Machinery Directive 2006/42/EC

Implemented with PLATO e1ns

Why Machinery Directive 2006/42/EC?

The Machinery Directive 2006/42/EC ("Machinery Directive" in the following) serves to prevent accidents when handling properly installed and maintained machines. This means the health and safety requirements of the Machinery Directive must be considered and their fulfillment documented starting in the development phase of a machine.

The Machinery Directive applies to

- machinery and component manufacturers,
- importers and distributors,
- operators of machinery.

Implementation with PLATO e1ns

With the Machinery Directive 2006/42/EC solution package, PLATO e1ns provides an integrated solution that can

- model the risk evaluation and risk reduction strategies as well as
- make it possible to track requirements, risks, and safeguards.

Machine Safety Right from the Start

By fulfilling harmonized standards, you ensure that all requirements of the Machinery Directive are met right from the start. You already know during the development process that you are fulfilling the mandatory standards:

- EN ISO 12100
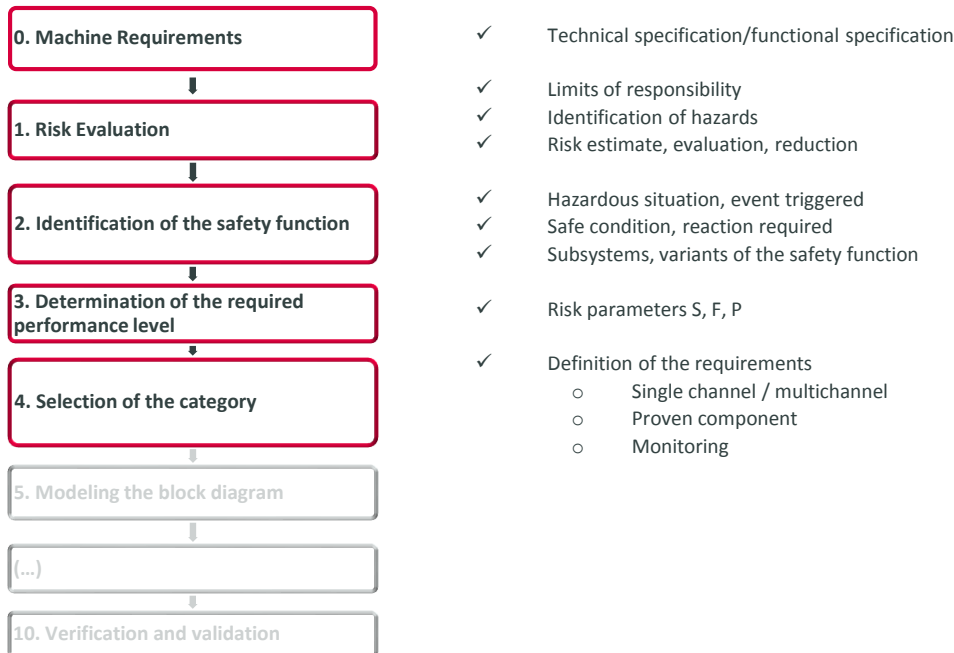- EN ISO 13849-1

Your Benefits

- **Conformity to standards**
  Legal certainty in terms of the Machinery Directive

- **Safe machines**
  Avoidance of worst-case scenario

- **Cost savings**
  Detect risks in the early development phase

- **Catalogs**
  for hazardous and operating situations

- **Use of a database**
  Corporate knowledge is collected centrally and reapplied

- **Time savings**
  The time required for the user to maintain and care for data is minimized

- **Method integration**
  Data can be integrated into other methods such as FMEA, for example

- **Web application**
  Working in a browser allows easy access to software

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The Path to Safe Machinery

PLATO e1ns helps you take the first steps towards safe machinery, from the technical specification to the definition of the requirements. In the PLATO approach, we have expanded the 10 classic steps for manufacturing safe machinery by adding the machine requirements (Step 0) - they are then integrated into the data concept.

Steps	Checklist
0. Machine Requirements	✓ Technical specification/functional specification
1. Risk Evaluation	✓ Limits of responsibility ✓ Identification of hazards ✓ Risk estimate, evaluation, reduction
2. Identification of the safety function	✓ Hazardous situation, event triggered ✓ Safe condition, reaction required ✓ Subsystems, variants of the safety function
3. Determination of the required performance level	✓ Risk parameters S, F, P

4. Selection of the category	✓ Definition of the requirements
	   o Single channel / multichannel
	   o Proven component
	   o Monitoring

5. Modeling the block diagram	
(...)	
10. Verification and validation	

Scope of Delivery

With the PLATO e1ns solution for implementing the Machinery Directive, you have a portfolio of networked methods forms on a single platform.

Method forms

- Requirements analysis
- Limitations
- Risk evaluation according to EN ISO 13849-1
- Functional Safety
- Category

Supplemental Methods and Modules

As an option, you can also expand your Machinery Directive 2006/42/EC solution package by adding the following methods and modules, and thus obtain new functions.

Methods

- FMEA
- FMEDA
- Specification & Testing

Modules

- e1ns.aspects - system modeling with SysML
- e1ns.documents - document management
- e1ns.actions - action management