

RISKY BUSINESS - THE RISK ASSESSMENT PROCESS

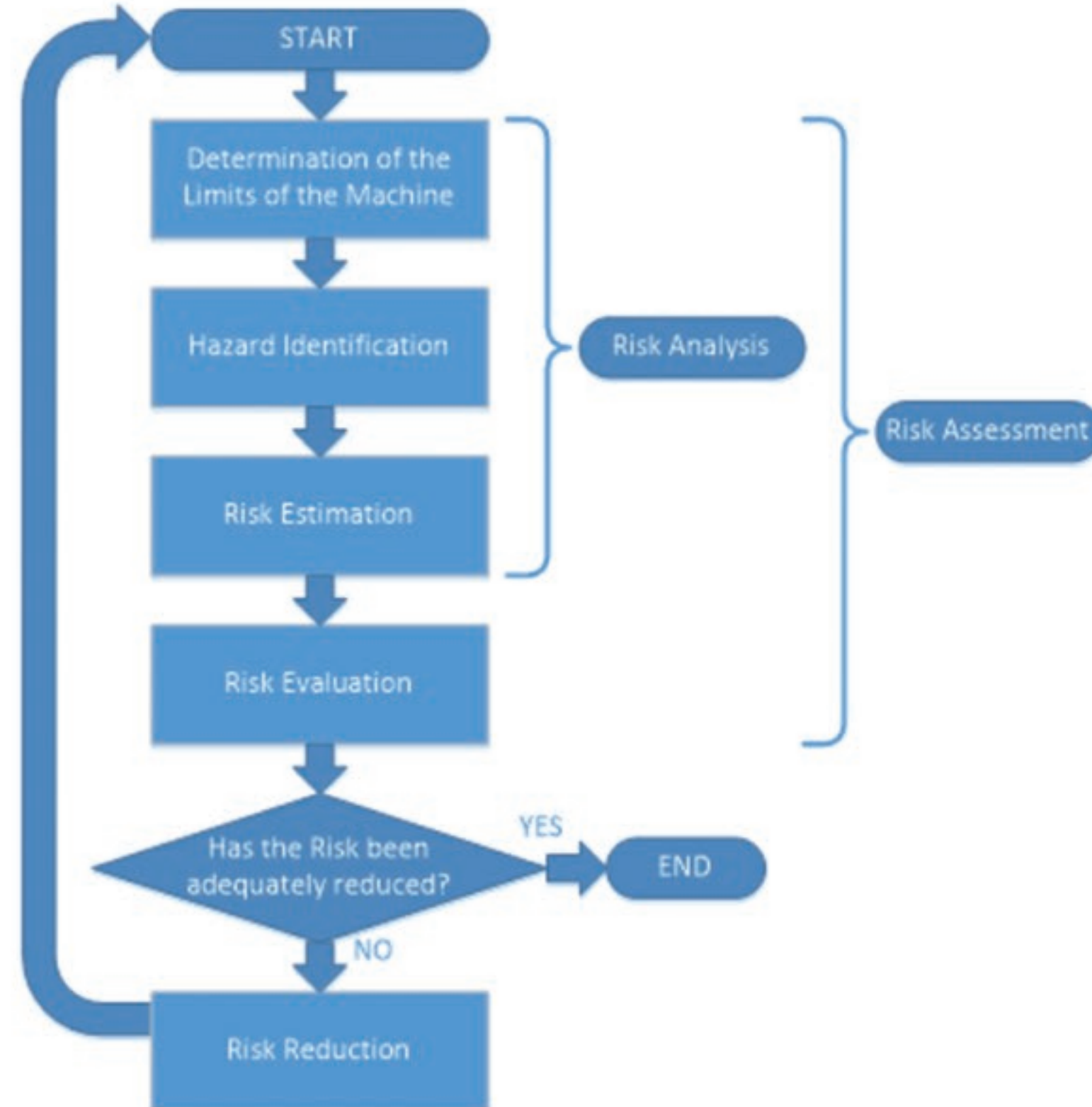
Performing a risk analysis is a crucial step for machine safeguarding, and the first step in a *risk assessment*, as it identifies the machine hazards and their associated risks. Part of the analysis is understanding how the machine operates and the required interactions which takes place between personnel and the machine. This information will help in determining dangerous parts, areas and situations with the equipment, which is considered the hazard.

