

## *Minimum documents to comply with NR-12.*



NR-12 establishes parameters to guarantee the safety of the worker and prevent accidents in the use of machines and equipment, which undergoes important changes as we commented in the previous article. The justification, according to the Special Secretary for Social Security and Labor at the Ministry of Economy, Rogério Marinho, is to "simplify the rules and improve productivity" of Brazilian industries.

Below is a description of the minimum documents that an inspection requires:

- **Updated list of machines**

This document is a list of all machines containing, for example: Name, location, power or capacity, category according to risk analysis (Reference: Item 12.18.1 of NR-12)

The objective of this document is to have an overview of the machines and risks existing in the factory, with it to classify the priority in the risk reduction action plan or even in the inspection by the inspector of the Department of Labor.

- **Risk assessment**

The risk assessment must be prepared, carried out by a legally qualified professional who will carry out the risk analysis of the entire security system of the machines and equipment, analyzing the entire electrical, electronic, pneumatic, hydraulic and mechanical systems. Risk assessment is a systematic analysis, and aims to inform what are the risks that the machine and equipment offer (Risk Analysis, with classification of the degree of risk), which is the category of the security system, classification of the Degree of Reliability and Integrity of the "SIL" security system, classification of the Performance Level "PLr", which prevention or protection measures exist, or should exist to control the risks, what the possibilities of the hazards are eliminated, and what parts of the machine and equipment are subject to causing injury and damage. (Reference: Item 12.1.9 of NR-12)

This document must have an engineer as the responsible technician with registration at CREA, that is, have an ART, Technical Responsibility Note.

To perform the Risk Analysis, Brazilian Standard NBR ISO 12100: 2013 must be used, which is the standard on Machine Safety - General principles of design and Risk assessment and risk reduction.

- **Operation and Maintenance Manuals**

Machines and equipment must have an instruction manual provided by the manufacturer or importer, with information related to safety at all stages of use. (Reference: Item 12.13.1 of NR-12)

The manuals for machinery and equipment, national or imported, manufactured after the validity of this item, must follow the applicable official or international technical standards. (Reference: Item 12.13.3 of NR-12)

The machinery and equipment manuals must be written in the Portuguese language - Brazil, be clear and objective, have procedures for using the machine or equipment safely, among other requirements according to the requirements of NR-12.

- **Operational Safety Procedures (Operation and Maintenance)**

Specific and standardized work and safety procedures for machinery and equipment must be developed based on risk assessment. (Reference: Item 12.14.1 of NR-12)

The safety procedures must have information for the operator, on how the operations of each machine or equipment should be carried out, while considering the risks. When creating security procedures, the Risk Analysis must be taken into account.

Companies that do not have their own machine maintenance service are not required to develop work and safety procedures for this purpose. (Reference: Item 12.14.3.1 of NR-12)

- **Training**

The operation, maintenance, inspection and other interventions in machinery and equipment must be carried out by qualified or qualified or trained workers, and authorized for this purpose. (Reference: Item 12.16.1 of NR-12)

The workers involved in the operation, maintenance, inspection and other interventions in machinery and equipment, must receive training provided by the employer and compatible with their functions, which must address the risks to which they are exposed and the existing and necessary protection measures, for the accident and disease prevention. (Reference: Item 12.16.2 of NR-12)

**NOTE:** This document does not describe all the legal requirements in force, it only guides professionals on the main measures to be taken in the process of adaptation to meet NR-12.

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