

INDEX - MICROFILM REEL 178
(Original designation Navy 5868-3)

Part 10.

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- Drawings - high pressure equipment details - Leuna.
1. Heat exchanger - Drawing #M710-1. Braunkohle-Benzin (FA283-1). Scale drawing of parts and assembly connections noted on drawing (no date).
 2. Assembly of cylindrical evaporator. Drawing #M3525A-1. Ammoniakwerk, Merseburg, 11/28/1940. Scale drawing of parts including bolt and thread details (2 copies).

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3. Intake-pressure valve for pump. Drawing #M3565-1. Ammoniakwerk, Merseburg 10/14/1940. Scale drawing of parts.
4. High pressure contact chamber. Drawing #M4746-1, Ammoniakwerk, Merseburg 12/10/1941. Scale drawing of chamber, cover, and casing (2 copies).
5. Heat exchanger - for methanol and isobutanol. Drawing #M4941A-4 Ammoniakwerk, Merseburg, 4/17/39. Scale drawing of heat exchanger.
6. Preheater for air and fractionated gas (1600 atmos.). Drawing #M5479b-1, Ammoniakwerk, Merseburg, 4/22/43. Scale drawing with complete details of a preheater.
7. Heat exchanger (in methanol works). Drawing #M5612-1, Ammoniakwerk, Merseburg, 8/14/44. Scale drawing with complete details of a heat exchanger (2 copies).
8. (Title not readable) Drawing #M5661a-2, Ammoniakwerk, Merseburg, 2/10/39. Scale drawing showing flange and tube connection.
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10. Experiment hydroforming contract, converter (300 atmos. operating pressure). Drawing #M5793-4, Ammoniakwerk, Merseburg, 3/15/40. Scale drawing (2 copies).
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14. "D. H. D." casing. Drawing #M7545b-4, Ammoniakwerk, 8/27/41. Scale drawing of casing.
15. High pressure diaphragm valve. Drawing #M9823-2, Ammoniakwerk, 3/2/42. A scale drawing.
16. Contact chamber with coke filter. Drawing #M11649-2, Ammoniakwerk, 9/25/43. A scale drawing (2 copies).
17. High pressure - special valve for reduction station. Drawing #M12037-2, Ammoniakwerk, 1/24/44. A scale drawing (2 copies).
18. Assembly of high pressure stuffing box. Drawing #M2541-2, Ammoniakwerk, 6/22/36. A scale drawing.
19. Oil stuffing box with leather collar. Drawing #M10234-2, Ammoniakwerk, 7/9/42. A scale drawing.
20. Stuffing box body. Drawing #M10907-2, Ammoniakwerk, 9/30/43. A scale drawing.
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23. High pressure diaphragm valve (325 atmos). Drawing #M12056-2, Ammoniakwerk, 2/5/44. A scale drawing with details of each part.
24. Stuffing box with X2 packing. Drawing #M12806-2, Ammoniakwerk, 2/4/45.
25. Gas (CO) purification and analysis. Drawing #M(Sk28-345)-1, Ammoniakwerk, 3/28/45. A flow diagram.
26. Gas (CO) purification. Drawing #M(SK26245)-1. Tracing paper diagram for item #25.
27. Tube bundle for 500 atms. regenerator. Drawing #M12621-2, Ammoniakwerk, 8/28/35. A scale drawing.
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31. Cylinder and head for expansion engine. Drawing #M1567-1, Ammoniakwerk, 5/14/36. A scale detail drawing.

Part 11.

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RUHRCHEMIE.