Next, the risk, which is the possibility and consequences of exposure to this hazard, can be documented. Part of the risk documentation is the calculation of a Hazard Rating Number or HRN. The HRN is used to quantify a risk so that it can be prioritized and so that a baseline is created. This baseline is used to estimate the effectiveness of control measures selected to remediate the identified risk.

An evaluation of the HRN is then performed to decide if further steps are needed to reduce the risk or not. The risk analysis and this evaluation of the HRN is the risk assessment process.

There are many different approaches and HRN parameters within the industry for guidance in the risk assessment procedure. The main goal is to make sure a methodology is selected or created which is effective for the machine(s) being assessed and that it is consistent throughout the company.

Risk assessment is one element involved in creating a machine safety mindset to provide a safe working environment and successful safety culture.



Flowchart of the Risk assessment process as described in ISO 12100

UPCOMING MACHINE SAFETY WEBINAR



Join us for "Risk Assessment Methods for Machine Safety and Cobots"

Risk assessments are the starting point to any machine safeguarding initiative. Identifying the risks is the first step to abating them. But many individuals rely on their understanding of what equipment requires risk assessment or use a company standard that may not follow current applicable standards.

Join Peter Rigakos as he explains methods for creating a risk assessment program for all EHS, engineering design, and maintenance staff in your company.

REGISTER NOW

MACHINE SAFETY WEBINAR:

RISK ASSESSMENT METHODS FOR MACHINE SAFETY AND COBOTS

- Date: October 20, 2021
- Time: 2 PM Eastern / 11 AM Pacific
- Presenter: Peter Rigakos
- Hosted by: **EHS**Today **NED** **MachineDesign**

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SCHMERSAL
THE DNA OF SAFETY

Date: October 20, 2021

Time: 2 PM Eastern
11 AM Pacific

Duration: 1 hour

Presenter: Peter Rigakos



ENGINEERING SERVICES

tec.nicum Engineering Services can provide assistance with Risk Assessments



ENGINEERING SERVICE
Risk Assessment to ISO 12100



ENGINEERING SERVICE
COBOT Risk Assessment



SAFETY TRAINING
Risk Assessment

Based on ISO 12100, tec.nicum specialists carry out risk analysis and a comprehensive assessment of all hazards relating to the machines and systems. They also analyze machines for conformity with the applicable standards and norms.

Even inherently safe by design equipment like a collaborative robot needs to be assessed for risks. Our engineers can evaluate the application as a whole, based on requirements from ISO/TS 15066 & ISO 10218.

This two day course will help prepare you to perform Risk Assessments. It helps you understand machine hazards and develops your ability to qualify and quantify them, using current machine safety standards.

