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T-10950

VIBRATION TESTS ON THREE
RADIOISOTOPE FIELD POWER
SUPPLIES (SNAP-15C)

Introduction

The object of this test was to determine the mechanical capabilities of the thermo electric system, the insulation system, and the voltage converter when subjected to sine vibration tests simulating a handling vibration environment.

All electrical monitoring was performed by Minnesota Mining and Manufacturing Company personnel, and this information was retained by them.

A similar test was performed under Environmental Test T-90288.

This test was requested by Richard Dahlen, 3 M Company on March 10, 1965. J. E. Bear, 7331, was the Test Project Engineer and A. G. Bauer, 7332, was the Test Coordinator. The test item was received March 29, 1965 and the testing was completed on the same date.

Procedure and Results

Three power supplies, Ser. Nos. A-8, A-10 and A-12, were secured to vibration machine No. 5 (MBC-25HB Exciter), and subjected to one sweep from 10 to 500 cps at a logarithmic frequency sweep rate of two octaves per minute (2.5 minutes/sweep) using the following inputs:

<u>Frequency Range</u> (cps)	<u>Double Amplitude or</u> <u>Constant Acceleration</u>
10-23	1 g
23-40	0.036 inch DA
40-500	3 g

Each specimen experienced vibration cycling in the longitudinal axis and in one transverse axis. 3 M personnel performed all electrical monitoring and the material and information were retained by them at the completion of testing.

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