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ASTRONUCLEAR LABORATORY

From: Mechanical Design

To: J. Kenney, Mechanical Design

Date: November 14, 1963

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Subject: Total Peripheral
Leakage Area,
ND 201 Core

WANL-TMI-864

Reference: 1. WANL-TMI-844, Filler Strips Bridging, dated October 29, 1963,
by the writer.
2. WANL-TMI-848, Seal Segment Leakage Areas, dated November 5, 1963,
by the writer.

MASTER

Leakage Area Between Filler Strips

The leakage area between the ND 201 filler strips which have a nominal average gap of 0.00103 inch at room temperature (Reference 1) was investigated and found to be a total of 0.08589 square inch around the circumference of the core. Approximately 45 per cent of this area occurs between those filler strips bounded by the pinned seal segments. The remaining 55 per cent occurs between those filler strips bounded by the free seal segments.

Leakage Area Between Filler Strips and Seal Segments

The average leakage area between the graphite filler strips and the seal segments in the ND 201 core (Reference 2) is 0.30516 square inch at room temperature. The equivalent mean leakage gap for this area is 0.00273 inch around the periphery of the core.

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NOV 15 1963

PROGRAM MANAGEMENT
H. F. FAUGHT

INFORMATION CATEGORY

UNCLASSIFIED

R. L. Thompson 11/14/63
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Total Leakage Area

The total average leakage area around the circumference of the ND 201 core, therefore, including the areas between the individual filler strips and the average area between the filler strips and seal segments is 0.39105 square inch. The equivalent mean leakage gap for this area is 0.00345 inch around the periphery of the core.

C. R. Eppley

nlg