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FCX ELEMENT LOAD TEST

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PURPOSE:

To determine whether fuel clusters may be removed from the FCX core by applying load to the cluster bolts.

PROCEDURE:

Ten center elements of FCS cluster (Dwg. No. 934 J 940) cut to 6-inch lengths and tapped 7/16-14 x 1-1/2 inches deep were submitted for evaluation. Load bars were threaded 1-1/4 inches into each end and then the assembly was placed in a tensile testing machine. The specimens were loaded at a slow uniform rate until failure occurred. All tests were conducted under ambient atmospheric conditions.

RESULTS:

The average rupture load for the 10 specimens 707 pounds, ranging from 606 pounds minimum to 814 pounds maximum. A sketch of the method of testing, including results, is shown in Figure 1. Each specimen failed at the edge of the studs; that is, 1-1/4 inch from the end of the specimen. Deflection between the test machine crossheads for several specimens was approximately 0.030 inch. A more realistic figure would be a smaller value due to small clearances between test fixtures and the testing machine.

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TYPICAL SETUP FOR FCX ELEMENT LOAD TEST

NOTE:

ALL FRACTURES OCCURRED AT "A" OR "B" (EDGE OF STUD)

FIGURE 1