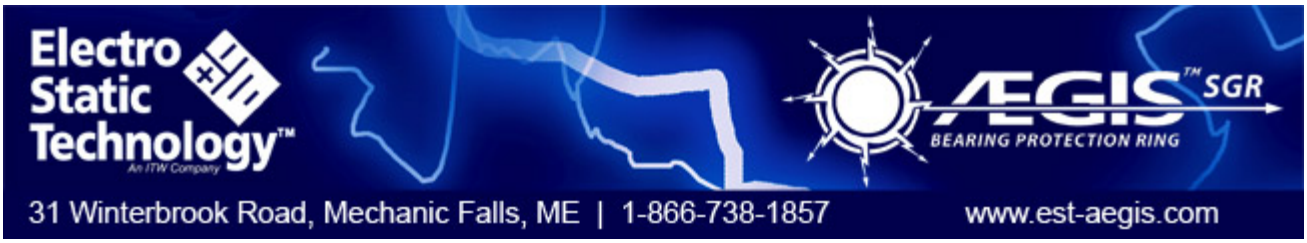


AEGIS Newsletter October 2009

Highlights:

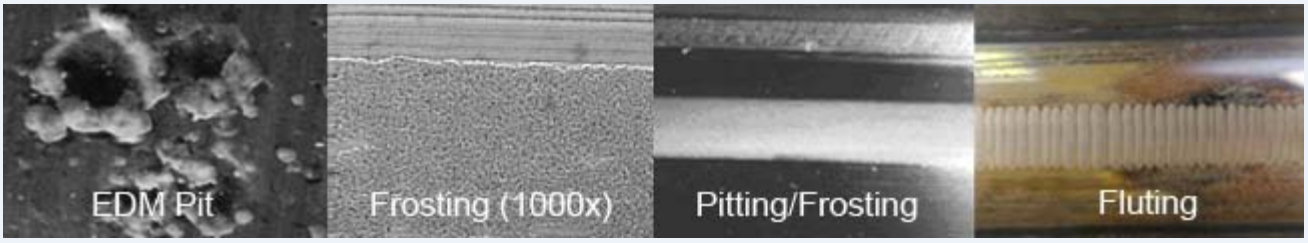
NEMA MG1 Specification addresses bearing failure in inverter driven motors. Recommends shaft grounding to protect motor bearings and attached equipment when motors are used with variable frequency drives.

Construction Specification Institute (CSI) 23 05 13 requires shaft grounding when motors are used with variable frequency drives.

HVAC Market Segment Report for Sustainable Commercial Buildings.

AEGIS Bearing Protection Ring is designed to be a current diverter for any motor controlled by a variable frequency drive. It's function is to provide a highly reliable path to ground thereby extending motor service life. Meets all NEMA MG1 and CSI requirements to protect bearings from fluting failure.

VFD Induced Shaft Voltages Damage Bearings- Variable frequency drives (VFD) on AC and DC motors induce harmful electrical voltages on the motor shaft. Once these voltages exceed the resistance of the bearing lubricant, they discharge through the motor's bearings causing fusion craters, severe pitting, fluting damage, and eventually bearing failure.



topics

NEMA MG1 31.4.4.3 Shaft Voltages and Bearing Insulation: : The NEMA MG1 specification addresses inverter driven motors and describes the effects of shaft voltages and destructive bearing currents induced by pulse width modulation (PWM) variable frequency drives (VFDs). In NEMA MG1 31.4.4.3 the induced bearing currents are described as *"..destructive currents through motor bearings, manifesting themselves through pitting of the bearings, scoring of the shaft, and eventual bearing failure."* ...read more

Construction Specification Institute (CSI) 23 05 13, Common Motor Requirements for HVAC Equipment: Motors for use with variable frequency drives require a shaft grounding kit for field installation. ... read more

HVAC Market Segment Report for Sustainable Commercial Buildings: From a survey of 1500 commercial projects in the US, VFDs are specified in 66% of the new construction projects. Shaft grounding

is required per CSI specificiations ... read more

spotlight

Marathon Electric, innovators of energy efficient motor technology for the long run, has introduced the latest innovation in inverter-driven motor technology with a field installable Shaft Grounding Ring (SGR) accessory for industrial, commercial and HVAC/R motors. AEGIS SGR may be factory installed on Marathon's Blue Max®, Black Max®, Micro Max® and NEMA Premium XRI® models. read more