

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW	
1 <sup>st</sup> Review Date: <u>8/18/98</u>	Internal Action Check Number:
Authority: <u>W.C. Layne</u>	1. Classification Satisfactory
2 <sup>nd</sup> Review Date: <u>8/19/98</u>	2. Classification Changed to: <u>U</u>
Authority: ADD	3. Contains No DCR Classified Information
Name: <u>W.C. Layne</u>	4. Coordinate With:
	5. Complete UCAF:
	6. Comments: <u>Declassify</u>

FEB 19 1959

Case No. 690.00  
 Ref. Sym: 1612 (931)  
 Project No. TM-974  
 File: Mk-28, 3-2

MR. W. J. DENISON - 1224

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Attn: Mr. J. C. Wardlow - 1224-2

RECEIVED

Re: Internal Pressure Test of Mk-28 X-Unit Cover Container

FEB 20 1959

CENTRAL RECORD FILE

Summary of Results

A Mk-28 x-unit cover container was hydrostatically pressurized and deflections measured to 100 psi. There was no indication of yielding or failure.

Object of Test

The object of this test was to determine the structural adequacy of the Mk-28 x-unit cover container when subjected to an internal hydraulic pressure of 100 psi, with deflections measured at points designated by the consultant.

Reason for Test

This test was requested in a Work Order Authorization from Division 1224, to Division 1612, dated January 2, 1959. Mr. J. C. Wardlow, 1224-2, was the consultant.

Summary of Past Tests

One previous test was performed on the Mk-28 x-unit cover container, and the results published in a memorandum entitled, Results of Tool-Made Sample Evaluation of the MC-706, Type 3 and Type 2, Ref. Sym: 1624 (1360A), dated November 19, 1957. The "Results" of that test is as follows:

"The cover was bolted and sealed to a plate base by flat rubber. The connector holes were sealed with washers, rubber and bolts. Eight indicators were mounted to indicate movement of the contour. At 90 psi pressure, no leak was evident and maximum change of contour was .096 inches at the upper portion of section D-D. The top of the dome portion moved .065 inches at 90 psi. The pressure was continued up to 135 psi when one of the bolts broke in tension and leakage occurred there. The container did not rupture at the weld or skin at 135 psi. The test was not pursued further and results judged quite satisfactory.

CENTRAL RECORD FILE	
ACCOUNTABILITY CAPD	<u>W.C.</u>
FILE NO. <u>Mk-28</u>	
	<u>3-2</u>

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW	
DOWNGRADING OR DECLASSIFICATION STAMP	
CLASSIFICATION CHANGED TO: <u>U</u>	AUTHORITY: <u>W.C. Layne</u>
PERSON CHANGING MARKING & DATE: <u>Emelda Selph 8/25/98</u>	RECORD ID: <u>985W3771</u>
PERSON VERIFYING MARKING & DATE: <u>WC Layne 8/25/98</u>	DATED: <u>8/19/98</u>

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Mr. W. J. Denison - 1224 -2-

Setup for Test

- I. The following component was tested:
  - 1 - Mk-28 x-unit cover container, Dwg. No. 137962.
- II. The following equipment was used:
  - 1 - Baldwin SR-4 strain indicator, Serial No. 391905
  - 1 - Pressure cell, capacity 150 psi
  - 1 - Sprague air-operated hydraulic pump
- III. The following instrumentation was used:
  - 6 - Starrett dial indicators, least graduation .001

Procedure

The Mk-28 x-unit cover container was connected to a sprague air-operated hydraulic pump, and deflections were measured at 45 psi and in 5 psi increments to 100 psi with gages located as shown in Fig. 1.

Results

A Mk-28 x-unit cover when hydrostatically pressurized to 100 psi gave no indication of yielding or failure. For deflection data see Table I.

