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Errata to IEEE Guide for the Application of Surge Voltage Protective Equipment on AC Rotating Machinery 1000 V and Greater

Sponsor

Surge Protective Devices Committee

of the

IEEE Power Engineering Society

Correction Sheet
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Page 4, Clause 3 Definitions, change the Note to read as follows:

NOTE—The following definitions are purposely not alphabetized. Rather, the terms are arranged in such a way as to facilitate an understanding of the technical relationship between them. The terms proceed in order of technical dependency.

Page 33, the paragraph below Equation (9) should read as follows:

The attenuation factor α_c is due to conductor skin effect, α_d dielectric loss and α_s semi-conductive layer loss. These losses are evaluated at 1 MHz in units of dB per meter as follows, and are then multiplied by the cable length, meters. Estimate skin effect loss α_c at this frequency using Equation (A.10).

Page 33, the first paragraph below Equation (10) should read as follows:

Where K_m is a conductor material parameter and w is the surface width (mm) over which current flows [B22]. Values of K_m for common materials are 1.1 for copper, 1.5 for aluminum, 3.9 for lead, and 30 for steel (assuming a relative permeability of 100). For unshielded cables consider only one phase conductor since Z_c in Equation (A.10) is per phase. For shielded cables, the attenuation should be taken as the sum of losses in one phase conductor and its shield.

Page 33, the third paragraph below Equation (10) should read as follows:

For EPR or XLPE cables with semi-conductive layers, an additional semi-conductive loss effect, α_s, is about 0.2×10^{-3} dB/m.