

AMD Flameproof Machines

The Simplest and Safest Solution for Hazardous Environments



ABB

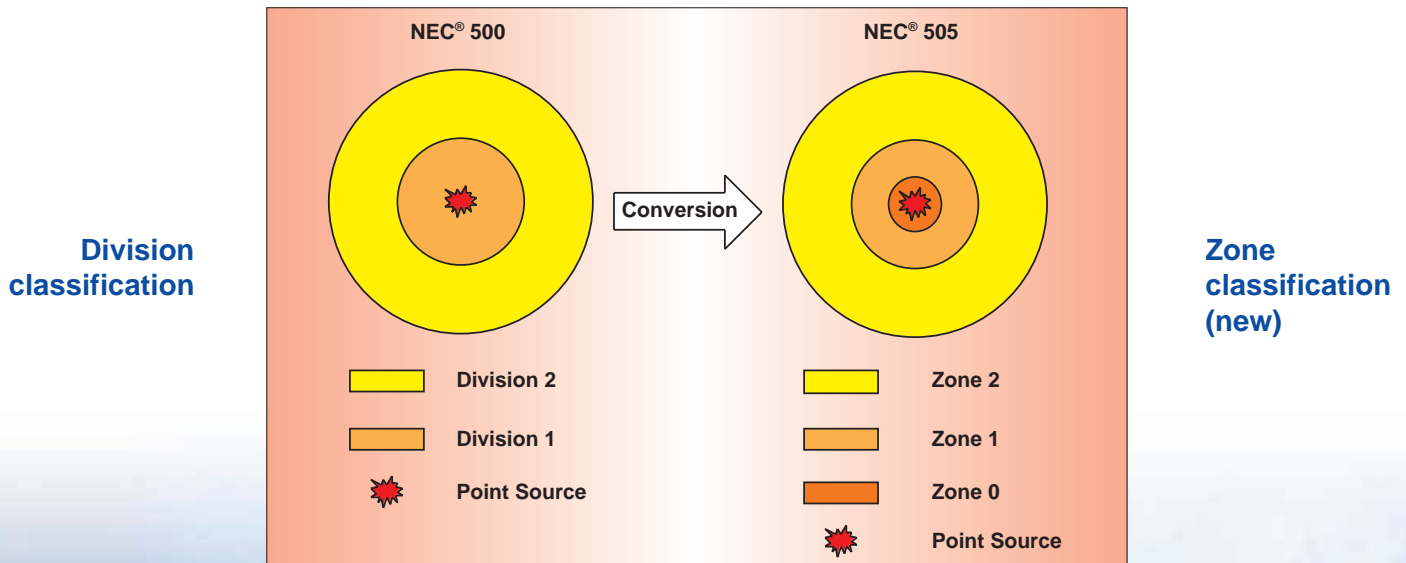
Hazardous environments

In light of international standard harmonization, NEC® has introduced new rules pertaining to the classification of hazardous environments, moving the “Division” toward the “Zone” criteria:

Comparison between NEC® 500 (Division approach) and NEC® 505 (new Zone approach):

Hazardous area classification for Class I material (gases, vapors and liquids)			
	Flammable material present continuously or for long period	Flammable material present intermittently during normal operation	Flammable material present only during abnormal operation
Zone system NEC®, Article 505	Zone 0	Zone 1	Zone 2
Division system NEC®, Article 500	Division 1		Division 2

The NEC® 500 Division 1 classification encompasses both NEC® 505 Zone 1 and Zone 0 classifications. The NEC® 500 Division 2 classification is equivalent to the NEC® 505 Zone 2 classification. Note that there are a small number of Zone 0 applications where no rotating electrical machine can be installed.



