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MacLean Power Systems Conductor Hardware General Maintenance and Inspection Guidelines

This PIB describes basic guidelines for Inspection and Maintenance of MacLean Power System Conductor Hardware. Individual users who wish to implement regular inspection or maintenance programs should take into consideration other aspects such as environment, application, and other potential risk factors when determining the frequency of inspection and response to inspection findings in such a program.

I. Recommended Inspection Intervals

- a. Under normal operating conditions routine maintenance is not typically required, but in special circumstances users may choose to perform routine inspections. Conditions which a user may wish to have routine inspection intervals include but are not limited to:
 - i. Installations in contaminated environments
 - ii. Due to specific line events, such as after significant storms
 - iii. Significantly aged lines
 - iv. During normal line maintenance or construction
- b. The interval at which inspections are performed, if any, should be determined by the end user based on their experience and knowledge of the conditions within their service territory

II. Inspection Procedures and Recommended Actions

- a. Inspection procedures apply to all conductor hardware components. Basic guidelines for inspection are outlined below. If the end user has additional concerns depending on the application, please consult MacLean Power Systems for additional support.
 - i. Infrared or thermal detection cameras may be used for line inspections to scan for hot spots on any current carrying components. This may be done as part of an existing thermal scanning inspection program.
 - MPS recommends eventual replacement of a device with indication of heat rise above other components on the line
 - ii. Visually inspect for surface corrosion either buildup, erosion, or pitting
 - MPS recommends eventual replacement of a device with indication of corrosion buildup beyond normal surface aging oxidation such as on Aluminum surfaces
 - Devices with physical surface erosion due to corrosive forces should be replaced immediately
 - iii. Visually inspect for excess contaminate buildup
 - Users may attempt to clean contamination buildup with a mixture of soap and water. Cleaning pads may also be used to aid in removing contamination. In excessive cases the device may need to be replaced.

- iv. Visually inspect the device for signs of mechanical or abnormal wear. On applications in server environments or where line vibrations or excessive conductor galloping may occur users may wish to inspect more frequently.
 - MPS recommends eventual replacement of a device with indication of abnormal wear
 - If the wear is severe then it is recommended to immediately replace the device

Please consult your MPS representative with any further questions.

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