

SOLUTIONS

TECHNICAL ARTICLE

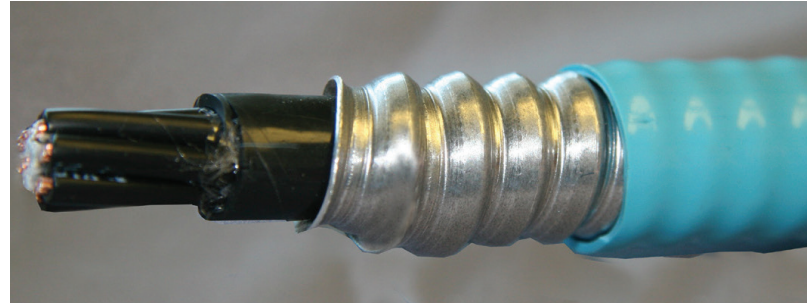
Understanding Intrinsically Safe

BY BRUNO NEKICH

There is frequent confusion surrounding the definition of intrinsically safe when it comes to electrical wire and cable.

An intrinsically safe circuit is an end-to-end system that encompasses all its components to be verified as intrinsically safe.

Equipment such as panels and housings must have tags that identify the product as IS (intrinsically safe).



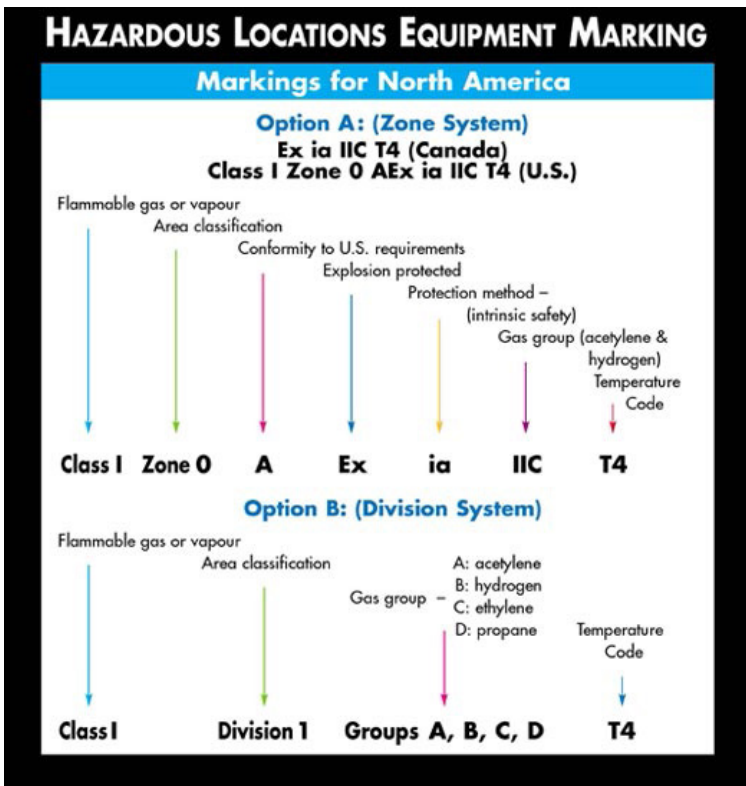
Cables used for an intrinsically safe circuit must be specifically identified and segregated from other non-intrinsically safe circuits. The common method of identifying IS cables is to use a light blue cable jacket. Although CSA standards have no specific requirement for the labeling of intrinsically safe cables, ShawFlex can add a custom marking at the request of the customer.

The length and electrical properties of the intrinsically safe cable must be such that the maximum permitted values of circuit inductance and capacitance are not exceeded; this value needs to be calculated for the entire intrinsically safe circuit (as per appendix F of the Canadian Electrical Code Part I).

Within the intrinsically safe electrical system, all cables need to be suitable for use in Class I, Zone 0 hazardous locations.

As a manufacturer of instrumentation and control cable ShawFlex builds and tests our cables to exceed the requirements of CSA Part II C22.2 series standards and is therefore qualified to manufacture intrinsically safe cables.

For more information on ShawFlex instrumentation and control cable solutions please visit www.shawflex.com



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