Evaluation Method of Structural Design of Impedance Bonds Molded by Resin

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Thermal effects on signalling field devices, such as high air temperature, intense sunlight, and Joule heat by return currents, can be tested independently. However, it has been difficult to evaluate the effects by multiple sources of heat. Therefore, failures of signalling field devices occasionally have occurred relating heat, such as a deformation of a structure by heat. To reduce such failures, we developed a method for evaluating thermal effects for impedance bonds using a computer simulation of heat-stress analysis. We also proposed a method for evaluating thermal effects for impedance bonds by combination of analytical and experimental methods.