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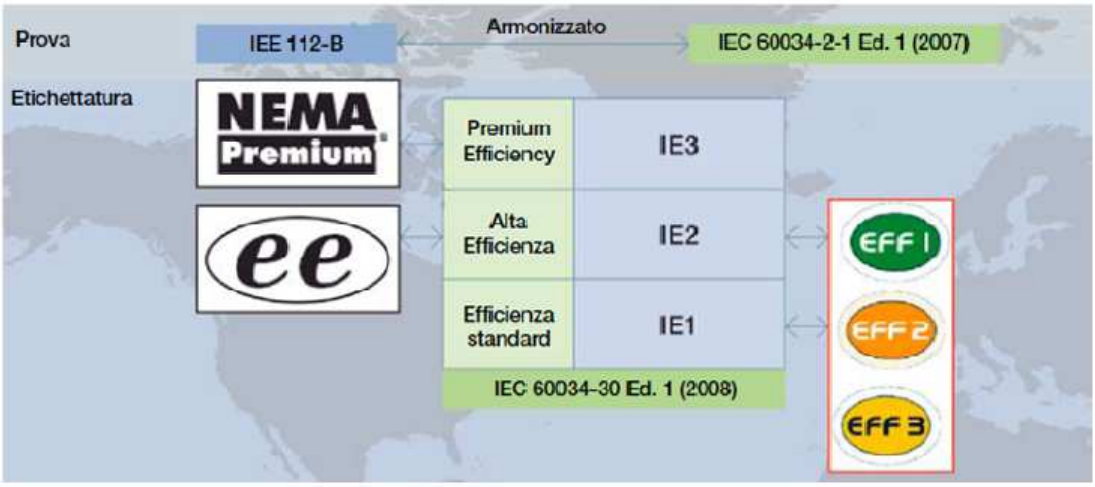
EFFICIENCY CLASS FOR ELECTRIC VIBRATORS

NORMATIVE REFERENCES

Within the electric motors testing methods, the standards internationally used to determine the losses and hence the efficiency classes of the electric motors are, historically, mainly two:

- IEC 60034-2
- IEEE 112 Method B

The IEC 60034-2 is used mainly in Europe, India and China, and previously in Australia and New Zealand. The method set by the IEEE 112-B norm is adopted in North America and in countries with 60 Hz power sources. In Brazil, for example, it is used a test method based on the IEEE 112-B norm, but the present standards MEPS (Minimum Energy Performance Standards-efficiency) are a bit different from those used in the United States.



The international technical committee has recently introduced the IEC TC 2 norm to try to harmonize the motors testing technics:

- IEC 60034-2-1 (2007) - Includes the efficiency test methods (harmonized with the IEEE 112-B t norm - even though small differences are still present).
- IEC 60034-30 (2008) - Sets the new efficiency classes IE1, IE2 and IE3, which are harmonized with the Brazilian regulations for 60 Hz (IE1) frequency and with the American norms applicable to closed motors

CONCLUSIONS

The international technical standard "IEC 60034-30: Rotating electrical machines - Part 30: Efficiency classes of single-speed, three-phase cage induction motors-(IE-code)" norms the motors efficiency classes highlighting the relevant exclusions.

The motovibrators are excluded being not possible to separate the electric motor from the machine originating the vibration (ie the electric vibrator) as the technical architecture of the motovibrator implies the sharing of both the housing body and of the rotor shaft between motor and vibrator.