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UL 2874

Outline of Investigation for Electric Motors for Use in Hazardous (Classified) Locations - Protection by Pressurized Atmosphere Maintained above the UFL

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Summary of Topics

This second issue of the Outline of Investigation for Electric Motors for Use in Hazardous (Classified) Locations - Protection by Pressurized Atmosphere Maintained above the UFL, UL 2874, covers the explosion protection of electric motors as permitted by the national Electrical Code, NEC®, Article 501.125 (A)(4) by means of submerging in a liquid that is flammable only when vaporized and mixed with air, or is submerged in a gas or vapor at a pressure greater than atmospheric that is either not flammable or is flammable only when mixed with air.

These requirements cover machines rated 1000 V or less and machines rated greater than 1000 V.

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INTRODUCTION

1 Scope

1.1 These requirements cover electric motors, refrigeration compressors and accessories for installation and use in Class I, Division 1 or Division 2 hazardous (classified) locations, in accordance with the National Electrical Code, NFPA 70.

1.2 These requirements cover electric motors, refrigeration compressors and accessories as follows:

- a) rated greater than 1000 V and of a type designed to be continuously submerged in a fluid at a pressure greater than atmospheric that is either not flammable, or flammable only when vaporized and mixed with air, and which is for use only in industrial establishments with restricted public access, where the conditions of maintenance and supervision ensure that only qualified persons service the installation.
- b) rated less than or equal to 1000 V and of a type designed to be continuously submerged in a fluid at a pressure greater than atmospheric that is either not flammable, or flammable only when vaporized and mixed with air.

1.3 These requirements anticipate common flammable gases, gas mixtures or flammable liquids with significant margin between the upper flammable limit and the purged and pressurized state of use for the motor.

2 Components

2.1 Except as indicated in 2.2, a component of a product covered by this outline shall comply with the requirements for that component.

2.2 A component is not required to comply with a specific requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product covered by this outline; or
- b) Is superseded by a requirement in this outline.

2.3 A component shall be used in accordance with its rating established for the intended conditions of use.

2.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.