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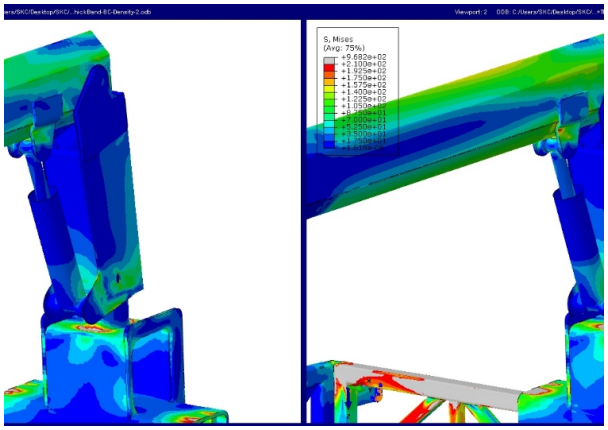
Dielectric Testing of Aerial Devices and Digger Derricks

Aerial devices and digger derricks require periodic testing of their insulating components including FRP lower and upper booms, FRP extensions, and bucket and liners. The dielectric test, a nondestructive method of evaluation, involves subjecting the equipment to a high-voltage in controlled conditions. The leakage current through the insulating components is measured and compared to the applicable acceptance standards (CSA C225 or ASSE A10.31.)



THE Applus+ SOLUTION

Dielectric testing is a method of NDT that is performed on aerial devices and digger derricks to ensure the ongoing integrity of their insulating components, which may degrade over time. In Canada periodic dielèctric testing of these components is required as per provinically mandated standards including CSA C225 and ASSE A10.31.

Applus uses expertly trained technicans and precisely calibrated equipment to determine the electrical strength of the tested products. Our testing provides assurance that your insulated equipment is performing as intended, ensuring the safety of your personel when working on or around hight voltatge power lines.

Applus+ offers testing using DC hipots at voltages up to 130 kV. This allows for indoor testing of equipment (unlike with AC tests). Applus+ can also offer non-destructive testing of the structural components of the device completing both required tests in a single visit. Mobile testing capabilities for units that cannot be brought to one of our facilities is also available.

Applus+ has extensive experience with these types of tests and complete hundreds of dielectric tests every year.

Target customers

Dielectric testing is required on a periodic (annual) basis on all aerial devices and digger derricks operating in Canada. Industries that utilize, own or operate aerial devices and digger derricks are key entities that are required to carry out this form of testing on their equipment including the energy industry e.g. utility companies and utility contractors, the arboriculture industry, e.g. tree trimming companies, and the machinery industry, e.g. sign manufacturers.

Key customer benefits

The various benefits in obtaining Applus+ NDT services, including dielectric testing of aerial devices and digger derricks, are as follows:

- Our dielectric tests are tracked in our proprietary Fleetutility database. Results can be accessed electronically through our online site, providing a level of accesability for operators and other personnel invested in the recent developments of tested materials.
- Tests are carried out indoors, and are not affected by the weather and other enviromental factors.
- We have highly trained technicians and our equipment is regularly calibrated.
- Services can be combined with structural inspection and non-destructive testing.
- Testing is performed to conform with CSA C225 or ASSE A10.31 standards to ensure compliance, integrity of materials, and safety of operators.