

FILM STUDY GROUP

SUBJECT INDEX AND REPORT

T.O.M. REEL NO. 117

Prepared by

STANDARD OIL DEVELOPMENT COMPANY

STANDARD OIL DEVELOPMENT COMPANY

ABSTRACT AND INDEX OF TECHNICAL OIL MISSION

MICROFILM

REEL NO. 117.

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Item V-14 - Foot 1, Frame 2 to Foot 5, Frame 2

Information on operation of Linde-Frankel oxygen plant in 1941-1944. Foot 5 frame 2 to foot 8 frame 9 consists of correspondence and memorandum written prior to 1941 on operation of the Leuna oxygen plants.

Item V-14 - Foot 8, Frame 17 to Foot 9, Frame 4

This report shows the results of tests on silumin castings for use at temperatures as low as -190°C .

Item V-14 - Foot 9, Frames 5-7 and 9-10 and 17-18

This report shows a list of materials according to German engineering specifications which are used at various points in Linde oxygen plants.

Item V-14 - Foot 9, Frames 8 and 11

A list of alloy steels suitable for operation at various temperature levels below freezing down to -190°C .

Item V-15 - Foot 10, Frame 3 to Foot 11, Frame 10

Report on manufacture of gasoline from brown coal by hydrogenation (Leuna).

Item V-16 - Foot 11, Frame 12 to Foot 12, Frame 4

Drawings of analytical procedures for acetylene and other minor components of air. There is no description of the details of the procedure but merely apparatus set-up.

Item V-17 - Foot 12, Frames 6-7

Results of test of several alloy steels in gas containing carbon monoxide and hydrogen at 750°C . At that temperature NCT₃, RS₁, and bicromal 10 are satisfactory (1931 data).

Item V-17 - Foot 14, Frame 4 to Foot 15, Frame 3

Use and testing of steels at low temperature. This is a 1943 research report by Krupp.

Item V-18 - Foot 15, Frame 8 to Foot 18, Frame 11

Report covering period 1938-1942 at Leuna on the preparation of oxygen. This report compares the old Linde process with the newer Linde-Frankel process and also describes new equipment and arrangement thereof made during the period covered by the report. Some figures on oxygen cost are given. The index is on Foot 15, Frames 9-10.

Item V-18 - Foot 18, Frame 12 to Foot 19, Frame 1

Memorandum on the use of a Linde-Frankel oxygen plant built after the one at Leuna in which improvements are supposed to have reduced power consumption somewhat over the older Linde-Frankel arrangement. Flow sheets and operations description are given.

Item V-18 - Foot 28, Frames 9 to 10

Drawings of piping layout of oxygen apparatus.

Item V-20 - Foot 37, Frame 9 to Foot 41, Frame 9

January, 1941 report on the compressibilities of various gases. This report includes numerous compressibility curves. This report has been previously scanned in another reel. There is some question as to whether the curves at the end of the report are available in the previous report.

Item V-21 - Foot 41, Frame 11 to Foot 42, Frame 17

Determination of acetylene and hydrocarbons in liquid oxygen from Linde plant.

Item V-22 - Foot 43, Frame 7 to Foot 44, Frame 11

1944 prospectus for manufacture of aviation gasoline from Swedish shale oil by hydrogenation. This report includes process classifications, oil inspections, investment data for a 50,000 ton per year plant. The estimate includes the preparation of hydrogen.

Item V-23 - Foot 48, Frame 10

Table of products produced in Leuna works in 1940 and costs thereof. This table is of interest in that it gives a list of the chemicals that were being manufactured and their relative cost in German money.

Item V-25 - Foot 54, Frames 13-16-18 and Foot 55, Frames 2, 9 and 11

Comparative costs in 1940 of Fischer and hydrogenation plants for treating coal and tar. Comparison of hydrogen consumptions for hydrogenation of various coal products.

Item V-25 - Foot 57, Frames 5-9

1940 memorandum on Michael process for synthesizing hydrocarbons using gas recycle.

Item V-25 - Foot 57, Frames 10-15

Comparison of the Michael process with the Wenzel-Winkler process and also the Ruhrchemie gas recycle process for the production of olefins in 1940.

Item V-25 - Foot 59, Frames 11-16

1942 data on the Michael synthesis using the foam process.

Item VI-4 - Foot 65- Frames 9-10

Memorandum on methods of operating oil plants in order to produce various types of products.

Item VI-4 - Foot 65- Frame 14 to Foot 66, Frame 1

This section gives a series of tables listing either known or proposed methods for making chemical compounds. Foot 66, Frames 5-14 cover the same subject matter but are arranged differently and may be more complete.

Item VI-6 - Foot 67, Frames 8-15

German report on analysis and performance of an American gasoline having an octane number of 150 and containing 1.4% of monomethyl aniline. This report is of interest in that it gives the German methods for analysis of the gasoline to determine its composition including infrared, ultraviolet, and Raman spectra data on cuts.