



## Nuclear Services/Repair, Replacement and Automation Services

# Molded Case Circuit Breakers

### Background

Westinghouse-supplied Series C and Classic molded-case circuit breakers are designed to provide thermal and/or magnetic overload protection in a Motor Control Center (MCC), typically 480 to 600VAC. Westinghouse also provides new molded-case circuit breakers (MCCBs) configured to plant-specific original order specifications for both Class 1E safety-related and non-safety-related applications.

### Description

When a customer orders a commercial or safety-related circuit breaker, Westinghouse procures the product from the original equipment manufacturer who also commercially dedicates breakers using our dedication instructions. Technicians trained to assemble and test the breakers also perform the dedication testing. The breakers are certified to meet the plant-specific original qualification documentation parameters.

Westinghouse also offers a reconditioning and recertification program for obsolete HKA Classic breakers.

### Benefits

The new Classic MCCBs provided to our utility customers have several enhanced internal components that meet or exceed the quality of the original design and operating requirements. Those components



MCCB undergoing instantaneous current testing during dedication

include redesigned arc runners, arc sides and plates and main contacts. Larger shunt wires have also been incorporated and Magnalube is used to lubricate the moving parts inside the breaker.

Westinghouse maintains the qualification for all MCCBs through dedication, testing, review of design changes and reviewing industry operability data. Seismic sensitivity is addressed during the design change review process and periodic seismic testing is performed at our in-house seismic test lab.

Since Westinghouse maintains strong technical ties with the manufacturer, we have access to current design drawings and manufacturing information. If breakers become obsolete and a direct replacement is

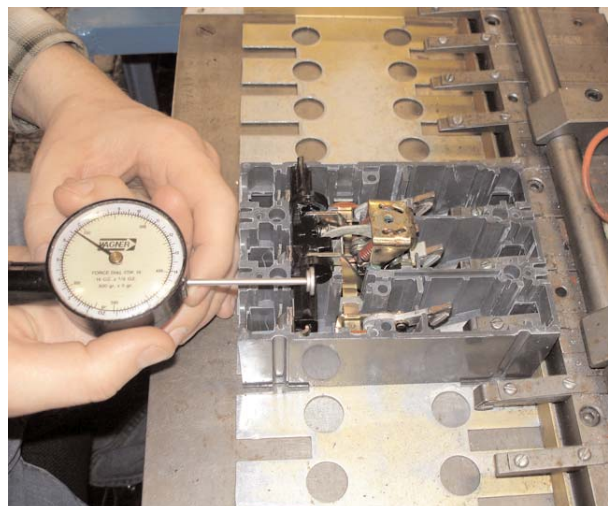
unavailable, the New Stanton Service Center can provide a replacement component and the technical data to verify proper functionality, including qualification of the replacement breaker. In the case of the obsolete HKA Classic breakers, Westinghouse also offers a reconditioning and recertification program. HKA breakers from customer plants can be returned to the original equipment manufacturer for a complete reconditioning and rededication.

## Experience

- Westinghouse, with its extensive experience in the nuclear power industry and access to the original Westinghouse-designed plant documents, has built and sold many MCCBs for nuclear plant operations.
- Westinghouse retains the rights to the original design and qualification documentation for Westinghouse-designed plants. If newly designed breakers are required, we can provide a qualification basis that ties directly back to the original qualification.



MCCB undergoing thermal testing at 300% rated current during dedication



MCCB undergoing trip latch force testing