



Brown Boveri Electric, Inc.

Manufacturer of I-T-E Electrical Power Equipment

July 27, 1983

Mr. R. C. DeYoung, Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. DeYoung:

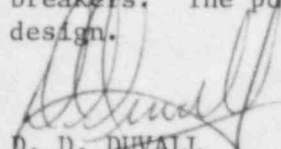
Recently, Brown Boveri Electric has experienced some broken puffer linkage studs on 7.5HK and 15HK circuit breakers that were manufactured during January, 1982. These broken studs were found on circuit breakers used in non-nuclear applications, however the same design is used in nuclear applications. In the area where the break occurred, a radius which is intended to relieve stress had not been maintained. Another possible cause of high stress and breakage in this type of heat treated alloy steel is hydrogen embrittlement. The material has been changed to one that is easier to heat treat and a larger radius has been specified.

Although the problem is probably limited to circuit breakers manufactured during January, 1982, Brown Boveri Electric recommends that circuit breakers manufactured between November, 1981 and February, 1982 be inspected to determine if this condition exists. The stud is identified as Part Number 192247A.

A broken puffer linkage stud could result in a reduction in the effectiveness of the puffer system.

Production records indicate that 7.5HK and 15HK circuit breakers for Nuclear Power Plants were manufactured between November, 1981 and February, 1982 for Georgia Power Company (Vogtle Plant) and TVA (Yellow Creek, Hartsville and Sequoyah Plants). A list of these circuit breakers by serial number, for both Class 1E and non-Class 1E applications, is included as an appendix to this report. Only the circuit breakers identified in this list require inspection. The other circuit breakers in the Sales Orders are acceptable for use as is.

The same condition would not apply to the Brown Boveri Electric 5HK circuit breakers. The puffer system on these circuit breakers is of a different design.


D. D. DUVALL
Vice President

DDD/jm

Attachment

cc: W. E. Laubach, E. W. Rhoads, L. H. Schmidt, J. R. Silverio, W. R. Wilhelm

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1E BREAKERS

54350 54350
TVA (YELLOW CREEK) S.O. 54350

<u>BREAKER SERIAL #</u>	<u>TYPE</u>	<u>DATE MFG.</u>
54350D-2-02852	7.5HK	12/8/81
54350D-2-01852	7.5HK	12/8/81
54350C-2-110839	7.5HK	12/8/81
54350D-2-05852	7.5HK	12/8/81
54350D-2-04852	7.5HK	12/8/81
54350D-2-03852	7.5HK	12/8/81
54350D-2-06852	7.5HK	12/8/81
54350D-2-07852	7.5HK	12/8/81
54350D-2-09852	7.5HK	12/8/81
54350D-2-08852	7.5HK	12/8/81
54350D-2-10852	7.5HK	12/8/81
54350C-2-113839	7.5HK	12/8/81
54350A-4-01839	15HK	2/10/82
54350A-4-02839	15HK	2/10/82
54350A-4-03839	15HK	2/10/82
54350A-4-04839	15HK	2/10/82
54350B-4-04834	15HK	11/20/81
54350B-4-02834	15HK	11/19/81
54350B-4-03834	15HK	11/19/81
54350B-4-01834	15HK	11/19/81

52313 52313
TVA (HARTSVILLE) S.O. 52313

52313AF-203-02717	7.5HK	11/2/81
52313V-3-01717	7.5HK	11/2/81
52313AF-3-01765	7.5HK	11/2/81

51903 51903
GEORGIA POWER (VOGTLE) S.O. 51903

51903S-401-01880	15HK	2/25/82
51903P-401-01880	15HK	1/30/82
51903R-401-01880	15HK	2/26/82
51903T-401-01880	15HK	2/26/82

NON-1E BREAKERS

TVA (YELLOW CREEK) S. O. 54471

<u>BREAKER SERIAL #</u>	<u>TYPE</u>	<u>DATE MFG.</u>
54471F-2-07836	7.5HK	12/12/81
54471E-2-08818	7.5HK	12/12/81
54471E-2-11818	7.5HK	12/12/81
54471B-2-02793	7.5HK	12/12/81
54471B-2-10793	7.5HK	12/12/81
54471B-2-01793	7.5HK	12/12/81
54471B-2-04793	7.5HK	12/9/81
54471E-2-07818	7.5HK	12/9/81
54471E-2-08818	7.5HK	12/9/81
54471E-2-11818	7.5HK	12/9/81
54471B-2-02793	7.5HK	12/9/81
54471B-2-10793	7.5HK	12/9/81
54471B-2-01793	7.5HK	12/9/81
54471B-2-04793	7.5HK	12/9/81
54471D-1-01812	7.5HK	12/10/81
54471E-2-09818	7.5HK	12/8/81
54471E-2-06818	7.5HK	12/8/81
54471E-2-12818	7.5HK	12/8/81
54471B-2-03793	7.5HK	12/7/81
54471E-2-05818	7.5HK	12/7/81
54471D-1-02812	7.5HK	12/7/81
54471E-1-02794	7.5HK	12/7/81
54471D-2-10791	7.5HK	11/12/81
54471D-2-02791	7.5HK	11/13/81
54471D-2-08791	7.5HK	11/16/81
54471D-2-07791	7.5HK	11/18/81
54471D-2-05791	7.5HK	11/18/81
54471D-2-09791	7.5HK	11/18/81
54471D-2-03791	7.5HK	11/19/81
54471C-1-02810	7.5HK	11/20/81
54471B-1-01794	7.5HK	11/25/81
54471E-1-01794	7.5HK	11/25/81
54471C-1-01810	7.5HK	11/30/81
54471B-1-02794	7.5HK	11/30/81
54471F-1-02832	7.5HK	11/30/81
54471F-1-04832	7.5HK	11/30/81
54471E-2-03818	7.5HK	11/30/81
54471E-2-04818	7.5HK	11/30/81
54471E-2-10818	7.5HK	12/1/81
54471F-01832	7.5HK	12/4/81
54471E-02818	7.5HK	12/4/81
54471F-03832	7.5HK	12/4/81
54471E-2-01818	7.5HK	12/3/81
54471D-2-06791	7.5HK	11/3/81
54471D-2-01791	7.5HK	11/3/81
54471D-2-04791	7.5HK	11/3/81

NON-1E BREAKERS

GEORGIA POWER (VOGTLE) S.O. 51903

<u>BREAKER SERIAL #</u>	<u>TYPE</u>	<u>DATE MFG.</u>
51903L-506-01860	15HK	1/20/82
51903L-507-01860	15HK	1/20/82

512-16
TVA (SEQUOYAH) S.O. 54968

54968A-301-01843	7.5HK	12/9/81
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TVA (SEQUOYAH) S.O. 54780

54780A-2-01748	7.5HK	11/13/81
54780A-4-01748	15HK	11/13/81

TVA (SEQUOYAH) S.O. 54801

54801A-12-02803	7.5HK	2/26/82
54801A-12-01803	7.5HK	2/26/82