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SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
1st Review Date: 6/25/98
Authority: ADC ADD
Name: R. Brauer
2nd Review Date: 6-29-98
Authority: ADD
Name: W. Layne
Determination (Circle Numbers):
1. Classification Retained
2. Classification Changed to: UNCL
3. Contains No DOE Classified Information
4. Coordinate With:
5. Contains UCAI?
6. Comments: DECLASSIFY

UNCLASSIFIED

RECEIVED
MAY 2 1963
CENTRAL RECORD FILE

File: TX-54-0, 3.2
T-19510
Completed: 4-4-63

MR. W. E. TREIBEL - 7146

Attn: Mr. J. A. Anderson

Re: Hydrostatic Pressure Test of the Bare B54-0 (SADM) Unit"s", and of the MC1677 Underwater Pressure Resistant Case Containing the B54-0 Unit"s" [redacted]

PROGRAM 05447 11677
CATEGORY 30446
ORG. 210
DATE 6337

Object of Test

The object of this test was to evaluate the B54-0 (SADM) Unit"s" with a Phase B3 MC1321 Interval Timer when subjected to the fifth and seventh of a series of environments that duplicate the exposures of System Confirmation Test Program Unit No. 2. These tests are hydrostatic pressure tests.

Authorization for Test

This test was requested by Division 7146 in an Environmental Test Order received March 28, 1963. Mr. J. A. Anderson was the consultant. The material for test was received March 29, 1963.

Summary

The B54-0 (SADM) Unit"s", bare and in the MC1677 underwater pressure resistant case was subjected to a one-hour hydrostatic pressure test.

During the test on the bare SADM, 0.06 of a pound of water entered the unit at the O-ring seal of the MC1466 Lock Secured Cover.

During the test on the MC1677 containing the SADM, no water entered the MC1677 or the SADM. However, the weight of the MC1677 containing the B54-0 had increased by 0.06 of a pound. It appeared that this increase in weight was due to the water absorbed by the nylon straps on the MC1677.

Functional Measurements and Methods

The weight of the unit, bare and in the MC1677, was measured initially and following the pressure tests using a Trainer Scale.

The pressure in the hydrostatic tank external to the units was monitored during each test using a Baldwin Pressure Transducer (S-1065) and a Baldwin Strain Indicator (S-53403) See Figure 1.

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SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
DOWNGRADING OR DECLASSIFICATION STAMP
CLASSIFICATION CHANGED TO: U
Emelda Selph 7/1/98
PERSON CHANGING MARKING & DATE
W. C. Layne 7/1/98
PERSON VERIFYING MARKING & DATE
AUTHORITY: W. C. Layne
RECORD ID: 98SN2694
DATED: 6/29/98

CENTRAL RECORD FILE
DB
541 Sadm
3-2

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Procedure and Results

Figure 2 shows the bare B54-0 (SADM) unit"s", and Figure 3 shows the MC1677 Underwater Pressure Resistant Case in which the SADM unit"s", was placed. These units were each subjected to a hydrostatic pressure test as follows:

Bare B54-0 - Initially the SADM was visually inspected, new grease applied to the O-rings of the MC1466 Lock Secured Cover and Dial Cover (See Figure 4), and the unit weighed. The SADM was then submerged in water in the 18-inch portable hydrostatic pressure tank and subjected to an external pressure of 24 psig for one hour. A bottle of compressed nitrogen was used to pressurize the hydrostatic tank for this test (See Figure 1). Following completion of this test the SADM was removed from the pressure tank, the external surface of the unit dried, and the unit weighed. The weight of the unit had increased by 0.06 of a pound. The dial cover and the MC1466 cover were then removed and the unit visually inspected. This inspection showed that no water existed under the dial cover but water was present under the MC1466 on the control panel. The control panel was then dried and the unit again weighed. The weight of the SADM was then as initially measured.

MC1677 with B54-0 - Initially the MC1677 and SADM were visually inspected and new grease applied to the O-rings of the MC1466, dial cover (See Figure 4), and MC1677 (See Figure 3). The SADM was then placed in the MC1677 and weighed. The unit was then submerged in water in the 18-inch hydrostatic pressure tank and subjected to an external pressure of 94 psig for one hour. The same method was used for this test as for the test of the bare B54-0 (See Figure 1). Following completion of this test the unit was removed from the pressure tank, the external surface of the MC1677 dried, and the unit weighed. The weight of the unit had increased by 0.06 of a pound. The MC1677, dial cover, and MC1466 were removed from the SADM, and the MC1677 and SADM visually inspected. There was no evidence of water inside the MC1677 or under the MC1466 or dial cover of the B54-0. It appeared that the increase in weight was due to water absorbed by the nylon straps on the MC1677.

