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THE WURLITZER COMPANY

NORTH TONAWANDA DIVISION
NORTH TONAWANDA NEW YORK

PROGRESS REPORT NO. 2

FOR PERIOD SEPTEMBER 1, 1958 THRU SEPTEMBER 30, 1958

PURCHASE ORDER 15-1536

MC-818 IMPROVEMENT PROGRAM

9/9/96
R. T. Ruff 8 4
9-9-96
W C Layne

Emelda Seph 9/10/96
W C Layne 9-12-96
PERSON VERIFYING MARKING & DATE

W. C. Layne
RECORD ID 96SN481
DATED 9/9/96

REPORT BY: Ralph T. Mead
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INTRODUCTION

This report covers progress on the MC-818 improvement program during the period from September 1, 1958 thru September 30, 1958 under Purchase Order 15-1536.

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SUMMARY

During September the following work was carried out:

Item 1: Unfinished work on Purchase Order 14-4189

The cell ring closing and pressing fixture was received in August but on trial it required replacement of some of the cell folding pins and other minor modifications. These were completed and the machine tried out on a minor scale. It was shipped out in October.

Item 2: Investigation of substitutes for asbestos

Ceramic fiber papers were prepared with improved abrasion resistance to permit use in 818 units without major modifications of unit assembly techniques.

Item 7: Investigation to improve cover-to-case assembly

Units with a 1/16" by 45° chamfering of the cover edges were delivered to Sandia in August by Mr. John Ivanhoe. These also had a groove radius of .025".

Photomicrograph of sectioned cases indicated that the 1/16" bevel was too wide for a close or tight fit between the case and cover. Additional headers with .032 bevel will be ordered. It is unlikely that a hermetic or pressure tight seal can be made mechanically that will prevent gas venting. during unit operation.

Seam welding of the case to the cover will not be attempted by Wurlitzer since this phase of the program is being conducted by Sandia for another type of unit and information obtained will be substantially applicable to the 818 unit.

Miscellaneous:

Attached is a summary sheet for the data on the "Controlled Experiment". Without a comparison chart showing performance at -65°F a proper interpretation is difficult but at least on the basis of the data the following interpretation is

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SUMMARY

possible.

1. At 223 calories per pad the unit performance at +165°F is insensitive to calcium thickness or electrolyte composition.

2. At 253 calories per pad, both electrolyte composition and calcium thickness are critical. The performance appears to depend in part on the effect of calcium thickness on heat balance.

   The effect of electrolyte composition may be due to differences in rate of Li-Ca alloy formation. It is reasonable to assume that formation of this alloy would be minimized by an electrolyte relatively high in chromate and potassium ions.

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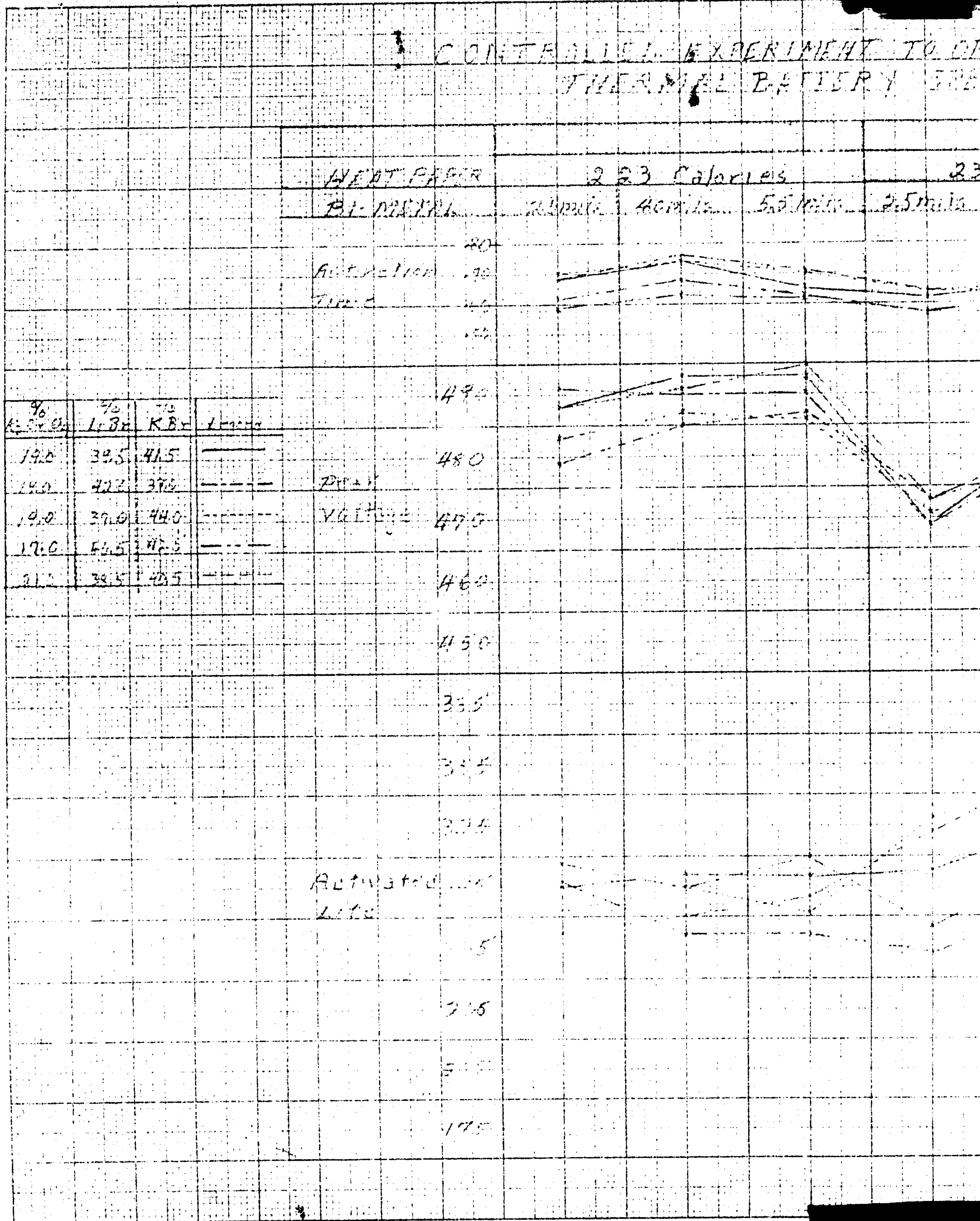

