ANSI B11.19-2019

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

ANSI-Accredited Standards Developer and Secretariat:

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Table of Contents

Foreword ................................................................................................................................. v
Application ................................................................................................................................. v
Effective Date ............................................................................................................................ v
Harmonization .......................................................................................................................... v
History ....................................................................................................................................... vi
Terminology .............................................................................................................................. vii
Context ..................................................................................................................................... vii

1 Scope ...................................................................................................................................... 12
2 References ............................................................................................................................... 13
  2.1 Normative references ...................................................................................................... 13
  2.2 Informative References .................................................................................................. 13
3 Definitions ............................................................................................................................... 15
4 Responsibility ......................................................................................................................... 27
  4.1 Supplier responsibilities ................................................................................................. 27
  4.2 User responsibilities ....................................................................................................... 27
  4.3 Integrator / modifier / rebuilder responsibilities ............................................................ 28
  4.4 Personnel responsibilities .............................................................................................. 28
5 Risk assessment process ....................................................................................................... 29
6 Risk reduction measures ....................................................................................................... 30
  6.1 General requirements for risk reduction measures ....................................................... 30
7 Inherently safe by design ....................................................................................................... 32
  7.1 General requirements for inherently safe design measures ........................................ 32
  7.2 Prevention through design ............................................................................................. 32
  7.3 Safe-opening safeguarding method .............................................................................. 32
  7.4 Safe-location safeguarding method .............................................................................. 33
  7.5 Minimum gaps to avoid crushing of parts of the human body ..................................... 34
  7.6 Maximum gaps to avoid exposure to hazards .............................................................. 36
8 Engineering controls – guards ............................................................................................... 37
  8.1 General requirements for guards .................................................................................. 37
    8.1.1 Guard design and construction ............................................................................... 37
    8.1.2 Guard visibility ......................................................................................................... 39
    8.1.3 Guard Location ......................................................................................................... 39
    8.1.4 Guard operation and maintenance .......................................................................... 40
  8.2 Fixed guards ..................................................................................................................... 40
  8.3 Movable guards .............................................................................................................. 41
  8.4 Interlocked Guards ......................................................................................................... 41
  8.5 Adjustable guards .......................................................................................................... 43
  8.6 Self-adjusting guards ..................................................................................................... 43
  8.7 Partial guards ................................................................................................................ 44
  8.8 Perimeter guards ........................................................................................................... 45
  8.9 Nip guards ..................................................................................................................... 46
  8.10 Shields ........................................................................................................................... 47
9 Engineering controls – control functions ............................................................................. 48
  9.1 General requirements for control functions .................................................................. 48
  9.2 Performance of safety functions .................................................................................... 48
    9.2.1 General requirements for safety functions ............................................................. 48
    9.2.2 Safety interface (safety relay) modules ................................................................. 49
    9.2.3 Considerations for safety-related application software (SRASW) ......................... 50
  9.3 Monitoring functions ....................................................................................................... 51

