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American National Standard
Safety of Machinery

ANSI-Accredited Standards Developer and Secretariat:



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FOREWORD (This Foreword is not part of the requirements of this ANSI B11.0 standard on Safety of Machinery)

Overview and History

The B11 series of machinery safety standards are over 100 years old, beginning with the first standard on the safety requirements for power presses in 1922. Since that time, safety requirements for a variety of machines have been developed and are continually updated/ revised to become the current series of ANSI B11 American National Standards and Technical Reports on machinery safety.

This American National Standard was promulgated by the B11 Standards Development Committee as a voluntary consensus standard to establish and specify general safety requirements for the design, construction, operation and maintenance (including installation, dismantling and transport) of machinery and machinery systems. This standard also applies to devices that are integral to these machines.

This standard was first published in 2008 as ANSI B11.GSR (General Safety Requirements). It was substantively revised and re-designated as ANSI B11.0 in 2010. The standard was again revised and published in 2015; that third edition of this standard added responsibilities related to machinery components, clarified the relationship between the risk assessment for the machine and the design specification for control systems, provided additional information on documentation requirements, included new subclauses on supervision and training, presented new annexes correlating machinery safety standards in the U.S. and EN/ISO, and generally clarified and simplified text in the standard. The 2023 edition of B11.0 provided additional or improved guidance in several key areas such as existing (legacy) equipment, prevention through design, how to achieve acceptable risk and validate/verify (check, test, compare) risk reduction measures. It also included new content on alternative methods for the control of hazardous energy, manual and special operation modes, and machinery systems dealing with aspects such as layout analysis and spans of control.

Changes from prior edition

The current edition of this American National Standard on the Safety of Machinery (ANSI B11.0-2023) includes updates / content in the following areas:

- clarified text related to responsibilities of machinery suppliers, users, modifiers, purchasers of used machinery, and other entities;
- introduced concepts of co-manufacturers and their associated responsibilities;
- updated and clarified responsibilities for existing (legacy) machinery;
- included requirements for when whole body access situations exist and/or apply;
- improved the information about validation;
- improved information related to remote / tele-operations of machinery;
- expanded requirements for radiation hazards and associated risk reduction measures;
- added a new section for heated systems and related equipment for processing of materials;
- updated requirements for *Information for Use* and manuals, consistent with ISO 20607;
- reorganized clauses 4 (*Responsibilities*) and 5 (*Lifecycle Requirements*);
- added new definitions and updated existing ones (e.g., recognizing distinctions between, and characterizing energy as hazardous, non-hazardous, or beneficial);
- updated and improved existing Annexes to assist the reader in applying the content of the standard;
- clarified content of Table D1 on estimating severity of harm;
- added a new annex on *Control Devices*.