INDEX - T.O.M. REEL 301
(Original Designation FIAT Reel R-23)
PB L74873
Documents taken from I.G. Farbenindustrie A. G.

Frames	
617	agnesium phosphate catalyst. Short report by Dr. chutze, dated Jan. 12, 1942, Oppau.
618-621	Conference of April 19, 1943, with representatives from I.G. and Ruhrchemie, to discuss the question of the replacement of cobalt by iron. Conference report dated April 19, 1943.
622	The question of cobalt replacement in the hydrocarbon synthesis. Report signed by Michael, dated Jan. 3, 1941
623-627	Investigation of the use of 700 or 300 atm. in the gas phase. Incomplete report dated April 16, 1941, Hochdruckversuche Lu 558.

Frames	
628-647	The calorific efficiency of bituminous coal hydrogenation. Report by Wilde and Schappert, dated Feb. 20, 1942, I.G. Farbenindustrie. (Tables and graphs included with report.)
648-650	The calorific efficiency of bituminous coal hydrogenation. Short report signed by Schappert, dated Oct. 17, 1942. (Table included with report.)
651-655	The calorific efficiency of bituminous coal hydrogenation in the production of gasoline and fuel oil. Report signed by Schappert, dated March 7, 1942. (Three tables included with report.)
656-668	The development of the I.G. research motor. Techn. Prufstand Op. 200, Rept. No. 362, report by Penzig, dated Oct. 21, 1938, Oppau. (Two of the eleven pages of photos and diagrs. are missing.)
669-685	Investigation of the course of combustion in the Hesselman motor by means of an I.G. piezo-quartz-cathode ray indicator. Techn. Prüfstand Op. 200, Rept. No. 370, author's signature illegible, dated Feb. 2, 1939, Oppau. (Eleven pages of graphs and tables included with report.)
686-700	Investigation with Ruhrchemie Diesel oil. Techn. Prüfstand Op. 200, Rept. No. 376, signed by Köhler, dated May 31, 1939, Oppau. (One table and six pages of graphs included with report.)
701-720	The measurement of the heat of polymerization of gasol. Techn. Prüfstand Op. 200, Rept. No. 384, signed by Kling, dated May 22, 1939, Oppau. (Five tables, two graphs and two diagrs. included with report.)
721-739	Comparative investigation in knocking motors (V. V. 65). Techn. Prüfstand Op. 200, Rept. No. 387, signed by Singer, dated May 12, 1939, Oppau. (Eight graphs and six tables included in report.)
740-781	The Otto-Diesel motor. Techn. Prüfstand Op. 200, Rept. No. 394, signed by Penzig, dated Aug. 15, 1939, Oppau. (One table and fifteen graphs included with report.)
782-785	The ignition behavior of fuels and lubricants. Techn. Prüfstand Op. 200, Rept. No. 405, signed by Singer, dated Nov. 15, 1939, Oppau. (One table and one graph included with report.)

Frames	
786-793	The ignitability of gasoline. Techn. Prüfstand Op. 200, Rept. No. 406, signed by Köhler, dated Dec. 1, 1939, Oppau. (Three pages of graphs and one page of photos. included with report.)
794-811	The packing and manner of flow of cubic and cylindrical catalysts. Techn. Prüfstand Op. 471, Rept. No. 411, signed by Kling, dated Nov. 25, 1940, Oppau. (Two tables, one diagr. and six pages of graphs and photos included with report.)
812-818	Report on trial runs using gasoline as Diesel fuel. Techn. Prüfstand Op. 471, Rept. No. 444, signed by Köhler, dated Dec. 9, 1940, Oppau. (Two pages of graphs included with report.)
819-825	The knock behavior and knock value data of fuels. Techn. Prüfstand Op., Rept. No. 446, signed by Singer, dated Feb. 3, 1941, Oppau. (One page of graphs included with report.)
826-836	The investigation of nozzles with the mass stroboscope. Techn. Prüfstand Op., Rept. No. 447, signed by Köhler, dated March 10, 1941. (One diagr., two pages of photos. and three pages of graphs included with report.)
837-847	The determination of the severity of knocking. Techn. Prüfstand Op., Rept. No. 449, signed by Schuch, dated Feb. 27, 1941. (Nineteen literature references, one photo. and two diagrs. included with report.)
848-857	Report on the fuels used and degree of accuracy obtainable in octane number determination. Techn. Prüfstand Op., Rept. No. 464, signed by Singer, dated June 23, 1941. (Two tables included in report.)
858-874	Passage of heat and temperature distribution in a catalyst tube of 250 mm ø. Techn. Prüfstand Op., Rept. No. 488, signed by Kling, dated Jan. 29, 1942. (One table, one diagr. and eight pages of graphs included with report.)
875-913	Reports of the Techn. Prüfstand Oppau, No. 3, 1943, at the fifth session of the Association for Knock Measurement, meeting Feb. 16 and 17, 1943, in Oppau. The following reports are included:

