeguarding, control circuit architecture and safety performance requirements
- Documentation of intent to produce a safe product or workplace
- A safeguarding baseline against which future inspections can confirm measures have been implemented and operate properly. Should a machine be modified, the assessment can be quickly updated to reflect any new hazards and mitigation plans
- Identification of potential hazards that other risk assessment methodologies may miss
- The impetus for technicians /operators to help meet machine guarding requirements (through their participation in the risk assessment process)



A comprehensive risk assessment lays the foundation for a successful safety strategy by helping you gain a thorough understanding of the potential hazards associated with your production equipment, machinery and processes. Risk assessments serve as a guide to regulatory compliance, a facilitator of positive staff attitudes toward machine safety, and a means to proactively identify safety-related issues that could cause injury and reduce productivity.

A Rockwell Automation Risk Assessment is performed by experienced safety experts utilizing our proven, task-based methodology (back). This methodology will identify the potential hazards associated with a machine or group of machines and quantify the associated risk by evaluating the following:

- Setup, operations, maintenance & sanitation
- Process design
- Circuit architecture & guarding (controls, hard guards)
- Awareness means (signs, beacons, markings)
- Training & administrative requirements
- Personal Protective Equipment (PPE)

Following the assessment, you will receive a complete summary report including a specific CAT/SIL level for each risk and recommended mitigation techniques to reduce high-risk levels.

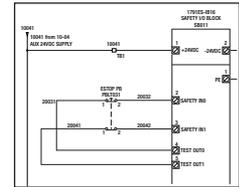
Rockwell Automation Risk Assessment Methodology Overview

The procedures conducted during an on-site Risk Assessment are as follows:

- Address the setup, operation and maintenance tasks of hazards associated with the machine /work cell
- Utilize a task-based analysis to review your facility's incident reports and conduct a brainstorming session to identify machine hazards
- Interview operators, engineers and maintenance personnel to understand human interaction with equipment and resulting hazards
- Inspect machine and work areas to identify additional tasks / hazards not previously identified, which includes its own review guidelines



For each hazard identified, the risk assessment team will assign a risk rating and identify potential risk reduction techniques.



At the completion of the Risk Assessment, you will receive a summary report with detailed documentation of analysis/results and recommendations for risk reduction.

Report elements include:

- Scope of risk assessment, machine overview and functional description, documented methodology, participants / interviewees
- Hazards lists based on human interaction with the machine and another with associated risk reduction category assigned per hazard
- Potential mitigation techniques and final mitigation log for the customer to complete to document the actual mitigation technique implemented
- List of assumptions and/or notes made by the risk assessment team during the process

RISK EVALUATION

The risk reduction categories are defined by the percentage severity of injury, maximum number of workers and potential fatalities. The table below provides an example of risk reduction categories assigned per hazard.

Table 1 - Risk Evaluation (Evaluation Table - categories in blue)			
SEVERITY OF HAZARD	CONCERN	AVOIDANCE	RISK REDUCTION CATEGORY
High	High Potential	High Potential	R1
Medium	Medium Potential	Medium Potential	R2
Low	Low Potential	Low Potential	R3
Very Low	Very Low Potential	Very Low Potential	R4

RISK MITIGATION

Table 2 - Risk Mitigation Matrix (Final Risk Reduction)		
RISK REDUCTION CATEGORY	AVOIDANCE/ MITIGATION	RISK REDUCTION CATEGORY
R1	Eliminate the hazard	R1
R2	Reduce the severity of the hazard	R2
R3	Reduce the severity of the hazard	R3
R4	Reduce the severity of the hazard	R4



For More information

Contact your local Rockwell Automation sales office or authorized Allen-Bradley distributor to learn more about or to order a Rockwell Automation Risk Assessment. For complete information on Rockwell Automation Safety Solutions, including the next Machine Safety Seminar in your area, go to www.rockwellautomation.com/solutions/safety/.

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