

11450.2A Reference Section(s)	RCDR Topic	RCDR Number
2-7.2.1(d) 2-7.2.2 (d)	Deviation from 11450.2A Anti-Spark Protection Requirements for Hazardous Environments	23-023

QUESTION

Q: NAVCRANECENINST 11450.2A sections 2-7.2.1(d) and 2-7.2.2 (d) require pendant pushbutton stations and electrical enclosures to be NEMA Type 7 for Class I, hazardous environments, and NEMA Type 9 for Class II, hazardous environments. NAVCRANECENINST 11450.2A does not recognize intrinsically safe circuitry* as a suitable alternative when safeguarding the pendant system from the applicable hazardous environment. Is it permissible to deviate from these requirements for NEMA Type 7 or Type 9 pendant housings in the respective environments and alternatively permit the use of intrinsically safe barriers to safely operate in hazardous environments when the intrinsically safe barriers are appropriately selected for the applicable environment and are installed in NEMA 7 or NEMA 9 junction boxes upstream of the pendant, per the NEC and per the guidance of the intrinsically safe barrier's OEM guidance? For situations where the junction box is not located inside the hazardous area (as can be the case in some minimum hazardous applications like aircraft hangars), the intrinsically safe barriers will be installed in a NEMA 12, 4, 4X, or other as appropriate for the environment.

* An intrinsically safe circuit as defined by NEC Article 100 is a circuit in which any spark or thermal effect is incapable of causing ignition of a mixture of flammable or combustible material in air under prescribed test conditions.

ANSWER

A: This request is approved, based on the technical justification provided in Enclosure (1) of RCDR 23-023 entitled White Paper Intrinsic Safety, which supports safe and reliable use of these or similar catalog components in the stated environment. For completeness, the white paper is included below. Note: Installation of intrinsically safe circuits shall be in accordance with NEC 504.