File

FILE COPY

O T T A W A June 14, 1945.

R E P O R T

of the

ORE DRESSING AND METALLURGICAL LABORATORIES.

Investigation No. 1891.

Corrosion Resistance of Anti-Corrosion Compound for Airoraft Engines (Specification C-27-587).

(Copy No. 10.)

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Background:

A letter dated May 9, 1945, (File No. 1034A), from Wing Commander J. Horner, Commanding Officer, No. 14 A. I. District, R.C.A.F., Department of National Defence for Air, Ottawa, Ontario, requested that a sample of anti-corrosion compound (Ref. No. 34A/94) be tested for Protection and Hydrobromic Acid Neutralization. The compound and the diluent lubricating oil were to be furnished by the R.C.A.F.

The letter stated in part:

"Results to be forwarded to Air Force Headquarters, attention AMSO:DAI."

"The sample was supplied by No. 11 Equipment Depot and was taken from their Incoming Shipment No. 1086."

TESTS PERFORMED:

Protection Test.

The steel panels corroded rather badly in the Protection Test (Paragraph 2m in the specification). See Figures 1a and 1b.

Hydrobromic Acid
Neutralization Test.

The steel panels corroded in the Hydrobromic Neutralization Test (Paragraph 2n in the specification). See Figure 2.

Conclusions:

The anti-corrosive compound failed to meet the specification requirements with regard to:

1. Protection Test.
2. Hydrobromic Acid Neutralization Test.

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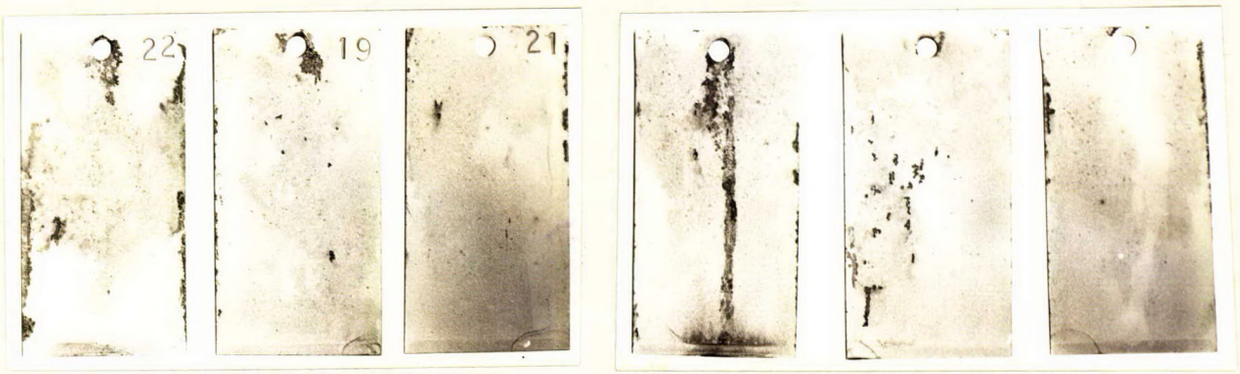
Figure 1.



(a) (b) Reverse Side.

STEEL PANELS COATED WITH COMPOUND-LUBRICATING OIL MIXTURE, AFTER 150 HOURS IN THE HUMIDITY CABINET.

(Magnification: approximately 0.5).

Figure 2.

TYPICAL STEEL PANEL AFTER THE HYDROBROMIC ACID NEUTRALIZATION TEST.

(Magnification: approximately 0.75).

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