- Part 1. Notes on the work conference of synthesis plants in Berlin on 13 Sept. 1940. 164 pages. Lectures by various technical people on aspects of synthesis including some tables. Dr. Feist.
- Part 2. Conference of 8 Nov. 1939. 16 pages. Coarse purification. Dr. Feist.
- Part 3. Industry conference on 14 July 1939. 15 pages. Catalyst questions, gas purification. Dr. Feist.
- Part 4. Industry conference of 5 May 1939. 13 pages. Contact catalyst assemblies gas purification, data on emptying contact ovens. Dr. Feist.
- Part 5. Report on: Division of annual yield of hydrocarbons in the gasoline synthesis for the establishment of the average monthly values. Dr. Schuff. 6 April, 1939. 5 pgs.
- Part 6. Industry conference on 3 March 1939. 9 pgs. Delivery of catalysts, experimental catalysts, catalyst quality, yield. Contact extraction, contact investigation problems, corrosion questions, mechanical process of the synthesis ovens. Dr. Feist.
- Part 7. Industry conference on 6 Jan. 1939. 16 pages. Report on burning of a storage tank, separation of mixed catalysts, new catalysts, comparison of mixed catalysts with Thorium catalyst contact. Dr. Feist.

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- Part 8. Industry conference on 4 Nov. 1938. 20 pages. Extraction of catalysts, cost questions. Dr. Feist.
- Part 9. Industry conference on 26 August 1938. 15 pages. Monthly yield graph. Comparison of mixed catalysts and Thorium contact. Average monthly yield. Physical characteristics of mixed catalysts. Emptying the ovens. Regeneration with oxygen or methods of extraction with Thorium and mixed catalysts. Catalytic requirement in Sept. 1938. Dr. Feist.
- Part 10. Industry conference on 8 July 1938. 6 pages. Catalysts, physical characteristics, reduction conditions, use in synthesis, regeneration, life cycle, emptying. Dr. Schuff. Conference on 17 June, 1938. 23 pages. Gas purification, synthetic production. Catalysts (Thorium-manganese). Dr. Feist.
- Part 11. Industry conference on 5 May 1938. 17 pages. Co-ThO₂-MgO Catalysts. Experimental catalysts with Co-Kgr - 1:1 ratio. General questions. Dr. Feist.
- Part 12. Industry conference on 25 March 1938. 12 pages. Delivery and quality of catalysts. Normal CoThO₂ catalysts. Co-ThO₂-MgO catalysts. Dr. Feist. The influence of cobalt, content and Keisel earth content on the effectiveness of gasoline synthesis catalysts. 12 pages. 2 graphs. Dr. Kolbel. Report on hydrogenation and its production value. 8 pages. correspondence. Basic concept:— catalysts and their characteristics. 2 pages.

Part 12.

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1. Report of the conference on lubricating material Part 2. - Ageing. Held in Berlin May 7-8, 1942. 269 pages. The report consists of 15 individual reports and a discussion. The reports deal mainly with ageing and testing of lubricating oils.
2. Property test of the synthetic lubricant code # SS 902-15Fr (final stage). Lubricant tested in aircraft diesel engine. June 205 D. Dr. Scheib, Dr. Rede, Date: 17 Mar. 1941. 10 pages text, 1 graph, 3 illustrations, 2 tables. Experimental report prepared under the auspices of Junkers - Aircraft and Motor Co.
3. "Lubricants technique" meeting of technical men on 29 June, 1943. Frictional problems. 23 pgs. text, 11 illustrations. Dr. Heidebroek, Dr. Kraft. Report made for VDI technical group.

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4. Report on "Lubricant technique" meeting of technical men on 29 Feb. 1944. Chemical lubrication of aircraft engines. The problem of stirring friction - 29 Feb. 1944. 32 pages including 9 pages illustrations. Dr. Heidebroek, Dr. Kraft. Report made for VDI technical group.
5. Photographs of various instruments - mainly testing of fuels. Testing synthetic lubricants in aircraft engines. Report #450, Dr. Lauer. 42 pages, including 24 tables. 27 Mar. 1941. Report #450 prepared under the auspices of Technical testing station Oppau.
6. A book issued by the German Institute for Air - 1940. 89 pages, containing articles by:-
 - 1- M. Pier - "Concerning aromatic fuels."
 - 2- W. Jost - "Auto-ignition of fuel-air mixtures by adiabatic compression and its knock behavior in the engine."
 - 3- H. List - Work of the Institute of Fuel Burning Machines of the Technical High School.
 - 4- E. Schmidt - Work of the Herman Goring Aircraft Engine Institute.
 - 5- G. Damkohler - Physical Chemical Problem of combustion happenings.
7. Knocking investigations on a one cylinder motor with special consideration of knock retarding (delay). 42 pgs. text, 35 illustrations, diagrams and graphs. Dr. A. Süss. Report prepared under the auspices of institute for chemical technology of technical schools. Mineral Oil Experimental Laboratory.