© B11 Standards, Inc. 2019
9.3.1 General requirements for monitoring functions .............................................. 51
9.3.2 Safe condition (stopping performance) monitoring systems .......................... 52
9.3.3 Speed monitoring function ......................................................................... 53
9.4 Stop functions .................................................................................................. 54
9.4.1 Normal stop function .................................................................................. 55
9.4.2 Emergency stop function ........................................................................... 55
9.4.3 Protective stop function ............................................................................. 56
9.5 Safety-related reset .......................................................................................... 59
9.5.1 General requirements for reset ................................................................. 59
9.5.2 Automatic reset .......................................................................................... 60
9.5.3 Manual reset ................................................................................................ 60
9.6 Safety distance ................................................................................................ 61
9.7 Suspension of safety functions ......................................................................... 63
9.7.1 Manual suspension (bypassing) ................................................................. 63
9.7.2 Muting ........................................................................................................ 64
9.8 Variable sensing functions ............................................................................... 69
9.8.1 Safety-related sensing field switching ....................................................... 69
9.8.2 Safety-related sensing field blanking ......................................................... 76
9.9 Presence-Sensing Device Initiation (PSDI) ...................................................... 78
9.9.1 General requirements for PSDI ................................................................. 78
9.9.2 PSDI control logic ..................................................................................... 80
9.9.3 PSDI operation .......................................................................................... 82
9.9.4 User responsibilities for PSDI ................................................................. 82
9.10 Perimeter risk reduction measures ................................................................. 83
9.11 Whole body access ....................................................................................... 83
9.11.1 General requirements for whole body access ........................................... 83
9.11.2 Control of hazardous energy .................................................................... 85
9.11.3 Prevent undetected presence of individuals within the safeguarded space 86
9.11.4 Manual reset ............................................................................................. 87
9.11.5 Location of safety-related manual control devices .................................. 88
9.11.6 Inhibit function ......................................................................................... 88
9.11.7 Interlock devices capable of internal opening ....................................... 89
9.11.8 Initiation warning system ....................................................................... 90
9.12 Span of control .............................................................................................. 95
9.12.1 Layout analysis ......................................................................................... 95
9.12.2 Level of safety performance ................................................................. 96
9.12.3 Identification ............................................................................................ 96
10 Engineering controls – devices ........................................................................ 97
10.1 General requirements for devices ................................................................. 97
10.2 Interlock devices ........................................................................................... 97
10.3 Trapped (captive) key systems ..................................................................... 103
10.3.1 General requirements for trapped key systems ...................................... 103
10.3.2 Trapped key system design ..................................................................... 104
10.3.3 Trapped key system installation ............................................................... 105
10.3.4 Trapped key system operation ............................................................... 105
10.4 Interlock blocking devices ........................................................................... 106
10.5 Movable barrier devices .............................................................................. 107
