

Fault Diagnosis of 132 KV Substation Secondary System based on Association Analysis using ETAP

Short circuit (S.C) analysis helps to select, control, and coordinate protection equipment like fuses, circuit breakers, relays, and transformers. This paper presents a simulation and analysis of 132 KV Substation in Ramadi city. Which includes power flow analysis and short circuit analysis in the ETAP Software (Electrical Transient Analyzer Program). Various types of faults are simulated for many buses in the tested substation using ANSI and IEC standards. Different scenarios were used for the connection of substations transformers, to evaluate the maximum and minimum current and short circuit level. The magnitude of S.C for the system under study in which all the transformers connected in individuals are considered as a reference to other connections. Finally, the simulation results for IEC and ANSI is presented to ensure reliable and valid results.