

High-Power Test Facilities: Renewal of Outdoor Disconnectors

Background

High-power test facilities are used for short-circuit tests of circuit breakers and high power arc tests of insulator sets, power cables, and transformers to ensure their safety and performance. Outdoor disconnectors are used to connect transformers

and terminals in test yards and are required for high current flow of 80kA. To maintain the testing ability of high-power test facilities, outdoor disconnectors installed in 1963 were renewed.

Outline

Outdoor disconnectors were used to flow short-circuit currents from transformers to test yards. The

outdoor disconnectors are used in combination to suit test voltages and currents.

Specifications

- (1) Disconnectors
 - (a) 115kV Vertical Break disconnector
 - Open-close mechanism: One pole vertical break, Operating mechanism: motor drive (50Hz, 200V)
 - Rated short time withstand current: 100kA rms, 2s, 250kA peak
 - Rated voltage: 115kV, Rated current: 4000A, Number: 26
 - (b) 115kV Horizontal Break disconnector
 - Open-close mechanism: Double side horizontal break, Operating mechanism: motor drive (50Hz, 200V)
 - Rated short time withstand current: 50kA rms., 2s, 125kA peak
 - Rated voltage: 115kV, Rated current: 4000A, Number: 3 (3-unit interlock operation)
 - (c) 23kV disconnector
 - Open-close mechanism: One pole vertical break, Operating mechanism: motor drive (50Hz, 200V)
 - Rated short time withstand current: 20kA rms., 2s, 50kA peak
 - Rated voltage: 23kV, Rated current: 800A, Number: 4 (Three pole: 1, single pole: 3)
- (2) Control system
 - Renewal outdoor disconnector control software
- (3) Supervisory system
 - Installation of video camera system for supervisory of disconnector contacts

[Installed location and date]

Yokosuka area / February, 2013

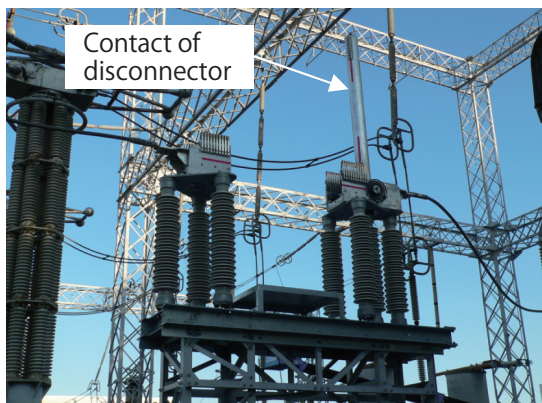


Photo 1: 115kV Vertical Break disconnector (Open)



Photo 2: 115kV Horizontal Break disconnector (3-unit interlock operation)