The test was performed in accordance with a safe-operating procedure for hydrostatic pressure tests of the B54-0 (SADM) at the Area III 155-181 Gun Facility Revetment written by J. M. Carmichael, 7331-2, and approved by Safety Engineering Division, 3211.

[redacted]

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J. M. Carmichael

J. M. CARMICHAEL - 7331-2

R P May

Test Project Engineer: R. P. MAY - 7331-1

JMC:7331-2:hb

Enclosures: Figs. 1-4

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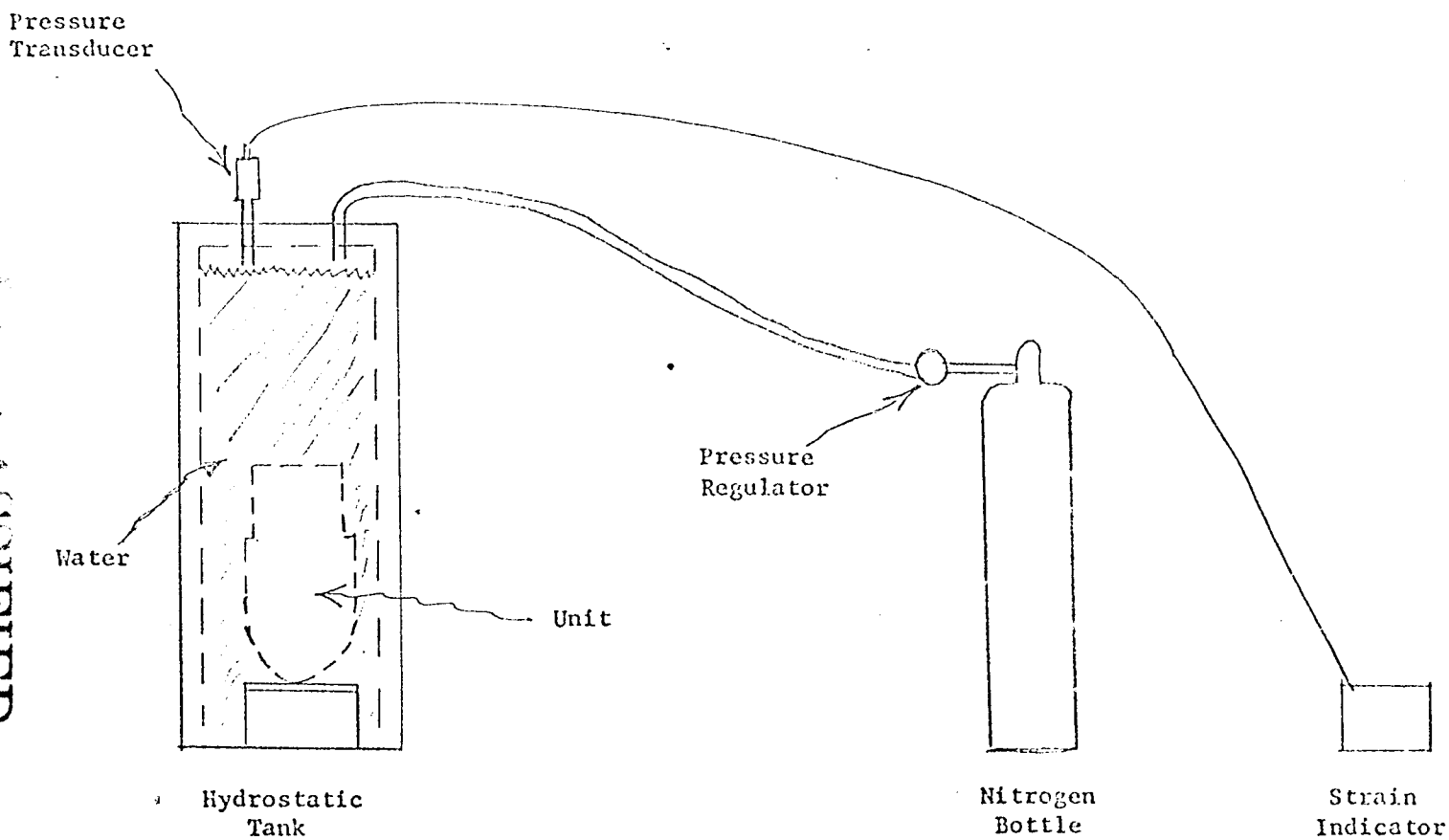

