

U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
REGION IV

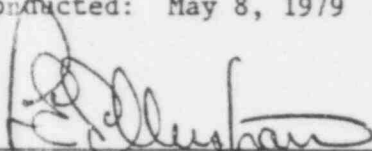
Report No. 99900365/79-01

Program No. 51400

Company: Power-Strut
Van Huffel Tube Corporation
Dietz Road
Warren, Ohio 44481

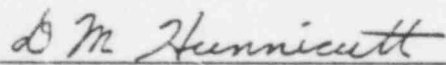
Inspection Conducted: May 8, 1979

Inspector:


L. E. Ellershaw, Principal Inspector
Vendor Inspection Branch

5/17/79
Date

Approved by:


D. M. Hunnicutt, Chief, Components II
Vendor Inspection Branch

5/17/79
Date

Summary

Special Inspection on May 8, 1979 (99900365/79-01)

Areas Inspected: Follow-up on a 10 CFR 50.55(e) Construction Deficiency Report relative to failed resistance welds in strut material. The inspection involved eight (8) inspector-hours by one (1) NRC inspector.

Results: In the one area inspected, no deviations or unresolved items were identified.

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Details Section

(Prepared by L. E. Ellershaw)

A. Persons Contacted

D. H. Gebhardt, Chief Engineer
R. T. Hileman, Manager, Quality Control
N. Pallante, Engineer
J. Poss, Vice President, Van Huffel, Power-Strut

B. Introduction

Pennsylvania Power and Light Company (PP&L) documented a reportable deficiency under the provisions of 10 CFR 50.55(e), to B. H. Grier, Region I, dated April 26, 1978, regarding inadequate spot welding of strut material used in field fabricated supports for safety related electrical raceways, HVAC ducts, and instrumentation panels (PP&L Reference No. PLA-249), as produced by Power-Strut.

C. Follow-up on 10 CFR 50.55(e) Report1. Objectives

The objectives of this follow-up inspection were to ascertain that an evaluation of the condition had been performed, including making an assessment of generic implications, and the responsibility for effecting corrective action and preventing recurrence had been assigned.

2. Method of Accomplishment

The preceding objectives were accomplished by:

- a. Review of 10 CFR 50.55(e) Report.
- b. Review of QA Manual dated July 1, 1977.
- c. Review of drawing PS-3022, latest revision dated May 25, 1978.
- d. Observation of in-process resistance welding being performed on P/N PS-3022.
- e. Review of Inspection Report for Work Order 89576 dealing with inspection of PS-3022.

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- f. Observation of welding equipment and testing equipment.
- g. Discussions with cognizant personnel.

3. Findings

Prior to the detection of failed spot welds at the job site (Susquehanna), the strut material had been purchased as standard off-the-shelf items, with no formally imposed quality control requirements relative to testing. The present test criteria is a Power-Strut requirement, limited to a chisel test and visual examination, with no customer imposed tests.

It was determined that the last mill galvanized, resistance welded only, PS-3022, was shipped to the job site in January, 1978. The Configuration of PS-3022 is that of a double channel, resistance welded to side plates on both sides. When the failed spot welds were detected at the job site, a hold was placed on all PS-3022 struts. Bechtel Power Corporation (BPC) transmitted a letter dated June 16, 1978, with an attached drawing dated June 13, 1978, requiring a rework of all PS-3022 struts on hold, by stitch welding 2½ inch welds on 6 inch centers with the size of the fillet to be equal to the thickness of the plate, using SMAW. The rework was accomplished subsequent to the receipt of the drawing. At the present time, the only mill galvanized material that is both resistance welded and stitch welded is the PS-3022 struts. Power-Strut stated that they are resistance welding only, other mill galvanized configurations such as back to back struts. The inspector commented that it is the consensus of the industry, that resistance welding of mill galvanized material is at best, inconsistent. As a result of the 10 CFR 50.55(e) Report, BPC and Power-Strut are in the discussion and review stage regarding BPC's Specification 8856-C-92, "Technical Specification for Furnishing and Delivering of Spot Welded Strut Material for the Susquehanna Steam Electric Station Units 1 and 2." This specification has provisions for conducting an additional destructive test, such as the shear test.

Power-Strut formally developed a procedure for performing a destructive test (Chisel Test) and visual examination parameters, "Spot Weld Destructive Test, Procedure No. SP DT-1-79", dated February 6, 1979. This procedure has been submitted to BPC for their review, but it has not been distributed internally for implementation.

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It must be noted that there appeared to be a lack of written, formal procedures for the various welding processes and for weld material control. In addition, it could not be verified that welders have been certified as qualified.

D. Exit Interview

The scope and findings of this 10 CFR 50.55(e) follow-up inspection were summarized with RT Hileman, Manager of Quality Control who acknowledged the comments relative to the findings.

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