1 Scope

1.1 This standard addresses the instruments that are classified as process safety safeguards by the authority having jurisdiction (typically the owner/operator or local regulatory authority), and establishes requirements for their mechanical integrity, including inspection/testing and documenting the inspection/test results.

1.2 This standard is specific to process safety risk management in the process industry.

1.3 This standard does not address codes, regulations, and other requirements that apply only to the nuclear power industry.

1.4 This standard does not address the mechanical integrity of non-process safety safeguards (e.g., business or asset protection, environmental protection or non-instrumented safeguards).

2 Normative references

ANSI/ISA-84.00.01-2004 Parts 1-3 (IEC 61511 Mod), Functional Safety: Safety Instrumented Systems for the Process Industry Sector.

3 Definitions

3.1
safety controls, alarms, and interlocks
process safety safeguards implemented with instrumentation and controls, used to achieve or maintain a safe state for a process, and required to provide risk reduction with respect to a specific hazardous event

NOTE 1 There are many types of safety controls, alarms, and interlocks, for example: safety alarm, safety interlock, safety permissive, detection or suppression, emergency shutdown, safety critical control, and safety instrumented system. Figure 1 illustrates their relationships to the process hazards analysis. The terms listed in the illustration are not intended to be construed as the only terms applied to safety controls, alarms, and interlocks; neither should it be assumed that each type is necessarily separate and independent.

NOTE 2 Refer to ANSI/ISA-84.00.01-2004 (IEC 61511 Mod) for additional requirements related to safety instrumented systems.

NOTE 3 Examples of non-instrumented safeguards include rupture disks, relief valves, dikes, etc. They do not fall within the scope of this standard.