ADDRESS NAVY DEPARTMENT,
BUREAU OF SHIPS

Section 341
REFER TO FILE NO.
OC/NTME(341)

NAVY DEPARTMENT

BUREAU OF SHIPS
WASHINGTON 25, D. C

Subj: Microfilm of U.S. Naval Technical Mission In Europe Reports

1 During the course of its field trips to examine German synthetic oil plants and to interrogate German technical personnel, the members of the Oil Team of the U.S. Naval Technical Mission in Europe prepared a number of "Letter Reports" and "Technical Reports". There is presented in the following film a complete set of the reports dealing with fuels and lubricants.

2. These reports have been arranged in numerical sequence, all the Letter Reports appearing as the first group and the Technical Reports as the second. A complete index to the film appears following this page. The numbers appearing before the report numbers as the left hand column will also be found in large letters below the pages of the appropriate reports.

3. It will be noted that certain of the reports refer to an appendix. When such additional material does not appear following the pages of the report, it will be found in a separate reel which bears the same title as does the report to which it pertains.

4. In addition to the reports and the documents which appear in the appendices, other miscellaneous documents, possibly of equal technical value, were obtained and saved for more detailed examination and study. These documents have also been microfilmed and appear titled "Miscellaneous German Technical Documents"

5. The Bureau of Ships, Research and Standards Branch, would appreciate receiving, for its technical files, a copy of any translations made of the German originals incorporated in these films, or of any evaluations which are made of the data here presented. This latter information, if desired, will be maintained in a confidential status.

T. A. Solberg

T. A. SOLBERG
Rear Admiral, USN

Naval Technical Mission in Europe

Letter Reports on Fuels and Lubricants

Letter Report Number	Title
4-45	German Fuels, Lubricants, and Related Synthetics.
119-45	Lubricant Additive for Decreasing the Time for Gasoline Engine Break-in Periods.
123-45	The Preparation of Tetrahydrofuran Polymers as a Synthetic Lubricant for Metals.
131-45	Tables on Special Diesel Fuel Cuts.
137-45	Lurgi Mahltrocknung Process (Pulvo-Drying).
150-45	Graphite Oxyde as a Fuel or Fuel Additive.

Naval Technical Mission in Europe

Technical Reports
on
Fuels and Lubricants

Technical Report Number	Title
87-45	The Wessling Synthetic Fuel Plant
105-45	The Production of Tetrahydrofuran Intermediates.
106-45	The Preparation of Formamide as an Intermediate for Acrylonitril Production and Acrylonitril from Acetylene
107-45	Synthetic Lubricating Oils.
108-45	Synthesis of Acetone
110-45	Wartime Research on Synthetic Fuels by the Kaiser Wilhelm Institut fur Kohlenforschung
111-45	Preparation of "Alkazid" M and DIK
115-45	The Arc Process for Acetylene Production
145-45	The Manufacture of Aviation Gasoline in Germany
146-45	The Manufacture and Application of Lubricants in Germany
147-45	Internal Combustion Engines (Use of a chemical as ignition agent)
187-45	German Diesel Fuels
217-45	The Production of Synthetic Fuels by the Hydrogenation of Solid and Liquid Carbonaceous Materials
234-45	Use of Graphite Oxide as a Fuel or Fuel Additive.

80003

Technical Report Number	Title
235-45	The Preparation of Tetrahydrofuran Polymers as a Synthetic Lubricant for Metals
248-45	The Synthesis of Hydrocarbons and Chemicals from CO and H_2
280-45	Synthetic Coatings for Gasoline Tanks
281-45	The Production of Monomeric Vinyl Acetate in Germany.
333-45	German Naval Fuel Oil.
388-45	Additive for Lubricating Oil.
556-45	Methane Cracking By Partial Combustion with Oxygen or Air in Germany
---45	Synthesis Gas Purification Processes in Germany

LIST OF GERMAN DOCUMENTS ON

SYNTHESIS GAS PURIFICATION PROCESSES

80902

1. Report dated Dec. 12, 1936 by Dr. Geister of I. G. Farbenindustrie entitled "Entstaubung" (Dust Removal)

2 Report by Dr. Sachsse entitled "Removal of Carbon Black and Dust from Gases with the Oppauer Schachtfilter."

3 M 202-8 - a simplified general flow-sheet showing the operation of the Alkazid Process.

4 Report by Drs. Jeltsch, Sommer and Bunger of visit made to the Alkazid Plant in Lutzkendorf, in regard to corrosion.

5 Confidential Reports (2) on the operating and supervision methods for the Alkazid process. entitled:

(a) "Betriebserfahrungen und Hinweise zum Alkazidverfahren"
(b) "Richtlinien für den Betrieb und die Überwachung von Alkazid-Waschanlagen".