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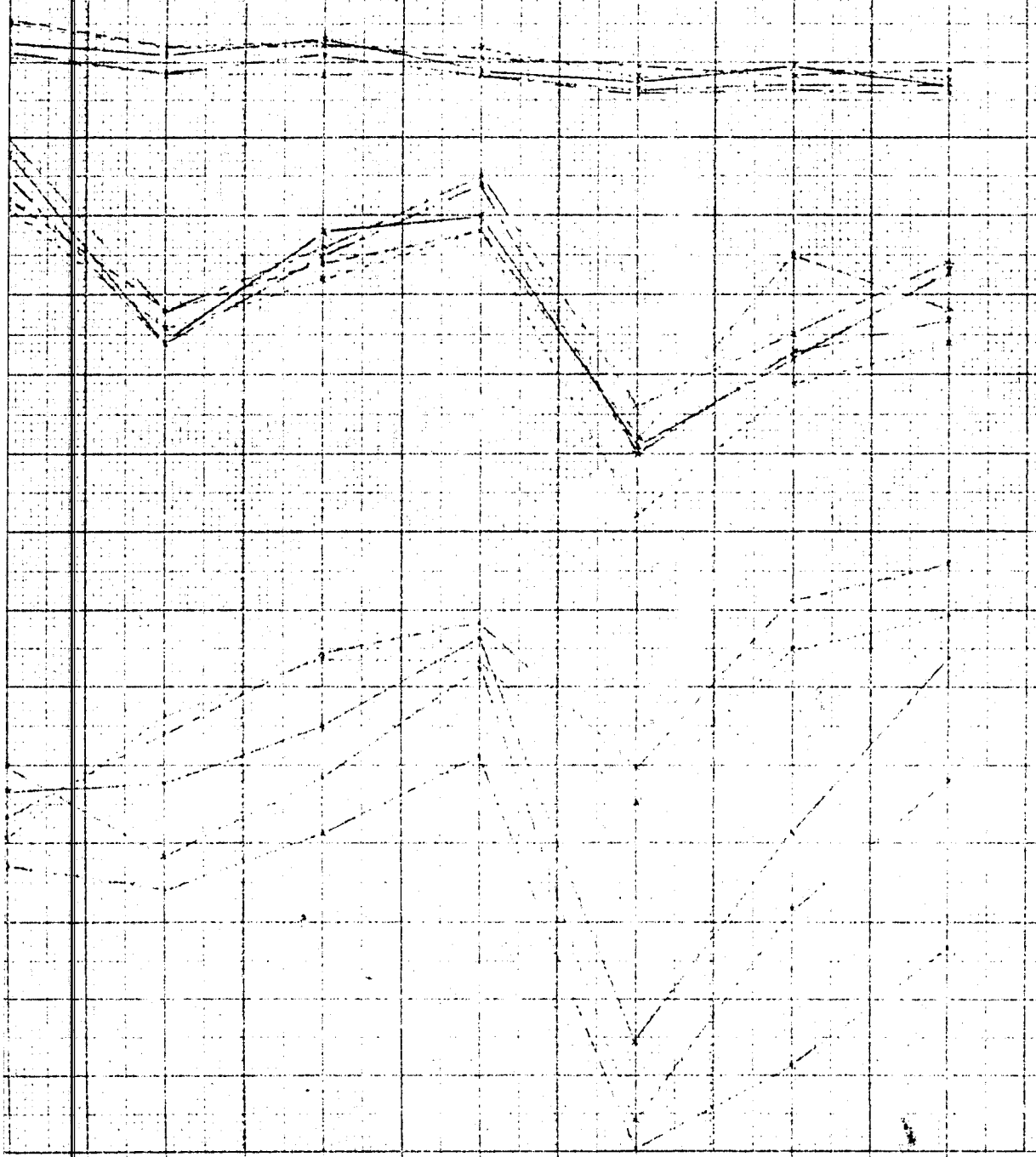

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