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SEP 8, 1961

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW	
1 st Review Date: <u>7/13/98</u>	Classification (Circle Number)
Authority: CIA/DC <u>W. Loya</u>	1. Classification Retained
Name: _____	2. Classification Changed to <u>U</u>
2 nd Review Date: <u>7/13/98</u>	3. Contains No DOE Classified Information
Authority: _____	4. Coordinate With: _____
Name: <u>R. B. Crane</u>	5. Contains UCAIT <u>NO</u>
	6. Comments: <u>OK for approval</u>

File No: TX-53, 3-2
 T-17637
 Date Completed: 3-10-61

MR. E. I. BRUCE - 7117
 Attn: C. W. Moses

RECEIVED

Re: Explosive Test of Chute Deployment System Unit 60 L (U) SEP 2 1961

CENTRAL RECORD FILE

Summary of Results

This test was conducted to determine the minimum energy MDF that can be used for cover plate deployment and retard chute strap cutting. From this test it was found that 10 gr/ft MDF will deploy the cover plate satisfactorily. 15gr/ft shaped MDF re-inforced with copper wire at the location where there are no straps will satisfactorily cut the straps.

Object of Test

The object of this test was to determine the minimum energy MDF that can be used for cover plate deployment and retard chute strap cutting on TX-53 unit 60-L.

Authorization for Test

This test was requested in a Work Order Authorization from E. I. Bruce, 7117, to E. H. Copeland, 7321, dated 3-9-61. D. K. Buchanan, 7321 was the test project engineer.

Setup for Test

Setup for this test is shown in Fig. 1. 14 ft of 15 gr/ft shaped MDF and 14 ft of 10 gr/ft MDF were used in this test. Dupont X257D detonators were used to detonate the MDF.

Fastex camera coverage was taken of the cover plate deployment.

Procedure

In this test, the rear cover plate was loaded with 10 gr/ft MDF and fired. After the cover deployment, the retard chute nylon straps were put under tension with a hydraulic jack. The straps were then cut with 15 gr/ft shaped MDF. The shaped MDF was re-inforced with copper wire at the locations where there were no straps.

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW DOWNGRADING OR DECLASSIFICATION STAMP	
CLASSIFICATION CHANGED TO: <u>U</u>	AUTHORITY: <u>R. B. Crane</u>
PERSON CHANGING MARKING & DATE: <u>Emelita Selph 7/21/98</u>	RECORD ID: <u>98SN2884</u>
PERSON VERIFYING MARKING & DATE: <u>W. Loya 7/22/98</u>	DATED: <u>7/13/98</u>

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Mr. E. I. Bruce - 7117

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Results

The cover plate was deployed satisfactorily as shown in Fig. 2 and no damage occurred to the MDF groove as shown in Fig. 3. The retard chute straps were cut satisfactorily and the MDF ring held up satisfactorily as shown in Figs. 4 and 5. Fig. 6 is a velocity vs time curve obtained from Fastex camera coverage of rear cover plate deployment.

Conclusion and Recommendations

From this test it was found that 10gr/ft MDF would satisfactorily deploy the rear cover plate with no damage caused to the afterbody. It was also found that 15gr/ft shaped MDF would satisfactorily cut the retard chute straps when aligned properly and re-inforced with copper wire.

William V. Hoffman
W. V. HOFFMAN - 7323-1

Dale Buchanan
7321 Project Engineer: DALE BUCHANAN - 7321-5

R. S. Hooper
Approved By: R. S. HOOPER - 7321-5

VH:mr

Encl: Figs. 1 thru 6

Copy to:

J. M. Wiesen, 1442
D. S. Bliss, 2344
D. M. Bruce, 7182
E. H. Copeland, 7321
J. R. Harrison, 7523
→ K. K. Smeltzer, 3421-3
L. C. Horpedshi, W-1, LASL
Attn: S. D. Huffman
R. S. Cauler, CMK-3, LASL
Attn: D. E. Mitchell

