

MCAA Background Summary Regarding Certification of Products for Use in Flammable Atmospheres  
by Nationally Recognized Testing Laboratories  
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Background: Nationally Recognized Testing Laboratories (NRTL or NRTL's) were created under a program developed by the Occupational Safety and Health Administration (OSHA) and initiated in 1988. The purpose of the program from the OSHA website follows:

OSHA created the NRTL program to ensure that certain types of equipment be tested and certified for their safe use in the workplace. OSHA's NRTL [regulations](#) were established in 1988. The first organization became recognized as a NRTL in 1989.

A Nationally Recognized Testing Laboratory (NRTL) is a private-sector organization that OSHA has recognized as meeting the legal requirements in 29 CFR 1910.7 to perform testing and certification of products using consensus based test standards. These requirements are:

- The capability to test and evaluate equipment for conformance with appropriate test standards;
- Adequate controls for the identification of certified products, conducting follow-up inspections of actual production;
- Complete independence from users (i.e., employers subject to the tested equipment requirements) and from any manufacturers or vendors of the certified products; and
- Effective procedures for producing its findings and for handling complaints and disputes.

An organization must have the necessary capability both as a product safety testing laboratory and as a product certification body to receive OSHA recognition as an NRTL.

OSHA "recognizes" organizations that demonstrate they meet the criteria outlined above as well as specific scopes of testing each lab is authorized to perform with respect to the compliance of products submitted by their manufacturers to various standards that are also recognized by OSHA. Certification of certain products (typically used in the workplace) by a NRTL to the applicable standards is considered by OSHA as being the minimum requirement to be met to demonstrate the inherent safety of the product design and its manufacture. Those applicable standards are listed by OSHA on their website at the following link [https://www.osha.gov/dts/otpca/nrtl/list\\_standards.html](https://www.osha.gov/dts/otpca/nrtl/list_standards.html). The specific NRTL's recognized by OSHA to perform the testing and analysis on products to the various standards (defined individually for each NRTL) are listed by OSHA at the following website link <https://www.osha.gov/dts/otpca/nrtl/nrtllist.html>. The standards each NRTL is recognized by OSHA as being qualified to test products for are under the tab for each lab at this link.

Since this program's inception manufacturers of process measurement, control and automation devices have found many if not most of their products are subject to one or more of the standards listed by OSHA and therefore subject to testing and certification by a NRTL. One of the purposes in establishing the NRTL recognition by OSHA was a desire and need to provide a common basis for which OSHA would accept the test results from a third-party laboratory that a product was in compliance to the applicable standard(s). In the eyes of OSHA, the certification of a product by one NRTL to a standard within its scope is of equal validity to that of a certification of the same by another NRTL to the same standard also within that NRTLs' recognized scope. From the OSHA website:

Given that each NRTL has met the requirements for recognition, OSHA considers NRTLs recognized for the same product safety test standard to be capable of testing to, and certifying under, that standard.

Each NRTL has a unique logo typically referred to as its “mark” that it authorizes the manufacturer to apply to the certified product along with in the case of hazardous area certifications, the appropriate code that indicates the protection scheme and other information required by the standard. This allows the user to understand the method and other parameters by which the product can be safely installed in a hazardous area and the NRTL to which they may contact in order to verify the validity of the certification. In addition to the initial certification the manufacturer is subject to ongoing and unannounced audits by the NRTL intended to assure the product is continuously produced and marked in accordance with the applicable standard(s). This process was designed to serve the needs of OSHA to assure worker safety first and foremost and provide the user similar assurances that the product will perform safely.

Because OSHA recognizes multiple standards from multiple NRTL’s applicable to the same safety schemes the effect has been for the NRTL’s to promote their mark, standards and services aggressively in order to maximize their share of business from manufacturers. This has driven certain NRTL’s to assert their superiority over competitor NRTL’s for the same safety scheme certification. This competitive environment has led to situations where one NRTL will often not accept tests conducted by a different NRTL to a given standard should the manufacturer desire to have multiple marks from multiple NRTL’s for the same standard(s). The usual reason for a manufacturer to seek multiple marks is the requirement of different end users for specific marks. The end users normally require specific marks based on either local regulatory requirements or an internal decision to standardize on a specific mark. In both cases those situations often arise in part or whole as the result of the promotional efforts of the designated NRTL. Such decisions are not based on any requirement inherent to the NRTL program. The results for the manufacturer are extra costs to obtain and maintain multiple NRTL certifications for a given product. To date OSHA has taken no position or actions to discourage these practices which economically benefit the NRTL’s at the disproportionate expense of their customers with no demonstrable improvement to worker safety. This unbalanced model may be described by the term “regulatory capture” which is defined as a form of [government failure](#) that occurs when a [regulatory agency](#), created to act in the public interest, instead advances the commercial or political concerns of special [interest groups](#) that dominate the industry or sector it is charged with regulating.<sup>[1]</sup> When regulatory capture occurs, the interests of firms or political groups are prioritized over the interests of the public, leading to a net loss to society as a whole. Government agencies suffering regulatory capture are called "captured agencies".

OSHA’s position is that it has neither the inclination nor the legal authority to regulate the behavior of any NRTL with respect to its recognition or acceptance of the testing performed by another NRTL authorized to perform that testing to the same standards. Though the agency recognizes the concept of mark equivalency between NRTL’s it does not feel obligated to enforce that concept in any way as it is not seen as being essential to the agency’s primary mission of improving worker safety. In the opinion of the MCAA one effect of the NRTL program then has been to provide official sanction of the efforts of some NRTL’s to gain near monopolistic powers with respect to certification of products to standards written by these same NRTL’s and that this occurs despite OSHA’s stated neutrality towards any one NRTL over another for certifications to the same standard(s) to which they are recognized to test and certify products to by OSHA. So ingrained is this situation that one of the largest NRTL’s in a public meeting at OSHA headquarters stated that basically all matters related to how the NRTL’s perform the

work covered by the program should only be left to the NRTL's themselves to manage or to put another way, to regulate, rather than the program owner and legal authority, OSHA. This is historically what has often occurred to the detriment of the industry suppliers and customers by driving up the costs for product certification with no discernable or demonstrable improvement in product safety, cost or reliability.

The NRTL system's specific flaws that have produced not only the above negative outcomes but its inherent intransigence have also reduced its value as a global model along with most of the pre-IECEX standards recognized by OSHA. With the development of the ATEX scheme in the European Union (EU) a model developed to give product certifications acceptance across a large economic trading zone. Though national exceptions are allowed under the ATEX standard a key improvement this system introduced was the mandated mutual recognition of laboratory test data from one ATEX notified body by any other notified body in the EU. As a result the concept of a single global standard under a single mark began to emerge in response from an increasingly globalized economy that demands the ability to trade goods anywhere in the world with fewer barriers. Though ATEX has never achieved truly global standard status it did contribute to the environment for development of a set of hazardous area standards by the International Electrotechnical Commission (IEC) that were developed to be truly global standards (collectively referred to as IECEx). These standards have now been broadly recognized by the relevant authorities in most of the major global economies including the USA. The IECEx standards and international recognitions do not preclude national exceptions nor do they mandate universal acceptance of test data between NRTL's (in the case of the USA). They are, however, the closest the world has come thus far to a single set of globally accepted standards for certification of equipped intended for use in hazardous/flammable atmospheres. They are a good starting point towards the goals of a single global standard with a single mark accepted globally.

It is against this background that the Board of Directors of the Measurement, Control and Automation Association has sanctioned the following policy.