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UNCLASSIFIED 571
 DEC 19 1950
 Ref. Symbol: 1531 (79)
 Project No. ET-68

MR. L. DAVIDSON - W-1, LASL
 Re: Shake Test of Type D Carrying Case

~~Downgrade to Confidential~~
P. S. per 3422 tra (3600)
J. Wagner
8/5/02

Object

Vibrate the Type D carrying case, alternating Type C and Type D capsules for 100,000 cycles (approximately 45 minutes) in two mutually perpendicular axes from 10-55-10 cps in one minute for each type capsule.

Requested by

This test was requested by L. Davidson, W-1, LASL, in a memorandum to R. E. Poole, 1000, Sandia Corporation, dated October 16, 1950.

Summary of Results

The birdcage legs failed to stand the vibration. However, the carrying case successfully withstood all vibration tests.

Procedure

A. Test conditions

The Type D carrying case was vibrated 10-55-10 cps in one minute for 100,000 cycles for each type capsule (C and D) in two mutually perpendicular axes.

B. Equipment used

The Sonntag vibration table was used to conduct the test. A specially designed jig was furnished by W-1, LASL, to fix the carrying case to the vibration table after the standard birdcage handling equipment proved inefficient.

Results

The test was begun on October 20, 1950, with the arrival of P. E. Lovelace, W-1, LASL, consultant. A visual inspection was made of the internal levers of the carrying case. No oddities were noted so the "O" gasket was lubricated with vacuum grease, and the case was pressurized to 39 psi. After one cycle from 10-55-10 cps in one minute along the axis parallel to the longitudinal axis of the case, the inner latch pin fractured. A screw was substituted for the pin and the test was continued. During the next cycling period, the four tied down legs of the birdcage fractured. Another visual inspection was made; the case was re-pressurized and returned to W-1, LASL.

INVENTORIED
 AUG 6 1964

INVENT
 APR 10 1968
 CENTRAL M & E CONTROL NO. Z-24137
 BY 2743
W. Wagner
10/19/98
WC Payne

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 AUG 5 '56
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THIS DOCUMENT CONSISTS OF 2 PAGE(S)

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MR. L. DAVIDSON - W-1, LASL -2- Ref. Symbol: 1531 (79) Project No. ET-68

The carrying case was returned to 1531 by W-1 October 27, 1950. Noting the internal case pressure as 28 psi, the case was cycled 10-55-10 cps in one minute along the axis parallel to the longitudinal axis of the case. During the first cycle, the birdcage fractured again as previously described. The case was removed from the birdcage; was block and strapped to the Sonntag shake table, and the test was resumed. A slight clatter was audible during the first 19 cycles, after which, it stopped. An inspection was made to locate this noise, but no oddity was noted. After this phase of the test, the carrying case was returned to W-1, LASL.

On November 2, 1950, the Type D carrying case was returned to 1531, Sandia Corporation along with an especially designed jig to complete the vibration test. The case was vibrated along the axis perpendicular to the longitudinal axis of the case for 45 minutes with the case pressure at 30 psi. This vibration test was completed without incident.

All previous vibration was done with the dummy Type C capsule in the case. D. E. Lovelace, W-1 consultant, at this point, removed the dummy Type C and inserted the dummy Type D capsule. The test was then resumed, repeating the vibration as in the two previously described axes. The remainder of the test was completed without incident. Mr. Lovelace then sealed the case and returned it to W-1, LASL.

Conclusions

The Type D carrying case successfully underwent the requested test.



Test conducted by FRANK L. KING - 1531

Original Signed By
E. L. WAGAR

Approved by R. L. WAGAR - 1531

FLK/1531/bh

DISTRIBUTION:

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