1 Purpose

This standard is intended to enhance the safety of personnel by providing minimum requirements for electrical ignition systems for spark-ignited reciprocating internal combustion engines, parts of which are installed or operated in Class I, Division 2 or Zone 2 hazardous (classified) locations.

2 Scope

This standard provides minimum construction and test requirements in addition to manufacturer installation and maintenance recommendations for the safe operation of ignition systems and components for spark-ignited reciprocating internal combustion engines in Class I, Division 2, Group C or D or Class I, Zone 2, Group IIB or IIA, hazardous (classified) locations. These requirements apply to systems rated for normal operation with secondary voltages less than or equal to 35 kV.

This standard is intended to cover only ignition systems of reciprocating internal combustion engines that are stationary when in operation. This does not include any application where the engine would be in motion (vehicles) while operating. Applications addressed by the scope of this document include but are not limited to gas compressors, electric power generators, and pumps.

This standard applies to ignition systems suitable for use in an ambient temperature range of -40°C to +70°C (-40°F to +158°F).

3 References

ANSI NFPA 70, National Electrical Code®

ANSI/ISA-12.12.01, Nonincendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations

ANSI/ISA-60079-0, Electrical Apparatus for Use in Class I, Zones 0, 1 & 2 Hazardous (Classified) Locations: General Requirements

ANSI/ISA-60079-1, Electrical Apparatus for Use in Hazardous (Classified) Locations: Type of Protection - Flameproof “d”

ANSI/ISA-60079-15, Electrical Apparatus for Use in Hazardous (Classified) Locations: Type of Protection “n”

ANSI/UL 1203, UL Standard for Safety Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations

ANSI/UL2556, Wire and Cable Test Methods

SAE J2031, High Tension Ignition Cable

4 Definitions

4.1 alarm:
an audible, visual, or physical presentation designed to alert the user that a specific parameter has been reached or exceeded.

4.2 ambient temperature:
the temperature of the air in the immediate vicinity of the device, equipment or component.