10.5.1 General requirements for movable barrier devices .............................. 107
10.5.2 Type A movable barrier devices ............................................................ 108
10.5.3 Type B movable barrier device ............................................................... 108
10.6 Pull back (pull out) and hold out (restraint) devices .................................... 108
10.6.1 General requirements for pull back and hold out (restraint) devices .... 108
10.6.2 Pull back and hold out (restraint) device operation .............................. 109
10.7 Presence-sensing devices ............................................................................ 110
10.7.1 General requirements for presence-sensing devices ............................ 110
10.7.2 Light curtains and single/multiple beam devices ................................. 112
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.7.3</td>
<td>Area scanning devices</td>
<td>114</td>
</tr>
<tr>
<td>10.7.4</td>
<td>Close proximity point of operation AOPDs</td>
<td>117</td>
</tr>
<tr>
<td>10.7.5</td>
<td>Vision-based protective devices</td>
<td>117</td>
</tr>
<tr>
<td>10.7.6</td>
<td>Safety mat devices</td>
<td>118</td>
</tr>
<tr>
<td>10.7.7</td>
<td>Safety edge / bumper devices</td>
<td>119</td>
</tr>
<tr>
<td>10.7.8</td>
<td>Probe detection devices</td>
<td>121</td>
</tr>
<tr>
<td>10.7.9</td>
<td>Radio frequency devices</td>
<td>121</td>
</tr>
<tr>
<td>10.8</td>
<td>Two-hand actuating controls</td>
<td>123</td>
</tr>
<tr>
<td>10.8.1</td>
<td>General requirements for two-hand actuating controls</td>
<td>123</td>
</tr>
<tr>
<td>10.8.2</td>
<td>Two-hand control devices</td>
<td>125</td>
</tr>
<tr>
<td>10.8.3</td>
<td>Two-hand trip devices</td>
<td>126</td>
</tr>
<tr>
<td>10.8.4</td>
<td>Two-hand operating levers</td>
<td>126</td>
</tr>
<tr>
<td>10.9</td>
<td>Single actuating controls</td>
<td>126</td>
</tr>
<tr>
<td>10.9.1</td>
<td>General requirements for single actuating controls</td>
<td>126</td>
</tr>
<tr>
<td>10.9.2</td>
<td>Single control devices</td>
<td>128</td>
</tr>
<tr>
<td>10.9.3</td>
<td>Single trip devices</td>
<td>128</td>
</tr>
<tr>
<td>10.10</td>
<td>Hold-to-run control devices</td>
<td>129</td>
</tr>
<tr>
<td>10.11</td>
<td>Enabling devices</td>
<td>130</td>
</tr>
<tr>
<td>10.12</td>
<td>Emergency stop (E-stop) devices</td>
<td>131</td>
</tr>
<tr>
<td>10.12.1</td>
<td>General requirements for E-stop devices</td>
<td>131</td>
</tr>
<tr>
<td>10.12.2</td>
<td>Pushbutton-type E-stop devices</td>
<td>133</td>
</tr>
<tr>
<td>10.12.3</td>
<td>Rope or cable pull-type E-stop devices</td>
<td>134</td>
</tr>
<tr>
<td>10.12.4</td>
<td>Foot-operated E-stop devices</td>
<td>135</td>
</tr>
<tr>
<td>10.12.5</td>
<td>Rod-operated E-stop devices</td>
<td>135</td>
</tr>
<tr>
<td>10.12.6</td>
<td>Push-bar-operated E-stop devices</td>
<td>135</td>
</tr>
<tr>
<td>10.13</td>
<td>Slide locks</td>
<td>136</td>
</tr>
<tr>
<td>11</td>
<td>Administrative controls</td>
<td>137</td>
</tr>
<tr>
<td>11.1</td>
<td>General requirements for administrative controls</td>
<td>137</td>
</tr>
<tr>
<td>11.2</td>
<td>Awareness means</td>
<td>137</td>
</tr>
<tr>
<td>11.2.1</td>
<td>General requirements for awareness means</td>
<td>137</td>
</tr>
<tr>
<td>11.2.2</td>
<td>Awareness barriers</td>
<td>138</td>
</tr>
<tr>
<td>11.2.3</td>
<td>Awareness signals</td>
<td>138</td>
</tr>
<tr>
<td>11.2.4</td>
<td>Awareness (safety) signs</td>
<td>140</td>
</tr>
<tr>
<td>11.2.5</td>
<td>Awareness (safety) markings</td>
<td>140</td>
</tr>
<tr>
<td>11.3</td>
<td>Information for use (human and organizational)</td>
<td>140</td>
</tr>
<tr>
<td>11.3.1</td>
<td>Instruction manual (handbook)</td>
<td>140</td>
</tr>
<tr>
<td>11.3.2</td>
<td>Safe work procedures</td>
<td>141</td>
</tr>
<tr>
<td>11.3.3</td>
<td>Training</td>
<td>142</td>
</tr>
<tr>
<td>11.3.4</td>
<td>Inspection and maintenance</td>
<td>143</td>
</tr>
<tr>
<td>11.4</td>
<td>Administrative safeguarding methods</td>
<td>144</td>
</tr>
<tr>
<td>11.4.1</td>
<td>Safe-distance safeguarding method</td>
<td>144</td>
</tr>
<tr>
<td>11.4.2</td>
<td>Safe-holding safeguarding method</td>
<td>145</td>
</tr>
<tr>
<td>11.4.3</td>
<td>Other safeguarding methods</td>
<td>145</td>
</tr>
<tr>
<td>11.5</td>
<td>Supervision</td>
<td>145</td>
</tr>
<tr>
<td>11.5.1</td>
<td>Supervision of the workplace</td>
<td>146</td>
</tr>
<tr>
<td>11.5.2</td>
<td>Avoidance of unauthorized changes</td>
<td>146</td>
</tr>
<tr>
<td>11.5.3</td>
<td>Management of change</td>
<td>149</td>
</tr>
<tr>
<td>11.6</td>
<td>Control of hazardous energy</td>
<td>149</td>
</tr>
<tr>
<td>11.6.1</td>
<td>Lockout / tagout</td>
<td>149</td>
</tr>
<tr>
<td>11.6.2</td>
<td>Alternative methods</td>
<td>150</td>
</tr>
<tr>
<td>11.6.3</td>
<td>Restraint mechanisms</td>
<td>150</td>
</tr>
<tr>
<td>11.7</td>
<td>Tools</td>
<td>152</td>
</tr>
<tr>
<td>11.7.1</td>
<td>Workholding equipment</td>
<td>152</td>
</tr>
<tr>
<td>11.7.2</td>
<td>Hand tools</td>
<td>152</td>
</tr>
<tr>
<td>11.8</td>
<td>Personal Protective Equipment (PPE)</td>
<td>153</td>
</tr>
</tbody>
</table>
LIST of ANNEXES (all Informative)