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1. Introduction. By Dr. W. Wilke (1 p.)
2. Report on the completed comparison tests conducted by the Association for Knock Measurement. By E. Singer. (6 pp.)
3. Observations in the investigation of synthesis gasoline. By Dr. W. Dannefelser. (8 pp.)
4. Experiments on the octane number determination of liquid gases. By F. Ruess. (5 pp.)
5. The influence of operation conditions on the knock behavior of fuels. By E. Singer. (4 pp.)
6. Prüfstand investigation of the applicability of the research and motor octane number in practical operation. By H. Unverhau. (5 pp.)
7. Motor or research methods for fuels? By H. Waldmann. (2 pp.)
8. Introduction of tetra-ethyl lead solutions to gasolines in the laboratory. By F. Ruess. (3 pp.)
9. Results of the fifth session on knock measurement. (1 p.)

914-997 Reports of the Techn. Prüfstand Oppau, No. 2, 1943, at the sixth session on heat, meeting May 18 and 19, 1942, in Oppau. The following reports are included:

1. Introduction. By Dr. Wilke (1 p.)
2. Report on the progress of the work in the field of heat. By Georg Kling. (5 pp.)
3. Calculations of heat exchangers. By Werner Matz. (4 pp.)
4. Diagrams for wall reflection in heated containers. By Rudolf Keinke. (6 pp.)
5. Investigation of high pressure ribbed tubes. By Georg Kling. (7 pp.)
6. Kipp phenomena in a steam blast aggregate with 0.1 mm, Hg end vacuum. By Alfred Haltmeier. (3 pp.)
7. Report on the heating surface construction according to Kautz. By Kurt Kautz. (7 pp.)
8. New corrosion-resistant vessel construction with good heat passage. By Karl Frank. (5 pp.)
9. Procedure technique in the range of the critical pressure and requisite thermodynamic data. By Franz Patat. (2 pp.)
10. Investigation of the heat conduction of cables. By Georg Kling. (7 pp.)
11. Light ash gypsum bricks as heat insulating construction material for walls. By Fritz Graf. (3 pp.)

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12. Explosion limits and ranges of combustible liquids and their dangers. By Fritz Nauck. (9 pp.
13. More recent statements on the further development of basic conceptions in pure thermodynamics. By Emil Hegelmann. (10 pp.)
14. Statistical calculation of calorific data of ideal gases--dependence of these data on the actual state of gases--thermodynamics of gas mixtures. By E. Justi. (15 pp.)
15. Experiments on the determination of the viscosity of steam. By Helmuth Speyerer. (7 pp.)

998-1052 Reports of the Techn. Prüfstand Oppau, No. 1, June 18, 1942. The following reports are included:

