

ANSI B11.19-2019

Performance Requirements for Risk Reduction Measures: Safeguarding and other Means of Reducing Risk

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Foreword

(This Foreword is not part of the requirements of American National Standard B11.19-2019)

General

The primary objective of this standard is to establish the requirements for the design, construction, installation, operation and maintenance of the risk reduction measures used to eliminate or control hazards to individuals associated with machines. This standard relies on other standards to determine which risk reduction measure(s) is required or allowed to control identified hazards / hazardous situations and is intended to be used in conjunction with the ANSI B11.0 standard on general safety requirements and risk assessments of machines, and any relevant ANSI B11 "base" standard for a given machine. To accomplish this objective, this standard has established responsibilities for the supplier (e.g., manufacturer, rebuilder, installer, integrator, and modifier), the user, and individuals in the working environment. The overall goal is to achieve acceptable risk in the work practices and work environment.

Application

Other industry sectors may benefit from applying this standard. Where a machine-specific "base" (type-C) safety standard exists, ANSI B11.19 may be constructively used to supplement that standard.

The words "safe" and "safety" are not absolutes. Safety begins with good design. While the goal of this standard is to eliminate injuries, this standard recognizes that risk factors cannot practically be reduced to zero in any human activity. This standard is not intended to replace good judgment and personal responsibility. Operator skill, attitude, training, job monotony, fatigue, and experience are factors that affect safety and that must be considered by the user.

Throughout its history, ANSI B11.19 has not provided the requirements for the selection of the risk reduction measures, but only the implementation of the risk reduction measure once chosen. No hierarchical order, no level of risk reduction, or any relationship between risk reduction measure options are implied within this standard.

Effective Date

The following information on effective dates is informative guidance only, and not a normative part of this standard. This Subcommittee recognizes that some period of time after the approval date on the title page of this document is necessary for suppliers and users to develop new designs or modify existing designs or manufacturing processes in order to incorporate the new or revised requirements of this standard into their product development or production system.

This Subcommittee recommends that suppliers complete and implement design changes for new machines and machinery systems within 30 months of the approval date of this standard.

The Subcommittee recommends that users evaluate whether existing machinery and machinery systems have acceptable risk within 30 months of the approval date of this standard using generally recognized risk assessment methods. If the risk assessment shows that modification(s) is necessary, refer to the requirements of this standard or the machine-specific "base" safety standard to implement risk reduction measures (protective measures) for appropriate risk reduction.

Harmonization

The requirements of this standard have been harmonized with similar requirements in several international (ISO and IEC) and European (EN) standards. Harmonization means that the requirements have been aligned in essence to achieve a similar level of risk reduction. Harmonization does not mean duplication of exact requirements.

ANSI B11.19 implements a standardization philosophy that differs significantly from that often found in some ISO, IEC, and EN standards. ISO, IEC, and EN standards tend towards individual documents for each type of risk reduction measure (e.g., light curtains, emergency stop controls, prevention of unexpected start-up, etc.). ANSI B11.19 has historically combined the various requirements into this single standard, thereby allowing readers to understand and compare the requirements for different approaches to reducing risk.