FTD-HT-23-1287-71

FOREIGN TECHNOLOGY DIVISION

PRESERVATIVE OIL

by

I. A. Makarov, A. P. Voytov, et al.

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author)
Foreign Technology Division
Air Force Systems Command
U. S. Air Force

2a. REPORT SECURITY CLASSIFICATION
UNCLASSIFIED.

2b. GROUP

3. REPORT TITLE

PRESERVATIVE OIL

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)
Translation

5. AUTHOR(S) (First name, middle initial, last name)
Makarov, I. A. ; Voytov, A. P. ; Bludilin, V. M. and Sukhoverkhov, V. D.

6. REPORT DATE
9 August 1968

7a. TOTAL NO. OF PAGES
3

7b. NO. OF REFS

8a. CONTRACT OR GRANT NO.

b. PROJECT NO. 7343

c.

d.

9a. ORIGINATOR'S REPORT NUMBER(S)
FTD-HT-23-1287-71

9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)

10. DISTRIBUTION STATEMENT

Approved for public release; distribution unlimited.

11. SUPPLEMENTARY NOTES

12. SPONSORING MILITARY ACTIVITY
Foreign Technology Division
Wright-Patterson AFB, Ohio

13. ABSTRACT

To increase the effectiveness of the protective properties of the oil, it is suggested to use as the corrosion inhibitor 0.5-1 wt percent of a salt of 1-p-nitrophenyl-1, 3-dihydroxy-2-aminopropane and fractions of fatty acids containing 18-24 carbon atmos, or a mixture of 1-p-nitrophenyl-1, 3-dihydroxy-2-aminopropane and fatty acids containing 18-24 carbon atoms, with hexathioadamatane in the amount of 0.5-1 wt percent.

DD FORM 1 NOV 65 1473

UNCLASSIFIED

Security Classification

UNCLASSIFIED

Security Classification

KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Protective Coating						
Mineral Oil						
Anticorrosive Additive						
Benzene Derivative						
Aromatic Nitro Compound						
Amine Derivative						
Primary Amine						
Metal Coating						
Adamantane						
Patent						

UNCLASSIFIED

Security Classification

II

FTD-HT-23-1287-71

EDITED TRANSLATION

PRESERVATIVE OIL

By: I. A. Makarov, A. P. Voytov, et al.

English pages: 3

Source: Russian Patent No. 255467 (Appl. No. 1264880/23-4 August 9, 1968), 1970, pp. 1-2.

Translated by: SSgt René E. Courville

UR/0000-70-000-000

Approved for public release; distribution unlimited.

PREPARED BY:

TRANSLATION DIVISION
FOREIGN TECHNOLOGY DIVISION
WP-AFB, OHIO.

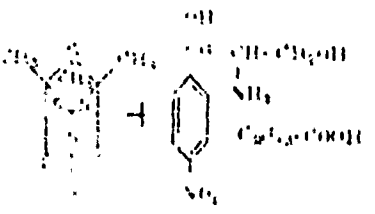
PRESERVATIVE OIL

I. A. Makarov, A. P. Voytov, V. M. Bludilin and
V. D. Sukhoverkhov

The invention relates to preservative oils for the protection of metallic objects from corrosion.

A known oil for the protection of metals from corrosion, contains oil-scluble salts of dicyclohexylamines and fatty acids as the corrosion inhibitor.

To increase the effectiveness of the protective properties of the oil, it is suggested to use as the corrosion inhibitor 0.5-1 wt. % of a salt of 1-*p*-nitrophenyl-1, 3-dihydroxy-2-aminopropane and fractions of fatty acids containing 18-24 carbon atoms, or a mixture of 1-*p*-nitrophenyl-1, 3-dihydroxy-2-aminopropane and fatty acids containing 18-24 carbon atoms, with hexathioadamatane in the amount of 0.5-1 wt. %.



With the addition of 1% hexathioadamatane to oil containing the previously mentioned salt, a considerable synergism of action is observed. The composition suggested for the protection of ferrous and nonferrous metals, for example, aluminum-tin, does not cause the darkening of the metal surface with packing in waxed paper.

Example 1. The oil-soluble salt 1-*p*-nitrophenyl-1, 3-dihydroxy-2-aminopropane and stearic acid in the amount of 1 wt. % is introduced into aviation lubricating oil MS-20 at 120-150°C. Such a composition guarantees the complete protection of steel, cast iron, aluminum and tinned materials under the following testing conditions: a temperature gradient 20-45°C, relative humidity 95-98%, for 30 days without packing in waxed paper. MS-20 oil without the additive protects steel plate under these same conditions for 4 hours.

Example 2. The oil-soluble salt 1-*p*-nitrophenyl-1, 3-dihydroxy-2-aminopropane and fractions of synthetic fatty acids containing 18-24 carbon atoms in the amount of 1 wt. % are introduced into spindle oil at 120-150°C. This composition guarantees complete protection of steel, cast iron, aluminum and tinned materials under the indicated conditions for 25 days.

Example 3. One percent of the oil-soluble salt 1-*p*-nitrophenyl-1, 3-dihydroxy-2-aminopropane and stearic acid and approximately 1% hexathioadamantane are introduced into spindle oil at 120-150°C. This composition guarantees complete protection of steel, cast iron, aluminum and tinned materials in the accelerated testing method: temperature gradient 20-45°C, relative humidity 95-98%, for 60 days without packing in waxed paper.

Object of the Invention

1. The preservative oil for the protection of ferrous and

nonferrous metals from corrosion, which consists of mineral oil and a corrosion inhibitor *is distinguished by the fact* that it contains the salt 1-*p*-nitrophenyl-1, 3-dihydroxy-2-aminopropane and fatty acids containing 18-24 carbon atoms with hexathio-adamantane as a corrosion inhibitor in order to increase the effectiveness of the oil's protective properties.

2. The oil in paragraph 1, *is distinguished by the fact* that the salt 1-*p*-nitorphenyl-1, 3-dihydroxy-2-aminopropane and fatty acids containing 18-24 carbon atoms are introduced in the amount of 0.5-1 wt. %.

3. The oil in paragraph 1, *is distinguished by the fact* that the salt in paragraph 1 is introduced in the amount of 0.5-1 wt. % and hexathioadamantane is added in the amount of 0.5-1 wt. %.