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RESOURCES

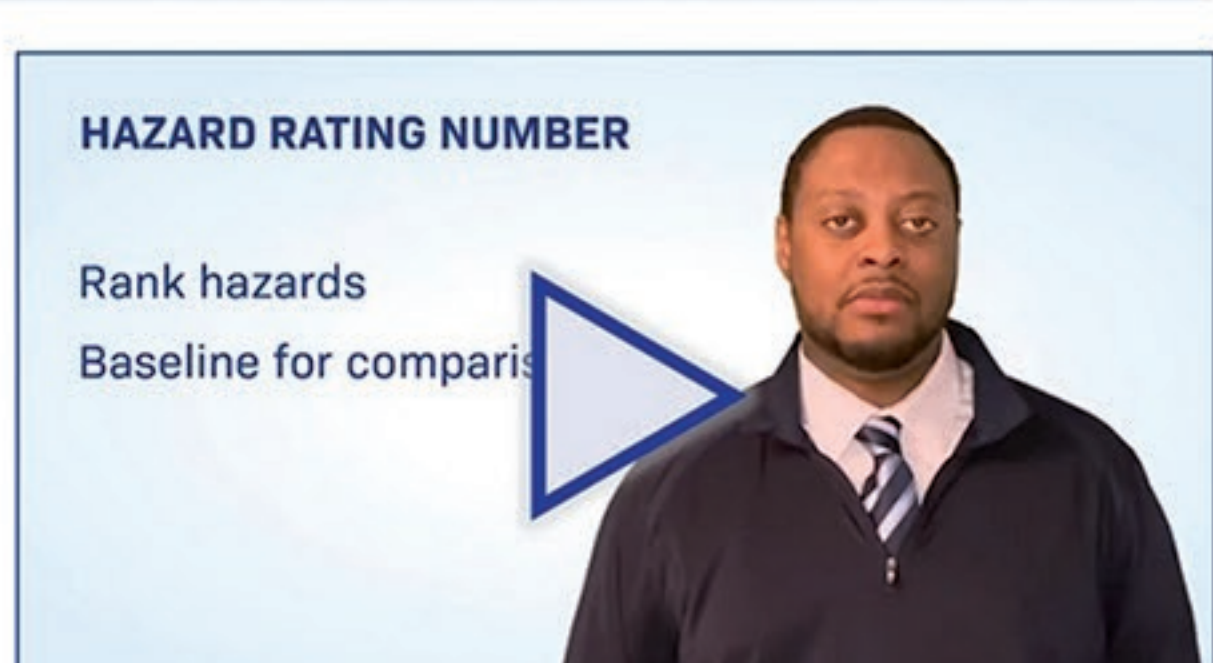
Here is a collection of reference documents on the topic of Machine Safety

VIDEO:

Schmersal on Machine Safety: Risk Assessment

In this short video Devin Murray discusses Risk Assessment, which allows you to identify hazards and risks associated with the equipment.

[View on YouTube](#) (Duration 1:35)



BROCHURE
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Engineering Services



ARTICLE
Building A Machine
Safety Mindset



DESIGN GUIDE
Machine Safety
In Automation

tec.nicum offers a variety of engineering services including risk assessment and machine safety training courses. We also offer the OSHA Outreach Training for General Industry (10 or 30 hour). 12 pages.

This executive summary of our recent webinar discusses the steps of building a machine safety mindset to achieve a more uniform company machine guarding and safety methodology. 5 pages

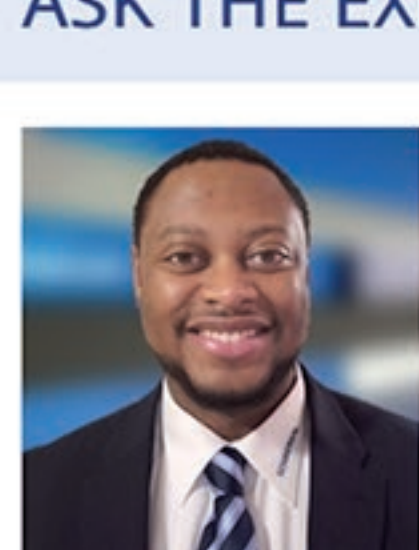
In this exclusive Design Guide, the editors of Design World review the approaches needed to assess a machine's required level of safety and the components needed needed for safe installations. 27 pages

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ASK THE EXPERT



Devin Murray

TUV Functional
Safety Engineer
ID-No. 4274/11

Question: What is the difference between a task-based and a hazard-based risk assessment?

Answer: A task-based assessment looks at the individual interactions with the machine and identifies hazards and risks for each action. An operator loading raw material into the machine would be one example of a task to assess.

A hazard-based assessment is more general and looks at the equipment as a whole. Overall hazards of the machine and its environment are considered, such as tripping, noise, and exposed entrapment hazards.

Both the task-based and hazard-based assessment are required and complement each other to create an overall picture of the hazards and risks associated with the machine.

Do you have a question? Ask Devin: dmurray@schmersal.com

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