1. Foreword. (1 p.)
2. The development of the Technische Prüfstand Oppau. By Franz Jantsch. (3 pp.)
3. Work of the heat technology group in the Technische Prüfstand. By Georg Kling. (6 pp.)
4. The nature and use of light ash. By Walter Schenker. (4 pp.)
5. The development of the knock value determination of light fuels. By Eugen Singer. (4 pp.)
6. Testing of Diesel fuels. By Ludwig Köhler. (2 pp.)
7. Starting aid for Diesel motors in case of cold. By Heinz Leib. (3 pp.)
8. The Hesselman motor and its fuels. By Walter Witschakowski. (4 pp.)
9. Experiments with automotive engines. By Ludwig Köhler. (3 pp.)
10. Motor lubricant testing. By Walter Lauer. (3 pp.)
11. Friction and wear and tear in lubrication. By Rudolf Halder. (3 pp.)
12. I.G. -- test motor. By Fritz Penzig. (5 pp.)
13. Overload experiments and Prüfstand arrangements for it. By W. Witschakowski. (4 pp.)
14. Electrical measurements in the Technische Prüfstand Oppau. By Erich Schuch. (4 pp.)
15. Optical index of refraction and dispersion as analytical aids in the investigation of gasolines and Diesel oils. By Rudolf Roth. (4 pp.)
16. Evaluation of the combustion equation. By Fritz Penzig. (4 pp.)
17. List of publications and authors from the Technische Prüfstand Oppau.

Frames

1053-1059 Report on the Freudenberg process for working up sulfite spent liquor. Report by Dr. Schuster, dated Oct. 8, 1941.

1060-1086 Report on piston pressure measurement apparatus--its development and use. Report from Betriebskontrolle Oppau, Rept. No. 443, signed by Gmelin and Frank, dated Aug. 20, 1942. (One table, one page of graphs and six pages of diagrs. and photos included with report.)

1087-1101 Report on compounds with C:C double bonds and olefinic character. Report signed by Tanneberger, dated Nov. 28, 1938.

1102-1116 Report on inorganic tanning agents, particularly those made by I.G. Ludwigshafen. Report by Dr. Hühn, dated March 2, 1938.

1117 Note of transmittal concerning the report by Dr. von Nagel entitled "Laboratory experiments on the purification and concentration of waste sulfuric acid." Note signed by Johannson, dated May 11, 1943.

1118-1126 Laboratory experiments on the purification and concentration of waste sulfuric acid. Signed by Dr. v. Nagel, dated April 28, 1943, I.G. Farbenindustrie A.G. (One diagr. included with report.)

1127-1145 The alkylation of iso-pentane and propylene in the presence of concentrated sulfuric acid. Report of work carried out in Laboratory No. 907 (Hydrogenation) between Mar.-June 1940. Report is signed by Pohl. (Five pages of graphs included with report.)

The following documents are connected with high pressure dehydrogenation at I.G. Farbenindustrie A.G., Ludwigshafen.

1146-1150 Concentrated feed and fodder conserves from hydrocarbon oxidation products. Patent suggestion signed by Pfirrmann and dated Aug. 18, 1944.

1151 Note of transmittal concerning a report on the production of synthetic fats. Note is dated Dec. 22, 1944.

1152-1164 The production of synthetic fats, their properties and their behavior physiologically, especially with regard to feeding diabetics. Report signed by G. Wietzel, dated Dec. 14, 1944, Ammoniak-Laboratorium, Oppau.

Frames	
1165-1167	Methane as aviation fuel. Report is dated March 14, 1945 and signed by Hinhau (?).
1168-1171	Fodder from hydrocarbon oxidation products. Patent specification signed by Pfirrmann, dated Aug. 18, 1944.
1172-1179	Synthetic fodder. Report signed by Pfirrmann, dated Feb. 28, 1944.
1180-1185	Anti-knock properties of aviation fuels. Report signed by Dehn, dated Oct. 18, 1942. (Three pages of graphs included with report.)
1186-1187	Production and use of alkyl benzene. Report dated Oct. 17, 1942.
1188-1210	Directions for the operation and supervision of the alk-acid washing plant. (Three sample data sheets and three diagrs. included with report.)
1211-1225	600 atm. aromatization of bituminous coal liquefaction middle oil as a preliminary stage in the production of DHD high capacity fuels. Report signed by Günther, dated Dec. 9, 1943. (Two tables, two diagrs. and three pages of curves included with report.)
1226-1236	Aromatization of middle oil from the bituminous coal liquefaction. Incomplete report is dated April 10, 1941.
1237-1244	Gas solubility at 700 atm. (Sump-phase-bituminous coal.) Report signed by Donath and Simon, dated March 11, 1942. (Two tables and five graphs included with report.)
1245-1248	Development of the sump-phase since 1933. Report signed by Rank, dated Oct. 23, 1942. (Two tables included in report.)
1249-1250	Operation control scheme for a coal chamber. Note from Gelsenkirchen to Schappert, dated Nov. 20, 1941, accompanied by diagram.
1251-1295	Report of work done on the dehydrogenation of paraffins, particularly i - C_4H_{10}, with the aim to prepare high anti-knock fuels from butane obtained in coal hydrogenation. Report brings up to date the work done in Leuna between 1936-1940 but is incomplete due to the absence of all of the curves and two (Tables 7 and 8) of the twenty-six tables referred to in the report. No author given.