Annex A – Guidance to Understand the ANSI B11 Series of Standards & Technical Reports ............................................. 154
Annex B – Hazard List for Risk Reduction Measures ......................................................................................................... 155
Annex C – Performance of the Safety Function(s) .................................................................................................................. 156
Annex D – Comparison of Physical Barriers ....................................................................................................................... 159
Annex E – Reaching Distance Considerations for Protective Structures .................................................................................. 160
Annex F – Nip Guards ............................................................................................................................................................. 171
Annex G – Considerations for Transparent Guards ................................................................................................................... 176
Annex H – Safety Distance Calculations for Engineering Controls – Devices .............................................................................. 182
Annex I – Reaching Distance Considerations for Engineering Controls – Devices ........................................................................ 188
Annex J – Measurement & calculation of system performance to achieve a safe condition ...................................................... 211
Annex K – Achieving a Safe Condition .................................................................................................................................. 214
Annex L – Safety Functions for Power Drive Systems .................................................................................................................. 215
Annex M – Supplier Information for Time and Distance to Achieve a Safe Condition ................................................................. 225
Annex N – Awareness Means ....................................................................................................................................................... 226
Annex O – Risk Reduction Measures in Use ............................................................................................................................ 230

Bibliography of Informatively Referenced International Documents ........................................................................................... 251

LIST of FIGURES

Figure 1 — Organization of the B11 Series of Documents ...................................................................................................................... 1
Figure 2 — Example of sensing field switching ................................................................................................................................. 75
Figure 3 — Example of sensing field switching of a light curtain to allow passage of material ......................................................... 75
Figure 4 — Example of sensing field switching of an area scanner to allow passage of material ....................................................... 76
Figure 5 — Determining effective detection capability of a light curtain .............................................................................................. 77
Figure 6 — Example of Whole body Access .................................................................................................................................. 84
Figure 7 — Example of pre-start warning system used for momentary jog control ............................................................................. 94
Figure 8 — Example of a mechanical interlock ................................................................................................................................ 98
Figure 9 — Examples of interlock devices that control energy ........................................................................................................... 98
Figure 10 — Example of trapped key transfer system ....................................................................................................................... 105
Figure 11 — Examples of two-hand actuating device design ............................................................................................................ 124
Figure A.1 – Typical clause layout of ANSI B11 ‘base’ standards showing the various responsibilities .............................................. 154
Figure E.1 – Reaching over a protective structure ........................................................................................................................... 162
Figure E.2a – Protective structure location versus opening size for slotted openings ......................................................................... 165
Figure E.2b – Protective structure location versus opening size for square openings ..................................................................... 165
Figure E.2c – Protective structure location versus opening size for round openings ........................................................................ 165
Figure E.3 – Reaching through a protective structure with openings of irregular shape ................................................................. 167
Figure E.4 – Prevention of whole body access through a protective structure .................................................................................... 167
Figure E.5 – Reaching through a protective structure indirectly .................................................................................................... 168
Figure E.6 – Reaching under a protective structure .......................................................................................................................... 169
Figure E.7 – Consideration of all reaching factors for protective structures .......................................................................................... 170
Figure F.1 – Examples of in-running nip hazards ............................................................................................................................... 171
Figure F.2 – Examples of nip guards ................................................................................................................................................. 171
Figure F.3 – Examples of protecting nip points from side entry ........................................................................................................ 172
Figure F.4 – Locating hazard points of in-running nips ....................................................................................................................... 173
Figure F.5 – Minimum cylinder-to-guard angle (preferred, acceptable) ............................................................................................. 173
Figure F.6 – Nip guards that create wedge pockets ............................................................................................................................ 173
Figure F.7 – Nip guards that do not create wedge pockets ................................................................................................................... 174
Figure F.8 – Nip guard clearance ............................................................................................................................................................ 174
Figure F.9 – Example determining guard distances and openings ....................................................................................................... 175
Figure G.1 – Aging curve of unprotected polycarbonate (averaged test points) ................................................................................. 177
Figure H.1 – Reaction time block diagram .................................................................................................................................. 184
Figure I.1 – Vertical application of a presence-sensing device .......................................................................................................... 191
Figure I.2 – Horizontal application of a presence-sensing device ...................................................................................................... 191
Figure I.3 – Reaching over a vertical presence-sensing device ........................................................................................................... 192
American National Standard