6 M3200-I - Flowsheet - showing an NaOH wash following the Alkazid absorption.

7 Zo 1416-2 - Flowsheet showing Claus process of converting hydrogen sulfide to molten elementary sulfur.

8 F.Z.A.1 b - Flowsheet showing the Claus Ofen.

9 F.Z.A.4 a - Flowsheet showing the Nachverbrennungsofen.

10. "Clausofen Operation". translated data covering complete operation of the Leuna Plant.

11 S-92 - A drawing which shows a schematic diagram of the I. G. process of hydrogen sulfide removal over carbon.

12 Drawing No. 711496 - A flow sheet of a "Grob-and Feinreinigung" sulfur removal unit.

13 Drawing No. 4A34210 - Piping and Equipment arrangement of Claus plant

14 Several short reports from Sept. 30, 1942 to May 25, 1943 on the subject of dust removal in multi-cyclone units.

15 Reports by Herr Koinke dated Dec. 29, 1931 on "Verbrennen von H_2S zu Schwefel in Claus-Ofen" and by Dr. Hanisch dated Jan. 11, 1933 "Notiz über Versuche zur Gewinnung von elementarem Schwefel aus Gasen mit niedrigem Schwefelwasserstoffgehalt." Early data on the Claus process.

16. A report by Dr. Braus dated Jan. 21, 1935 on "Berechnung der Verbrennungstemperaturen von Schwefelwasserstoff - Kohlensäuregemischen" giving theoretical data on combustion temperature of H_2S mixtures

17 Tables of data dated Nov. 11, 1933 on requirements of Alkazid process for utilities, equipment, solutions, operating personnel, etc.

18 Analysis results and methods for gas purification catalysts 80903

19. Report by Dr. Bähr dated Oct. 2, 1936 on "Weiterentwicklung des Alkacid und Claus Ofen - Verfahrens," reporting late developments in the Alkazid and Claus processes.

20. Report by Dr. Orlicek, dated July 11, 1941 on "Untersuchungen über die Lage des chemischen Gleichgewichtes beim Clausprozess", on the calculated and experimental chemical equilibrium in the Claus process.

21. Drawings A-1030-4 and U 1878-1, flowsheets on carbon monoxide removal.

22. Folder containing numerous short reports and drawings on the Alkazid process.

23. Four curves on CO - CO_2 wash costs.

24 Drawing S IV 3, Flowsheet of a pressure water wash process.

25 Folder containing report and several drawings concerning the removal of carbon oxy sulfide (COS) from gases.

26 Report by Dr. Bartholomé dated Nov. 26, 1941 on "Über die Umsetzungsgeschwindigkeit des CO an Braunoxyd-Kontakt bei höheren Drucken" giving data on reaction velocity over "Brown oxide" catalyst for the shift reaction.

27. Patent announcement dated June 27, 1939 on a process for catalytic recovery of S from gases containing H_2S.

28. Report by Dr. Kubbler dated April 24, 1939 on "Entschwefelungs-Verfahren der Sachtleben A.G." covering data on a process reacting H_2S and SO_2 in thiosulfate solution to produce sulfur.

29. Report on a meeting to exchange information on gas purification processes, dated Nov. 17, 1939.

30. Drawing 240-8 on layout plan for a Claus unit.

31 Report by Dr. Mengdehl dated August 22, 1938 "Ein neues Verfahren zur Trennung von Ammoniak und Kohlensäure bezw. Schwefelwasserstoff" describing a new process for separation of NH_3 - CO_2 - H_2S mixtures

32 Patentschrift No. 388857 dated 21 January 1924 to Firma Eduard Theisen in Miinchen entitled "Stufen - Gas - O. dgl. Wascher" german patent on the Theisen washer for the purification of gases.

33 Patentschrift No. 513288 dated 25 November 1930 to Firma Eduard Theisen in Miinchen entitled "Verfahren zum Reinigen Von Gasen, Luft, Dämpfen u. dgl., german improvement patent on the design of the blades of the Theisen washer presented in the above patent No. 388857