

General Information or Other (GEN)

Event # 36479

Rep Org: ABB POWER T&D COMPANY		Notification Date / Time: 12/02/1999 10:33 (EST)	
Licensee: ABB POWER T&D COMPANY		Event Date / Time: 12/02/1999 10:33 (EST)	
Last Modification: 12/02/1999			
Region: 2	Docket #:		
City: Florence	Agreement State: Yes		
County:	License #:		
State: SC			
NRC Notified by: H. SCOTT BRIDGES	Notifications: KENNETH BARR		R2
HQ Ops Officer: JOHN MacKINNON	STEVEN DENNIS		R1
Emergency Class: NON EMERGENCY	GEOFFREY WRIGHT		R3
10 CFR Section:	PHIL HARRELL		R4
21.21	UNSPECIFIED PARAGRAPH	VERN HODGE	NRR

TRIP ROLLER - HK CIRCUIT BREAKER, ABB PART # 180097A00

During the 4kV ABB Type HK breaker refurbishment at the DC Cook Plant on October 21, 1999, newly installed trip rollers, ABB Part Number 180097a00, were determined to be below the minimum hardness specification, Rockwell C 50-55. One roller was observed to be "scoring" after 200 cycles. This roller was one of 130 rollers sent to DC Cook through a purchase order from ABB Service Company in Cleveland, Ohio. A sample of rollers indicated that all were below the hardness specification. After communicating this to ABB Service and the ABB Florence facility, the roller with the lowest measured hardness, Rockwell C13, was returned for evaluation at the ABB-Florence factory.

ABB Power TAD Company received notification from ABB Service Company, The Woodlands, TX, of a trip roller, 180097A00, problem occurring in November 11, 1998, purchased under ABB Service Company Purchase Order Number 27-04459-P4031, ABB Power T&D Company Order Number CCN0449. The initial investigation points to a roller that has not been heat-treated to its hardness specification as well. This information will serve to address the trip roller issue here a well.

An HK Circuit Breaker that contains trip rollers that are not properly hardened may fail to trip at some point during the life of the breaker. ABB Power T&D Company testing indicates that a very soft trip roller measuring Rockwell C13 was able to operate 4000 operations before minimum trip voltage failed to operate the circuit breaker.

The information of the defect of the trip roller was obtained on October 21, 1999

This information affects trip rollers that were shipped as Component Orders or as part of Complete Circuit Breakers from October 30, 1995 through June 1999.

The hardness critical characteristic was added to the QC Record Card in June 1999 for the trip roller, 180097A00.

ABB will notify all customers who purchased this product.

Replacement trip rollers may be obtained from ABB Power T&D Company, Snaford, FL, by contacting the

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PDL PT21

General Information or Other (GEN)

Event # 36479

Components Group.



Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

December 2, 1999

i) Notification By:

H. Scott Bridges – Quality Manager
ABB Power T&D Company
North American Distribution Switchgear Group
2300 Mechanicsville Road
Florence, SC 29501

ii) Subject: Notification of Potential Defect per 10CFR Part 21

Trip roller – HK Circuit Breakers, ABB Part Number 180097A00

iii) Basic Component Supplied by:

ABB Power T&D Company
North American Distribution Switchgear Group
2300 Mechanicsville Road
Florence, SC 29501

ABB Power T&D Company –Sales Order Number – CCN0964
ABB Service Company Purchase Order Number – 43-04386-P4404
PART Number - 180097A00
Description – Trip Roller
Quantity – 130 pieces

iv) Nature of the defect

During the 4kV ABB Type HK breaker refurbishment at the DC Cook Plant on October 21, 1999, newly installed trip rollers, ABB Part Number 180097A00, were determined to be below the minimum hardness specification, Rockwell C 50-55. One roller was observed to be “scoring” after approximately 200 cycles. This roller was one of 130 rollers sent to DC Cook through a purchase order from ABB Service Company in Cleveland, Ohio. A sample of rollers indicated that all were below the hardness specification. After communicating this to ABB Service and the ABB Florence facility, the roller with the lowest measured hardness, Rockwell C13, was returned for evaluation at the ABB-Florence factory.

We have also received notification from ABB Service Company, The Woodlands, TX, of a trip roller, 180097A00, problem occurring in November 11, 1998, purchased under ABB Service Company Purchase Order Number 27-04459-P4031, ABB Power T&D Company Order Number CCN0449. The initial investigation points to a roller that has not been heat-treated to its hardness specification as well. This notification will serve to address the trip roller issue here as well.

An HK Circuit Breaker that contains trip rollers that are not properly hardened may fail to trip at some point during the life of the breaker. Our testing indicates that a very soft trip roller measuring Rockwell C13 was able to operate 4000 operations before minimum trip voltage failed to operate the circuit breaker.

v) The information of the defect of the trip roller was obtained on October 21, 1999

ABB Power T&D Company
NADSG
2300 Mechanicsville Road
Florence, SC 29501

843-665-4144-Phone
843-664-0520-Fax



vi) This notification affects trip rollers that were shipped as Component Orders or as part of Complete Circuit Breakers from October 30, 1995 through June 1999.

vii) Corrective Actions

The hardness critical characteristic was added to the QC Record Card in June 1999 for the trip roller, 180097A00.

The routing or traveler for the trip roller has been changed to include a final hardness check after the plating operation and before being put in the stock locations. All trip rollers are marked with a dye pin to signify that the check has been made. This mark is visible after the plating operation is performed and provides verification to assembly and warehouse personnel that the part has been checked for hardness.

The Trip Roller will be manufactured complete in the Florence Facility and not outsourced from an outside supplier. A Shop Order/Job Packet will be generated for the entire process of manufacturing the part in house where appropriate controls are in place.

There are three hardness verifications for the trip roller before the part can be transferred to Components Inventory. One check is performed after the heat-treat process, a second check is performed after the final plating process where the parts are marked with a dye pin. A third check is done during the inspection process prior to the transfer into Components inventory for spare part orders. Components Group QA can also check for the dye mark on the trip roller for additional check that the hardness verification was performed after plating.

Training for manufacturing personnel regarding the new procedures for the verification process for heat-treat has been completed along with reinforcement of basic procedures that were not adhered to for this lot of trip rollers.

viii) Advice related to the defect

Suspect trip rollers should be removed from the breaker and verified to measure Rockwell C50-55. Trip rollers that do not meet this specification must be replaced. The verification of suspect trip rollers should take place before the roller has experienced 2000 breaker operations.

ABB will notify all customers who purchased this product.

Replacement trip rollers may be obtained from ABB Power T&D Company, Sanford, FL, by contacting the Components Group at 407-732-2175.

Any questions concerning this notification should be directed to Scott Bridges 843-665-4144 or Lynn Gorrell-407-323-8220.

Prepared By
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TELECOPY TRANSMITTAL SHEET

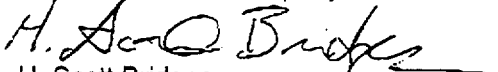
TO: NRC Operations Center **CO:**
LOCATION:
FAX NO: 301-816-5151 **DATE:** 12/2/99
FROM: H. Scott Bridges **DEPT:** QA
SUBJECT: Notification of potential Defect per 10CFR Part 21

TOTAL NUMBER OF PAGES(INCLUDING TRANSMITTAL SHEET)_3_

Please see attached notification.

If you have any questions, please give me a call.

Regards,
ABB Power T&D Company


H. Scott Bridges
Quality Manager