Figure I.4 – Reaching over a vertical presence-sensing device with an additional protective structure ........................................... 194
Figure I.5 – Reaching through a vertical sensing field with \( d_s \leq 64 \text{ mm} \) (2.52") .......................................................... 195
Figure I.6 – Reaching distance when reaching through a vertical sensing field for PSDs ...................................................... 196
Figure I.7 – Reaching through a vertical sensing field with \( 64 \text{ mm} < d_s < 600 \text{ mm} \) \( d_{is} = 850 \text{ mm} \) ................. 196
Figure I.8 – Reaching under a vertical presence-sensing device ......................................................................................... 197
Figure I.9 – Reaching under a vertical presence-sensing device with an additional protective structure ......................... 198
Figure I.10 – Consideration of all reaching factors for a vertical sensing field ............................................................... 199
Figure I.11 – Reaching over a horizontal presence-sensing device .................................................................................. 200
Figure I.12 – Height of a horizontal sensing field .............................................................................................................. 201
Figure I.13 – Allowable height of a horizontal sensing field, \( H_s \) .................................................................................. 201
Figure I.14 – Minimum Depth of Sensing Field .............................................................................................................. 202
Figure I.15 – Distance from end of horizontal sensing field to nearest obstruction .......................................................... 203
Figure I.16 – Safety distance for single beam devices \( d_{is} = 1200 \text{ mm} \) (47.74") ......................................................... 203
Figure I.17 – Safety distance for two-hand actuating controls (no shroud) \( d_{is} = 550 \text{ mm} \) (21.65") .............................. 204
Figure I.18 – Safety distance for hand-operated single actuating controls \( d_{is} = 2200 \text{ mm} \) (86.61") .......................... 204
Figure I.19 – Safety distance for foot-operated single actuating controls \( d_{is} = 2500 \text{ mm} \) (98.43") .......................... 205
Figure I.20 – Safety distance for radio frequency devices .............................................................................................. 205
Figure I.21 – Example of interlocked linear movable guard ........................................................................................... 206
Figure I.22 – Example of interlocked angular movable guard ....................................................................................... 207
Figure I.23 – Variables for determining opening (e) for a movable guard with a hinge switch ......................................... 207
Figure I.24 – Diagram of force-travel relationship ........................................................................................................ 210
Figure L.1 – Safe Torque Off (STO) .......................................................................................................................... 216
Figure L.2 – Safe Stop 1 Deceleration Controlled (SS1-d) .......................................................................................... 216
Figure L.3 – Safe Stop 1 Ramp Monitored (SS1-r) .................................................................................................. 217
Figure L.4 – Safe Stop 2 Deceleration Controlled (SS2-d) ....................................................................................... 217
Figure L.5 – Safe Stop 2 Ramp Monitored (SS2-r) .................................................................................................. 217
Figure L.6 – Safe Operating Stop (SOS) ................................................................................................................ 218
Figure L.7 – Safely-Limited Acceleration (SLA) ........................................................................................................... 218
Figure L.8 – Safe Acceleration Range (SAR) ........................................................................................................ 220
Figure L.9 – Safely-Limited Speed (SLS) ................................................................................................................ 220
Figure L.10 – Safely Speed Range (SSR) ................................................................................................................ 220
Figure L.11 – Safely-Limited Position (SLP) ........................................................................................................ 221
Figure L.12 – Safely-Limited Increment (SLI) ........................................................................................................ 221
Figure L.13 – Safe Direction (SDi) ........................................................................................................................ 222
Figure L.14 – Safe Cam (SCa) .................................................................................................................................. 222
Figure L.15 – Safe Speed Monitor (SSM) ................................................................................................................ 223
Figure L.16 – Safe Maximum Speed (SMS) ........................................................................................................ 223
Figure L.17 – Safe Braking and Holding System (SBS) ............................................................................................... 223
Figure L.18 – Safe Door Locking (SDL) ................................................................................................................ 224
Figure N.1 — Selection Criteria for Signal Word .................................................................................................... 227