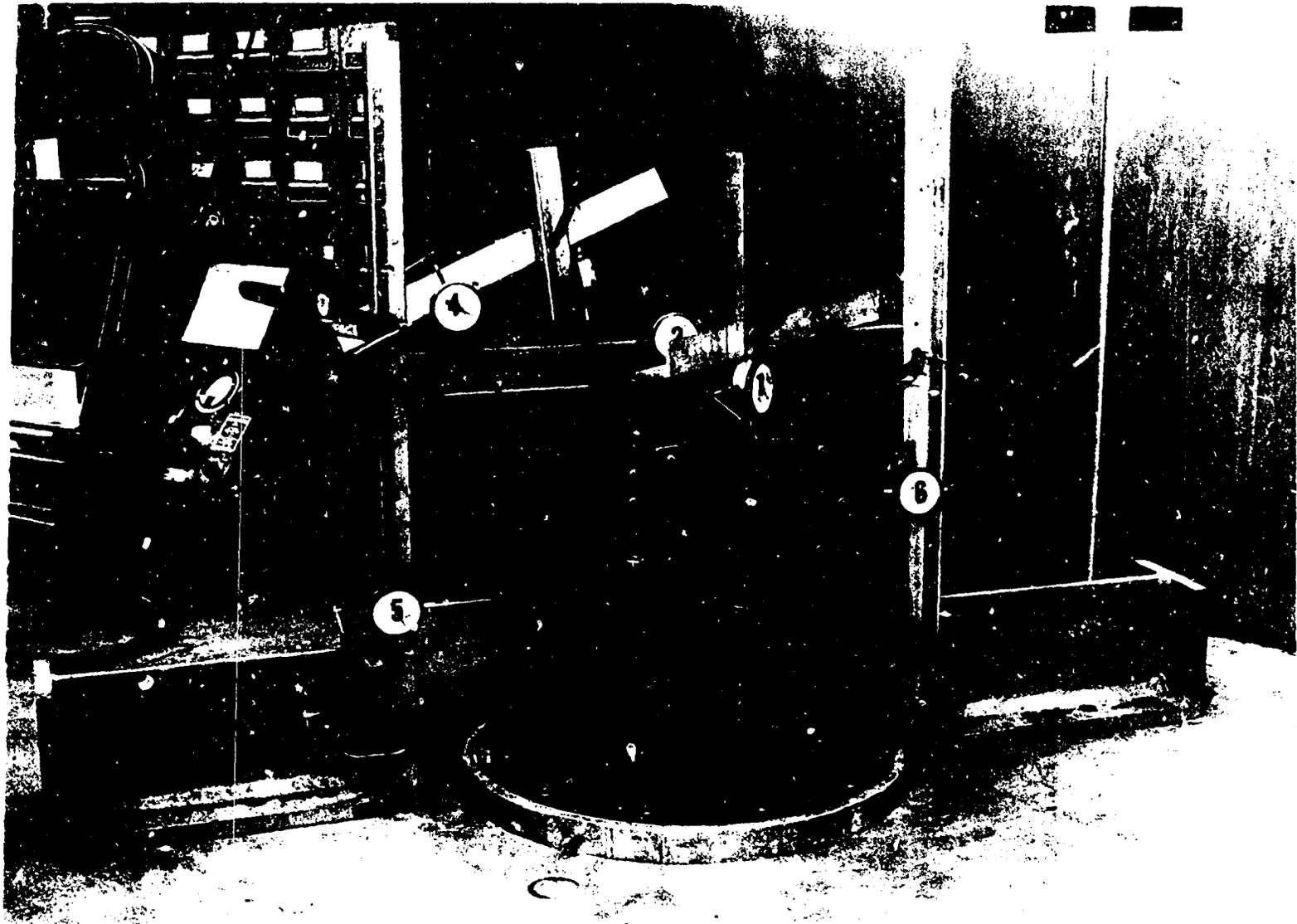
*H. A. Warrick*  
H. A. WARRICK - 1612-2

Approved by: *Paul H. Adam*  
PAUL H. ADAM - 1612

HAW:1612-2:as

- Copy to:
- W. A. Gardner, 1610
  - D. M. Bruce, 1282
  - C. L. Gomel, 5523
  - R. K. Smeltzer, 4721-3

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FIG. 1 --- DIAL INDICATOR LOCATIONS DURING INTERNAL PRESSURE TEST OF MK-28 X-UNIT COVER CONTAINER.

D# 9-2149

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TABLE I

LOAD DEFLECTION DATA DURING INTERNAL PRESSURE  
TEST OF MK-28 X-UNIT COVER CONTAINER

Load (psi)	Deflections (1/1000 Inch)					
	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
0	0	0	0	0	0	0
45	.015	.041	.028	.008	-.002	.029
50	.017	.046	.032	.009	-.002	.033
55	.018	.050	.035	.010	-.002	.037
60	.020	.055	.038	.010	-.003	.041
65	.022	.058	.041	.011	-.003	.045
70	.024	.062	.044	.012	-.003	.050
75	.025	.066	.047	.013	-.004	.055
80	.027	.070	.050	.015	-.004	.060
85	.029	.074	.053	.015	-.004	.065
90	.031	.078	.056	.016	-.005	.070
95	.033	.081	.060	.017	-.005	.075
100	.035	.085	.063	.018	-.005	.080
0	.002	.001	.001	.003	+.001	.002

+ Denotes a movement towards the dial.

- Denotes a movement away from the dial.

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