

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

SSINS: 6870
Accession No.:
7912190689

March 7, 1980

IE Information Notice No. 80-08

THE STATES COMPANY SLIDING LINK ELECTRICAL TERMINAL BLOCK

Description of Circumstances:

On July 19, 1979, the Consumers Power Company notified the Nuclear Regulatory Commission of a defect found in the sliding link electrical terminal block manufactured by the States Company, a subsidiary of Multi Amp Corp. The defective terminal blocks were found at the Midland plant.

The connection between the two slotted bars on the terminal block is made by a U-shaped sliding link and spacer located between the two bars. The top of the U-shaped link and the spacer are drilled and the bottom of the link is threaded to accept a 8-32 screw. When the screw is tightened it binds the link, spacer and bar together to make electrical connection. Loosening the screw and sliding the link from between the bars breaks the connection. The purpose of the link is to provide easy insertion of test instruments, etc. into the circuit.

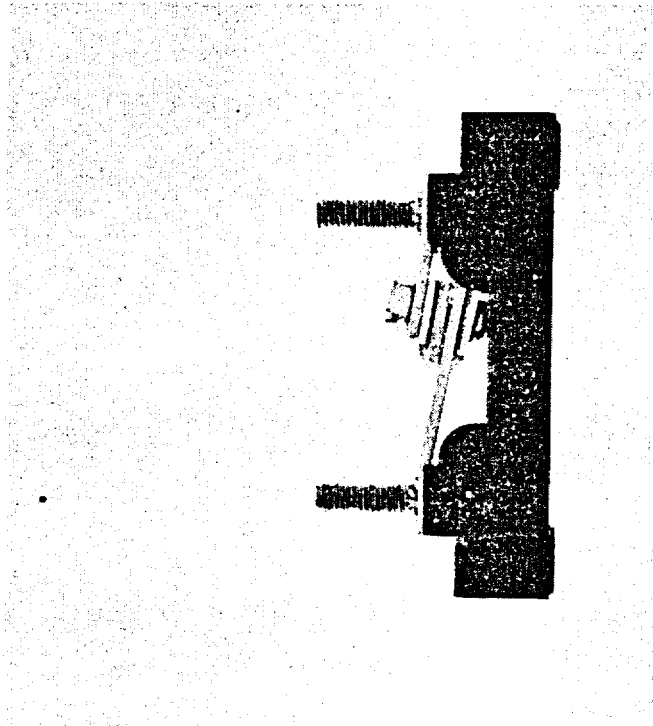
The defect, which has been identified in 5% of the terminal blocks checked, occurs in the form of a crack between the threaded screw hole and the side of the U-shaped link. When the screw is tightened the crack widens and a poor or intermittent electrical connection can result. A defective link is impossible to cinch tightly in place and is difficult to detect visually.

Enclosure 1 shows the States Company terminal block. The defect, a crack in the bottom portion of the metal U-shaped link, is displayed in the exploded view of the terminal block assembly. These terminal blocks are widely used in the nuclear industry and may be used as permanent installations in safety related systems. The defective mechanical connection can cause an electrical circuit malfunction.

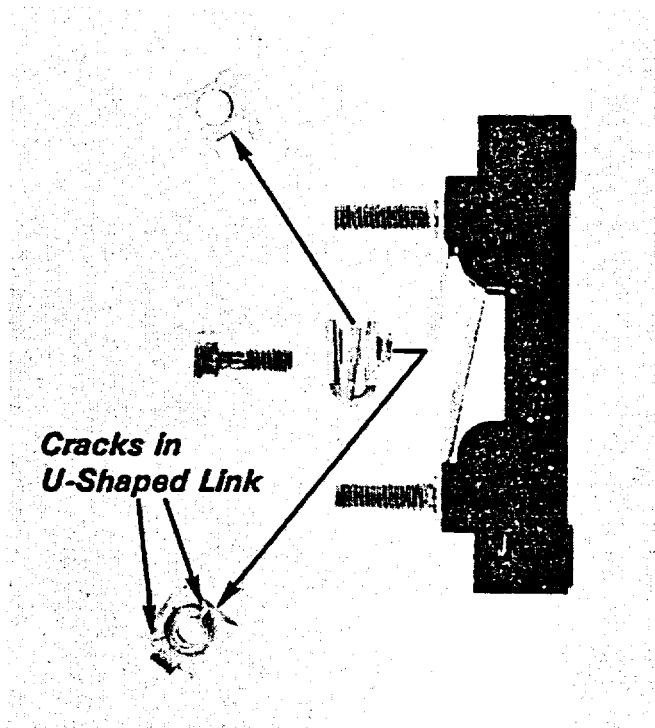
This Information Notice is provided to inform licensees of a potentially significant matter. It is expected that recipients will review the information for applicability to their facilities. No written response to this IE Information Notice is required. However, the reporting requirements as set forth in the regulations must be met. If you require additional information regarding this matter, contact the Director of the appropriate NRC Regional Office.

Enclosure:
Graphic Display of Terminal
Block

ENCLOSURE 1 TO IE INFORMATION NOTICE 80- 08



**Side View of States Company
Terminal Block in Assembled Position**



**Exploded View of
States Company Terminal Block**

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Enclosure

RECENTLY ISSUED
IE INFORMATION NOTICES

| Information Notice No. | Subject | Date Issued | Issued To |
|------------------------|---|-------------|---|
| 80-07 | Pump Shaft Fatigue Cracking | 2/29/80 | All Light Water Reactor Facilities holder power reactor OLs and CPs |
| 80-06 | Notification of Significant Events | 2/27/80 | All holders of Reactor OLs and to near term OL applicants |
| 80-05 | Chloride Contamination of Safety Related Piping | 2/8/80 | All licensees of nuclear power reactor facilities and applicants and holders of nuclear power reactor CPs |
| 80-04 | BWR Fuel Exposure in Excess of Limits | 2/4/80 | All BWR's holding a power reactor OL or CP |
| 80-03 | Main Turbine Electro-Hydraulic Control System | 1/31/80 | All holders of power reactor OLs and CPs |
| 80-02 | 8X8R Water Rod Lower End Plug Wear | 1/25/80 | All BWR Facilities holder power reactor OLs or CPs |
| 80-01 | Fuel Handling Events | 1/4/80 | All holders of power reactor OLs and CPs |
| 79-37 | Cracking in Low Pressure Turbine Discs | 12/28/79 | All power reactor OLs and CPs |
| 79-36 | Computer Code Defect in Stress Analysis of Piping Elbow | 12/31/79 | All power reactor OLs and CPs |
| 79-35 | Control of Maintenance and Essential Equipment | 12/31/79 | All power reactor facilities with an OL or CP |
| 79-34 | Inadequate Design of Safety-Related Heat Exchangers | 12/27/79 | All holders of power reactor OLs and CPs |