Figure 1

Diagram of the Test Setup Used for the Hydrostatic Pressure Tests of the Bare B54-0 (SADM) Unit"s", and of the MC1677 Underwater Pressure Resistant Case Containing the B54-0 Unit"s"

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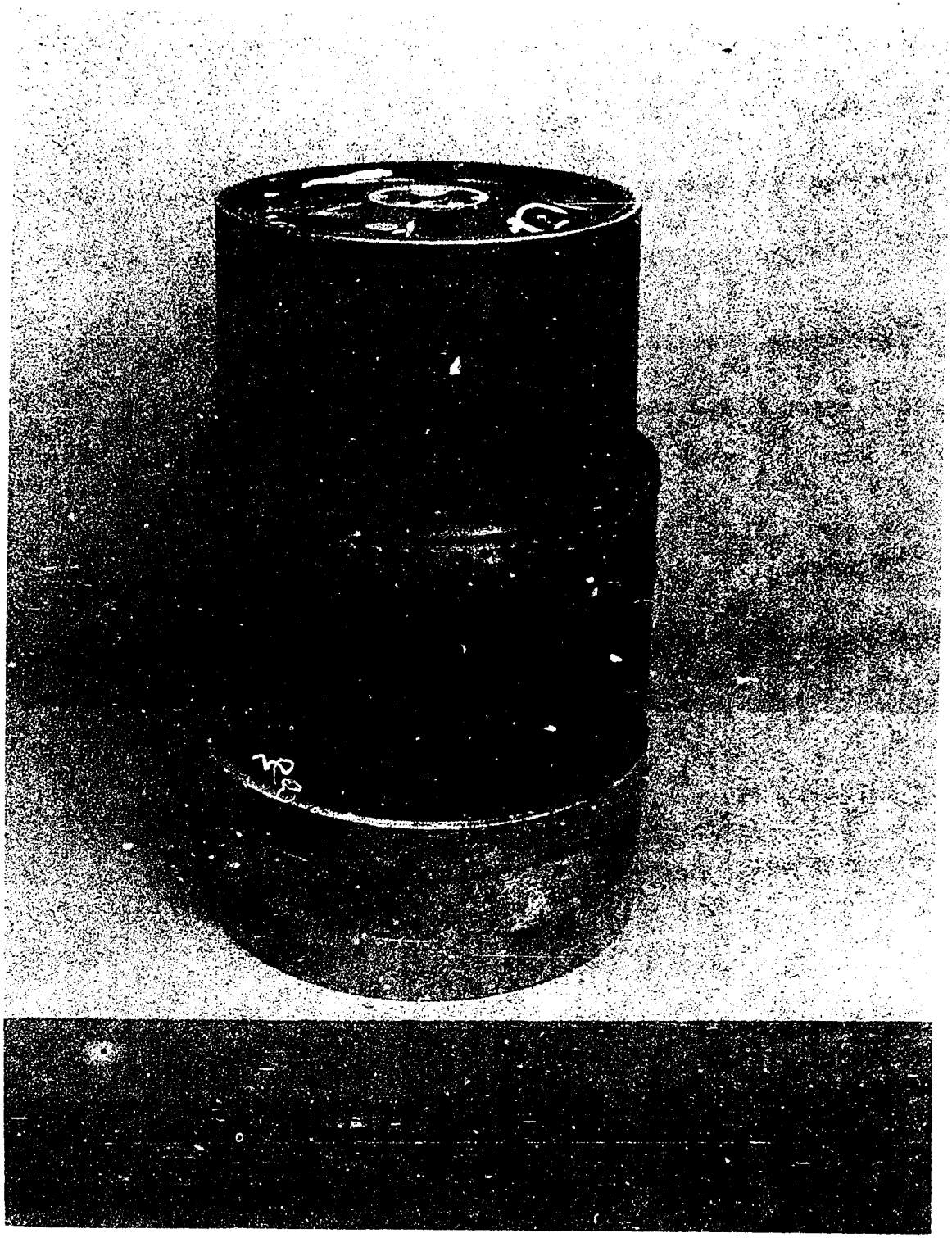

