Internal Line Break Life Expectancy - Investigation of Measurement Techniques

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INTERNAL LINE BREAK LIFE EXPECTANCY -
INVESTIGATION OF MEASUREMENT TECHNIQUES

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ABSTRACT

Experimental results obtained from each of five measurement techniques considered theoretically suitable to ascertaining device life expectancy are presented. Data obtained from two other measurement technique possibilities, discovered in the course of the laboratory investigations, are also included.

All but one of the measurement techniques investigated are shown to be either unsuitable for production line cycle time requirements, unsuitable to the requirement that the device be evaluated in situ in the stator windings, or incapable of revealing device life expectancy.

Corona starting voltage levels measured on thermally-opened contacts are shown to be capable of revealing poor "live" contact support placement as a possible Quality Control Audit test technique.

The internal line break device is shown to possess an interesting current actuation cycle life dependent phenomenon measurable with the device in the stator winding.