Part 13.

3507-4060

- (1) "The shape of contact chambers in catalytic exothermic and endothermic reactions," by Dr. Wirth. April, 1942. Leuna. (14 pages). A report on the most efficient design of catalytic chambers (Fischer-Tropsch Synthesis) from the view point of heat transfer.
- (2) "The calculation and evaluation of chambers for catalytic exothermic and endothermic reactions which occur within a narrow temperature range," by Dr. Wirth. July 4, 1942. Leuna (20 pages - 2 copies). The report concerns an evaluation of different methods of heat transfer arrangements. Besides a mathematical discussion, photographs of the different arrangements are included.

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- (3) Investigation:- "The stability of various working material against carbon-monoxide corrosion," - Wyszoniński and van Rossum - July 30, 1943, Ammoniakwerk, Merseburg (8 pages).
A report on investigation of substitutes for manganese-copper alloy used in methanol synthesis equipment. Tables and graphs illustrate corrosion effect. The materials tested are listed only by Code number.
- (4) "Report concerning the session of the work society for Knock measurement," Technical testing place at Oppau, No. 161, July 15, 1941, deals chiefly with octane measurement and knock measurements. 39 pages with charts.
- (5) "Experiments on the preparation of triptane and several other isoparaffins." Bueren, high pressure test 558, 30 Oct. 1940 9 pages with reactions.
- (6) "Comparison investigations on I. G. test Diesels," Köhler, technical testing place Op200, report No. 381, May 15, 1939, tests on I. G. test Diesels and other motors, 10 pages with charts.
- (7) "Overload capability of isoctane and aromatics," Pier, high pressure investigation Lu 558, Nov. 15, 1941. The difference in motor behavior between paraffin and aromatic high test fuel, 8 pages with charts.
- (8) "Fuel injection," German automotive research, technical research reports, performance of different compressions of fuels, 1938-1944.
- (9) "Investigations of knocking combustion," Heinz Rogener, investigations of spontaneous combustion in the gas phase. 33 pages with charts.
- (10) "Fuel test of the over-load process in BMW one cylinder motor," H. Schökel, INTAVA work society of Hamburg, Sept. 13, 1941, report No. K.199, testing of aircraft fuel WL814 in BMW over-load motor, 3 pages with charts.
- (11) Brochure giving history and development of the Leuna Werke in non-technical language. Mostly descriptive in nature. 18 pgs.
- (12) Preliminary cost report for Schwarzzeide for May, 1944. Dated: 10 July, 1944. Gives production figures for gasolines, oils, etc. Dr. Kollmar. 5 pages.

- (13) Preliminary cost report for Schwarzmeide for April, 1944. Gives production figures for gasoline, bills, etc. Dr. Kollmar. 8 pages, 1 graph.
- (14) Preliminary cost report for Schwarzmeide for December 1943. Gives production figures for gasoline, oils, etc. Dr. Kollmar. 6 pages, 1 graph.
- (15) Report on production of Bohlen Magdeburg, Zeitz, Schwarzheide Werke, from Jan - March 1943. 26 June, 1943: Production of gasolines, gases and oils, with master cost data.
- (16) Production reports on Schwarzheide, Bohlen, Magdeburg, Zeitz, from Oct. - Dec. 1943, and Jan - Dec. 1943. Production of gasoline, gases, and oils, etc., with master cost and data.
- (17) Production report on Schwarzheide, Bohlen, Magdeburg, Zeitz. July - September 1943. Production and cost data on gasoline gases, and oils, etc.
- (18) Construction and yield of Bohlen Werk gives cost, figures and production of gasolines, oils, etc. 28 June, 1941. 25 pages, including tables and graphs. Dr. Kollmar.