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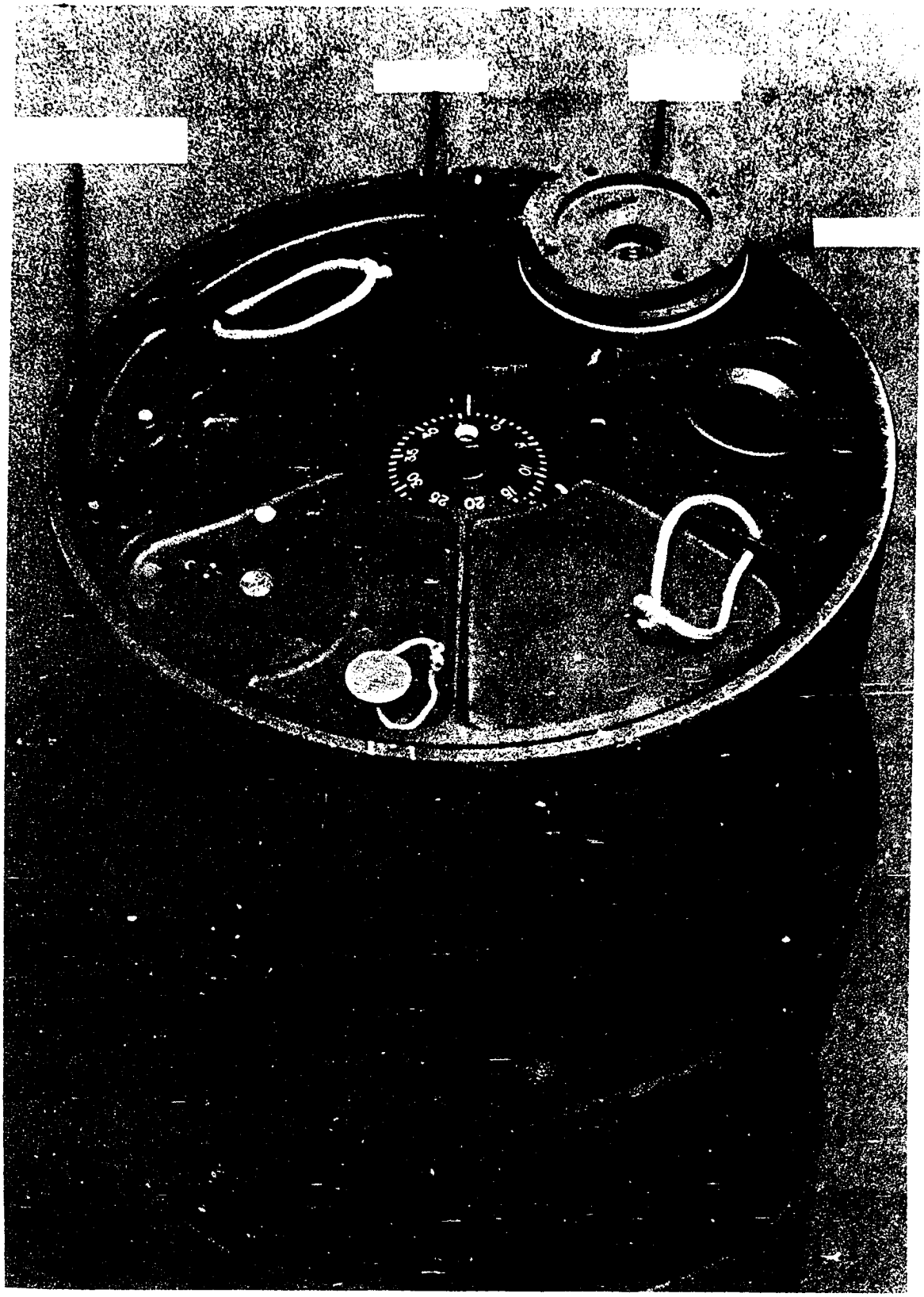

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