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Electrical Power Distribution Reliability Improvement by Retrofitting 4.16 kV Vacuum Contactor in Badak LNG Plant

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Abstract : This paper objective is to assess the power distribution reliability improvement by retrofitting obsolete vacuum contactor. The case study in Badak Liquefied Natural Gas (LNG) plant is presented in this paper. To support plant operational, Badak LNG is equipped with 4.16 kV switchgear for supplying the storage and loading facilities, utilities facilities, and train facilities. However, there is a problem in two switch gears of sixteen switch gears. The problem is the obsolescence issue in its vacuum contactor. Not only that, but the same switchgear also has suffered from electrical fault due to contact fingering misalignment. In order to improve the reliability in switchgear, the vacuum contactor retrofit project is done. The retrofit will introduce new vacuum contactor design. The comparison between existing design and the new design is presented in this paper. Meanwhile, The reliability assessment and calculation are performed using software Reliasoft 7.

Keywords : reliability, obsolescence, retrofit, vacuum contactor
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