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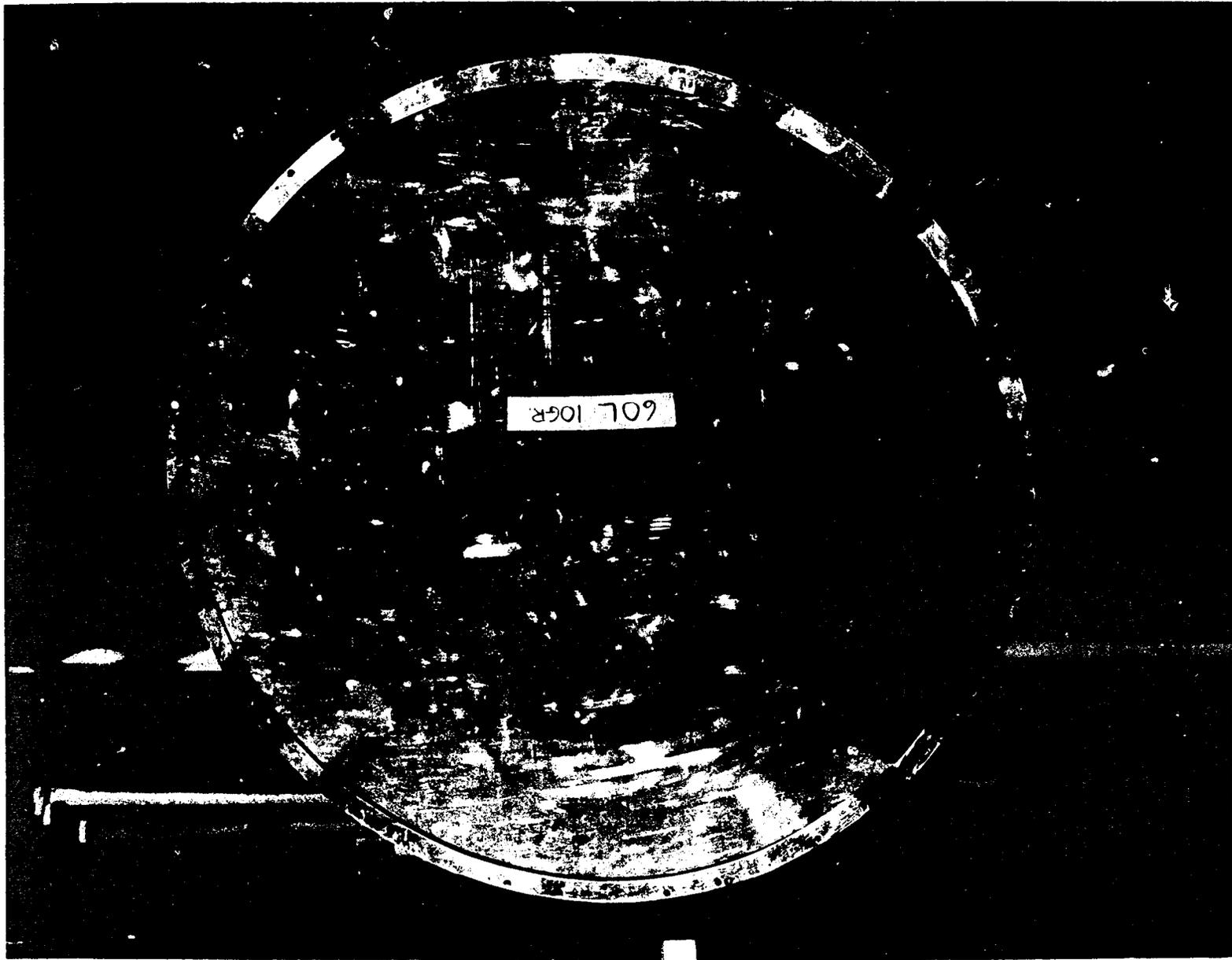
FIGURE 1 - SETUP FOR TEST RUN -- EXPLOSIVE TEST OF CHUTE DEPLOYMENT SYSTEM, UNIT 60-L

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FIGURE 2 - COVER PLATE AFTER TEST -- EXPLOSIVE TEST OF CHUTE DEPLOYMENT SYSTEM,
UNIT 60-L