LIST of TABLES

Table 1 — Values for Minimum Gaps to Avoid Crushing of Parts of the Human Body ......................................................... 35
Table 2 — Comparison of stop, emergency stop, and protective stops ............................................................................... 58
Table 3 — Comparison of initiation warning systems defined in 9.11.8 ........................................................................ 94
Table 4 — Types of Actuation of Interlock Devices (Informative) .................................................................................. 100
Table 5 — Examples of changes which could increase risk .......................................................................................... 147
Table 6 — Examples means to prevent unauthorized changes .................................................................................... 148
Table E.1 — Variable key for reaching factors associated with protective structures ................................................. 161
Table E.2 — Horizontal reaching distance when accessing over a protective structure ........................................... 163
Table E.3 — Reaching through regular openings in a protective structure ............................................................... 164
Table E.4 — Reaching through (around) a protective structure with limitation of movement .................................. 166
Table E.5 — Horizontal reaching distance when accessing under a protective structure ........................................ 170
Table H.1 — Safety distance equation for engineering controls – devices ................................................................. 182
Table H.2 — Variable key for determining safety distance for engineering controls – devices ....................................... 183

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vi
Table I.1 – Variable key for reaching factors associated with engineering controls – devices .................. 190
Table I.2 – Classification of optical presence-sensing devices used in vertical orientation .................... 192
Table I.3 – Horizontal reaching distance when accessing over a sensing field .......................................... 193
Table I.4 – Horizontal reaching distance when accessing under a vertical sensing field ............................. 198
Table I.5 – Sample calculation of b for typical hinge switch actuating angles (α) ........................................ 208
Table J.1 – Measured stopping times ......................................................................................................... 212
Table J.2 – Comparison of stopping time values .......................................................................................... 213
Table N.1 — Selection Guidance for Awareness (Safety) Signs ................................................................. 226
Table N.2 — Preferred Colors for Indicator Lights and Icons ................................................................. 228
Table N.3 — Alternate Colors for Indicator Lights and Icons ................................................................. 228
Table N.4 — Example Selection Guidance for Awareness (Safety) Markings ............................................. 229
Table O.1 – List of Risk Reduction Measure Reference Standards ............................................................. 230
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 evaluating whether existing machinery and machinery systems implement this edition 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.