

O T T A W A

March 9th, 1942.

R E P O R T

of the

ORE DRESSING AND METALLURGICAL LABORATORIES.

Investigation No. 1173.

Examination of Spot-Welded Aluminium Strips.

(Copy No. 5)

BUREAU OF MINES
DIVISION OF METALLIC MINERALS
—
ORE DRESSING AND
METALLURGICAL LABORATORIES



CANADA

DEPARTMENT
OF
MINES AND RESOURCES
MINES AND GEOLOGY BRANCH

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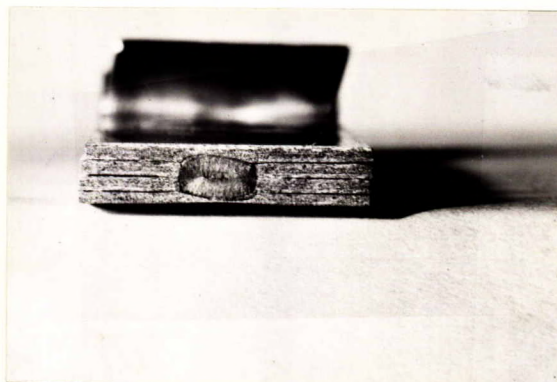
Origin of Request and Object of Investigation:

On March 5th, 1942, Flight Lieutenant A. J. Smith, of the Department of National Defence (Air Services), Ottawa, Ontario, submitted a sample of spot-welded aluminium strip. It was requested that this spot welding be examined to determine whether or not it was satisfactory.

Macro-Examination:

A cross-section through one of the welds was polished and etched for macro-examination. Figure 1 is an enlarged photograph of the results. The other welds were similarly treated and all showed identical structures.

Figure 1.



Cross-section through spot weld
in aluminium, etched with Tucker's reagent.

Magnification: $\times 1\frac{1}{2}$.

Conclusion:

This examination would indicate that the spot welding operation had resulted in good fusion, thereby forming a strong union between the aluminium strips.

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HVK:PEB.