

11450.2A Reference Section(s)	RCDR Topic	RCDR Number
2-7.2.1.(c)	Allowance for drawn galvanized wire rope in Division 2 hazardous areas	23-006

QUESTION

Q1: NAVCRANECENINST 11450.2A does not allow the use of drawn galvanized wire rope for hazardous duty locations. Zinc is known to have spark resistant properties. ASME HST-4 and ASME HST-6 acknowledge a zinc layer as a suitable replacement for solid spark-resistant materials depending on the specific hazardous location. Galvanizing is the process of applying zinc to steel or iron. Drawn galvanized wire rope is manufactured by pulling the wires through a bath of liquid zinc before passing through a die permanently reducing the wire diameter. Passing through the die physically embeds the zinc in the base metal, making it less of a coating and more of an integral component. Drawn galvanized wire rope is extremely resistant to any chipping or flaking that could expose ferrous material. Is drawn galvanized wire rope acceptable for use in hazardous areas, where components are required to be non-sparking?

ANSWER

A1: Division 2 hazardous areas, as clarified in NFPA 70 Article 500, are locations where the hazardous material is not likely to be present or is present only in the short term. Stainless steel wire rope is required for both Division 1 and Division 2 hazardous areas. However, drawn galvanized wire rope may be used in place of the solid spark-resistant material in Division 2 locations. Substituting drawn galvanized wire rope for stainless steel wire rope is acceptable in Division 2 locations as long as there is a letter from the crane, hoist, or wire rope OEM notifying the end user of the potential for the coating to be worn or otherwise damaged, thereby negating the spark-resistant protection. Hot dipped galvanized wire rope is not acceptable.