According to NEC® 500, hazardous materials are classified into three classes of flammable materials:

- Class I : Gases, vapors and liquids
- Class II : Combustible dust
- Ignitable fibers or filings

Class I materials are typical of petrochemical environments. They are further divided into the following groups:

- Group A
- Group B
- Group C
- Group D

NEC® 505 (Zone System) has changed the classification according to the table below:

Comparison between Division and Class Grouping		
Typical Gas	Division System NEC® Article 500	Zone System NEC® Article 505
Acetylene	Group A	Group IIC
Hydrogen	Group B	
Ethylene	Group C	Group IIB
Propane	Group D	Group IIA

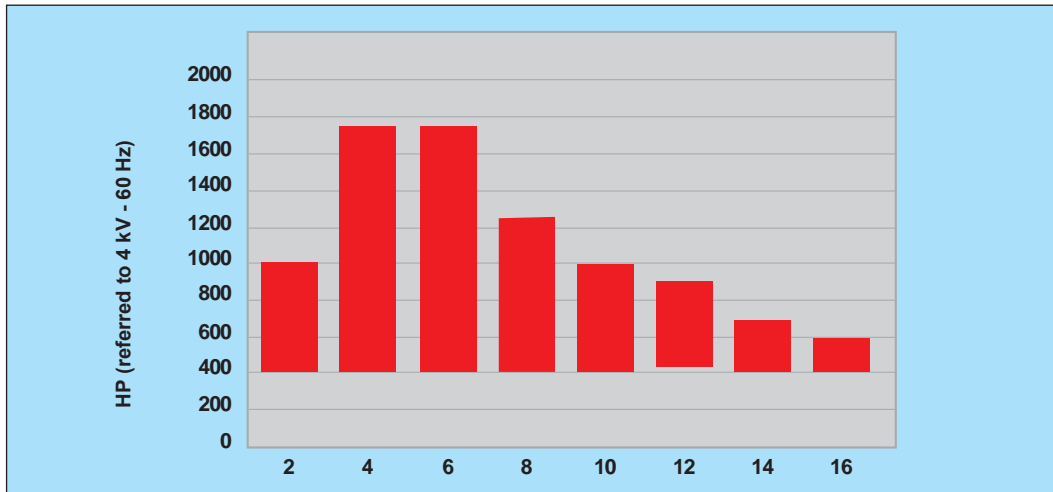
Class 1, Division 1 or 2 location can be reclassified as Class 1, Zone 0, Zone 1 or Zone 2 location by a qualified “Registered Professional Engineer” (*)

(*) A “Registered Professional Engineer” is a state-licensed engineer judged by examination to be competent in specific engineering disciplines

ABB HV Flameproof machines

ABB has been manufacturing and selling flameproof machines globally for more than 50 years. In order to meet growing customer demand, a new version of the AMD machine has been developed for the US and Canadian Markets.

AMD POWER RANGE



AMD POWER RANGE classified as: AEX d II B T4

AMD flameproof machines are also certified according to EN Standards, including ATEX Directive 94/9/EC. They are manufactured in compliance with:

- ISO 9001 : Quality System Certificate
- ISO 14001 : Environmental Management System Certificate

MAIN FEATURES OF FLAMEPROOF MACHINES:

- No purging before starting
- No pressurization system required
- No inert gas needed
- No thermal limitation for "Te" time
- Low maintenance costs compared to pressurized solutions.

ABB FLAMEPROOF HIGH VOLTAGE MACHINE

- Over 100 years experience in rotating machines
- 50 years experience in manufacturing flameproof machines
- High efficiency
- Low noise

AMD machines has been certified by CSA with the marking :



As CSA has a mutual agreement with UL organization, AMD machines can be installed in the classified areas corresponding to Class I, Zone 1 and 2 in compliance with:

- UL 1004
- UL 2279
- NFPA 70
- CAN/CSA-E79-0-95
- CAN/CSA-E79-1-95
- C22-1-98
- CAN/CSA-C22-2 N° 0-M91
- CAN/CSA C22-2 N° 100-95

- Long lifetime
- VPI insulation system
- Modern design
- Global ABB Service Network



ABB Industria SpA
V.le Edison, 50
20099 Sesto S. Giovanni (MI)
Tel. +39 02 262321
Fax +39 02 26232086
www.abb.com/motors&drives

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