

Diagnosis of MV oil filled cable terminations with X-ray imaging and infrared (IR) thermography

Abstract

A main purpose of doing a diagnostic in cable system including its accessories such as impregnated paper insulated oil filled cable termination is to predict failure before they occur. Those cable and accessories, which are about to fail, can be replaced, thereby reducing the incidence of electrical system failure, thus reducing the electricity outages. This paper presents the work carried out to find any possible method that can be used to detect a drying out of oil impregnated paper tape cable terminations. Furthermore, the diagnosis has to be used without destroying the terminations. Two diagnosis methods; infrared (IR) thermography and X-ray imaging are reviewed and the diagnosis result is presented. By comparison of two-diagnosis method in this work, the X-ray imaging method is the best approach to observe and detect a drying out of paper tape oil impregnated cable terminations. © 2007 Science Publications.