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FIGURE 3 - COVER PLATE MDF GROOVE AFTER TEST -- EXPLOSIVE TEST OF CHUTE DEPLOYMENT SYSTEM, UNIT 60-L

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FIGURE 4 - RETARD STRAP CUTTER MDF GROOVE AFTER TEST -- EXPLOSIVE TEST OF CHUTE DEPLOYMENT SYSTEM, UNIT 60-L

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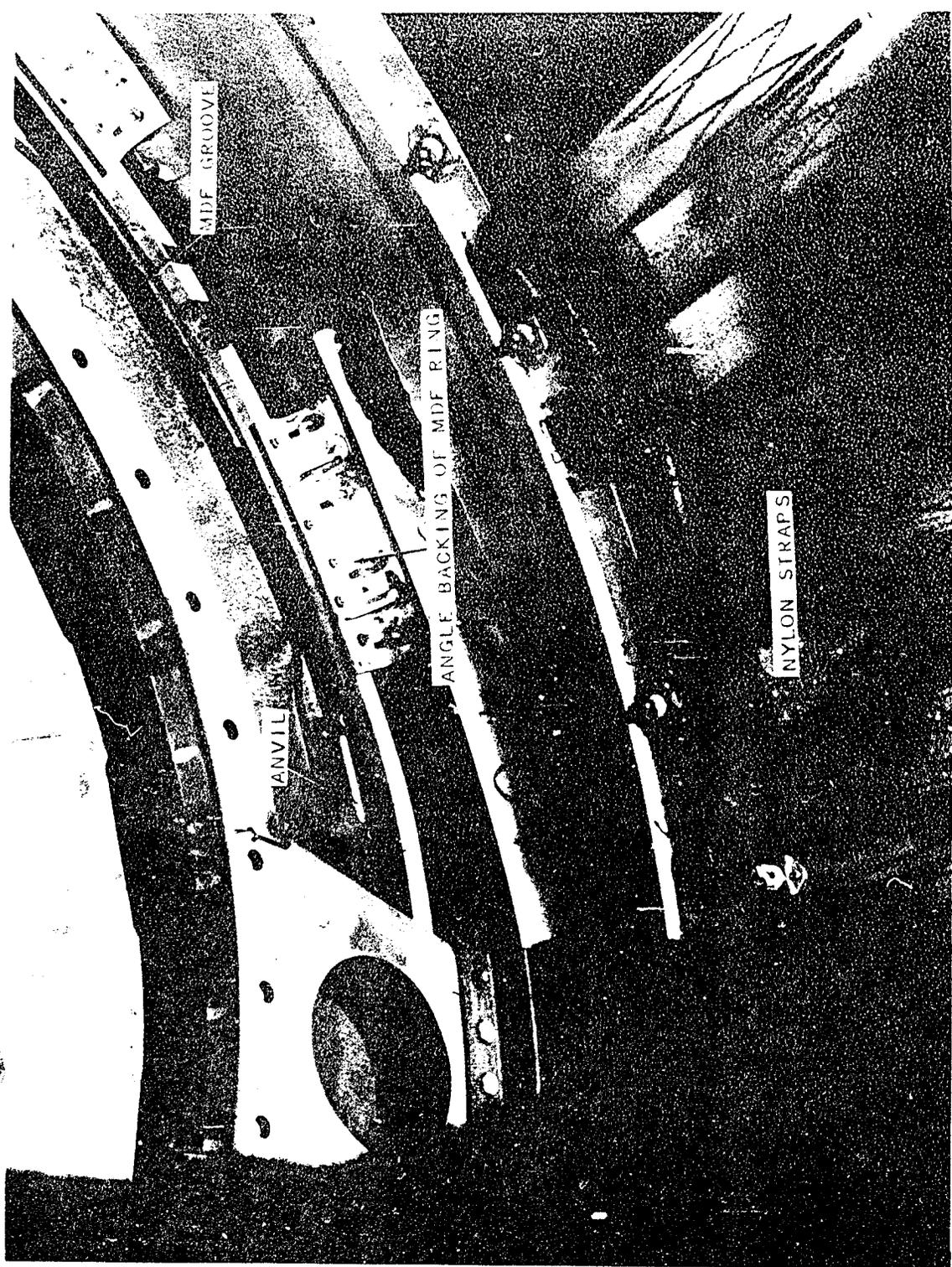


