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BUREAU OF INDIAN STANDARDS

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भारतीय मानक **मसौदा**

मशीनरी की सुरक्षा – एकीकृत विनिर्माण प्रणाली – बुनियादी आवश्यकताएँ

(ISO 11161 का *अधिग्रहण*)

Draft *Indian Standard*

SAFETY OF MACHINERY — INTEGRATED MANUFACTURING SYSTEMS — BASIC REQUIREMENTS

(*Adoption* of ISO 11161)

ICS 13.110; 25.040.01

Safety of Machinery Sectional Committee, MED 40	Last date or receipt of comments is **03 May 2024**

NATIONAL FOREWORD
(*Adoption clauses to be added later*)

The text of ISO Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appears referring to this standard, they should be read as 'Indian Standard'.
b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated:

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*
ISO 13849-1 : 2006, Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design	IS 16810 (Part 1) : 2018/ ISO 13849-1 : 2015, Safety of machinery — Safety related parts of control systems: Part 1 General principles for design	Identical
ISO 13849-2 : 2003, Safety of machinery — Safety-related parts of control systems — Part 2: Validation	IS 16810 (Part 2) : 2018/ ISO 13849-2 : 2012, Safety of machinery — Safety related parts of control systems: Part 2 Validation	Identical
ISO 13850 : 2006, Safety of machinery — Emergency stop — Principles for design	IS 16818 : 2018/ ISO 13850 : 2015, Safety of machinery — Emergency stop function — Principles for design	Identical
ISO 14120 : 2002, Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards	IS 16811 : 2018/ ISO 14120 : 2002, Safety of machinery — Guards — General requirements for the design and construction of fixed and movable guards	Identical
ISO 14122-1 : 2001, Safety of machinery — Permanent means of access to machinery — Part 1: Choice of a fixed means of access between two levels	IS 16809 (Part 1) : 2018/ ISO 14122-1 : 2016, Safety of machinery — Permanent means of access to machinery: Part 1 Choice of fixed means and general requirements of access	Identical
ISO 14122-2 : 2001, Safety of machinery — Permanent means of access to machinery — Part 2: Working platforms and walkways	IS 16809 (Part 2) : 2018/ ISO 14122-2 : 2016, Safety of machinery — Permanent means of access to machinery: Part 2 Working platforms and walkways	Identical
ISO 14122-3 : 2001, Safety of machinery — Permanent means of access to machinery — Part 3: Stairways, stepladders and guard-rails	IS 16809 (Part 3) : 2018 ISO 14122-3 : 2016 Safety of machinery — Permanent means of access to machinery: Part 3 stairs, stepladders and guard-rails	Identical
ISO 14122-4 : 2004, Safety of machinery — Permanent means of access to machinery — Part 4: Fixed ladders	IS 16809 (Part 4) : 2018/ ISO 14122-4 : 2016, Safety of machinery — Permanent means of access to machinery: Part 4 Fixed ladders	Identical
IEC 60204-1 : 2005, Safety of machinery — Electrical equipment of machines — Part 1: General requirements	IS 16504 (Part 1) : 2019/ IEC 60204-1 : 2016, Safety of machinery — Electrical equipment of machines Part 1 General requirements (*first revision*)	Identical

The technical committee has reviewed the provision of the following International Standard

referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard:

International Standard	*Title*
ISO 12100-1 : 2003	Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology
ISO 12100-2 : 2003	Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles
ISO 14121 : 1999	Safety of machinery — Principles of risk assessment
IEC 62061 : 2005	Safety of machinery — Functional safety of safety-related electrical, electronic and programmable electronic control systems

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

NOTE — The technical content of the document has not been enclosed as these are identical with the corresponding ISO standard. For details, please refer the corresponding **ISO 11161:2007** or kindly contact:

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