FIGURE 5 - INSIDE 60-L AFTERBODY AFTER TEST -- EXTERNAL TEST OF CH 15 (INTERNAL SYSTEM), UNIT 60-L

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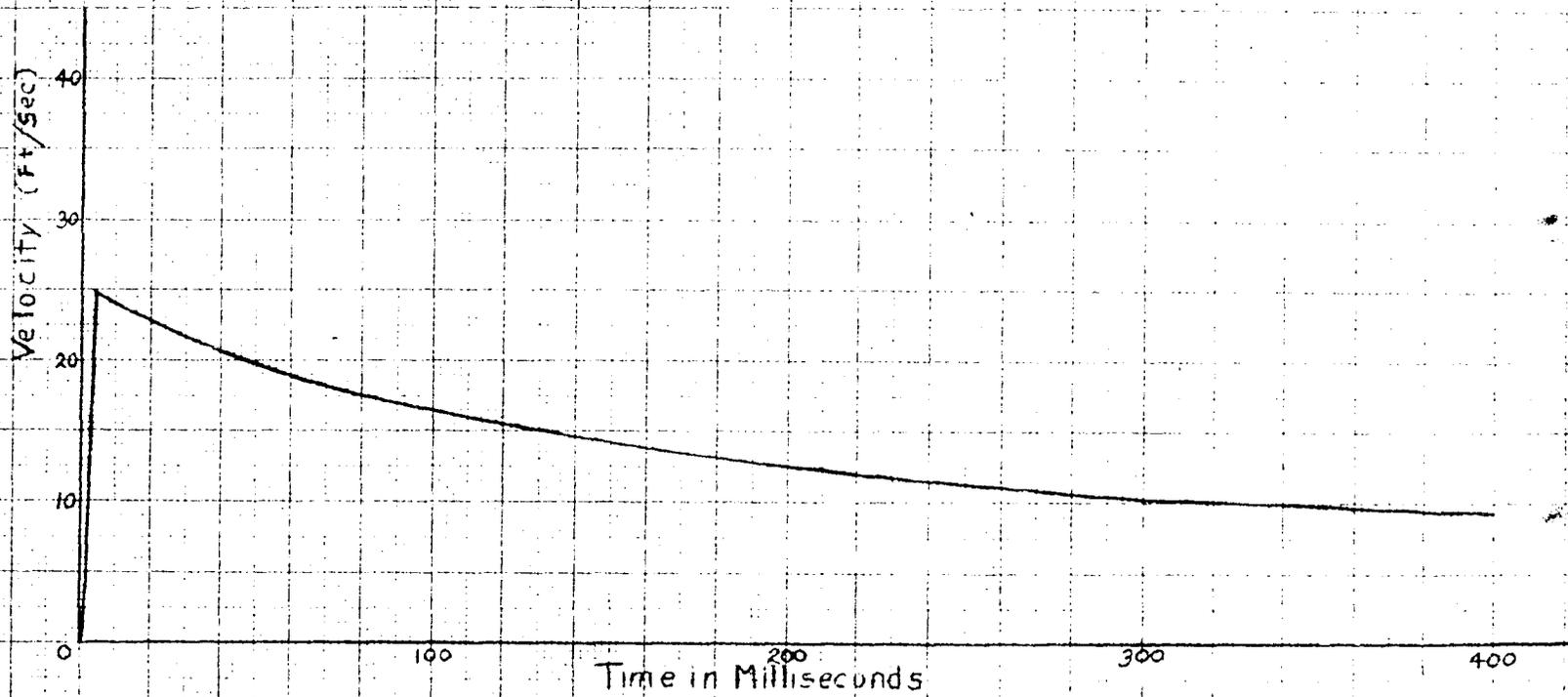


Fig. 6 Velocity vs. Time Curve of Rear Cover Plate Deployment Unit 60-L
Explosive Test of Chute Deployment System 60-L Project T-17637

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