Frames	
1296-1304	Cracking, hydrogenating and treating with water-gas in the presence of cobalt catalysts ("oxonating") of olefin polymers. Report signed by Bueren and Free, dated Nov. 28, 1940. (Four tables included with report.)
1305-1309	Dehydrating polymerization of alcohols or alcohol-olefin mixtures. Report signed by Bueren, dated Oct. 6, 1941. (One table included with report.)
1310-1313	Condensation of ethylene oxide with compounds which contain active hydrogen atoms. Report signed by Bueren, dated Dec. 19, 1941.
1314-1329	The process for the production of anti-knock hydrocarbons (by polymerization). Address by Dr. Bueren at a colloquium held in Ludwigshafen, Nov. 7, 1941.
1330-1334	Condensation of ketones by means of weakly basic catalysts and the reduction of keto-alcohols to hydrocarbons. Report signed by Bueren, dated Oct. 4, 1941. (One table included with report.)
1335-1343	Report on the state of the alkazid process. Report signed by Bähr, dated March 1935, Leuna Werke. (One graph and two diagrs. included.)
1344-1351	New experiments on the aromatization of heavy gasoline over silicate and alumina catalysts in the absence of pressure. Report signed by Free, dated Aug. 18, 1944. (Three tables included with report.)
1352-1366	Highly condensed aromatics and their relation to the hydrogenation asphalts. Report signed by Boente, dated Nov. 22, 1944.
1367-1379	Conference on the carbon monoxide-hydrogen synthesis. Report of conference held in Berlin, July 1, 1941, signed by Peters. (One table included with report.)
1380-1381	The propane process. (Use of propane as refining agent for petroleum distillates and residues.) Report signed by Eisenhut, dated Oct. 19, 1942.
1382-1389	Lubricant factory at Lützkendorf. Report from Wintershall A.G. to I.G. Farben, dated Oct. 23, 1941. (Two diagrs. included with report.)

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1390-1400	The hydrogenation of aromatic hydrocarbons. Report signed by Henkels, dated June 17, 1940.
1401-1404	The production of propylene lubricating oils. Report signed by Christmann, dated Jan. 19. 1942. (Table referred to is missing.)
1405-1408	Comparison of various sump-phase systems with respect to heat requirements and temperature progress. Report signed by von Hartmann, dated May 22. 1942. (Two curves included with report.)
1409-1413	The chemical constitution of the asphalts of the bituminous coal hydrogenation. (Report at the colloquium on asphalts held on Oct. 13, 1942.) Report signed by Boente, dated Oct. 13, 1942.
1414-1425	The question of the production of special Diesel oils with low solidifying point and high octane number. Report signed by Peters and Günther, dated April 7, 1943. (Four tables and two graphs included with report.)
1426-1436	Production of altitude fuel from 5058/6434 gasoline--190°C, from Scholven, according to the DHD process. Experiments in a 1,000 ccm. oven for Ka. 504. Report signed by Nonnenmacher, dated Aug. 28, 1942. (Three tables and two graphs included with report.)
1437-1466	Phenol extraction plant, Lützkendorf. Operation periods I-V. Report dated Jan. 4, 1942. (Tables 1-18 and 20 included with report.)
1467-1479	Activity report, January to February 1944. (Small gas phase oven). Report signed by Peters, Trofimow, Günther, Meade and Grassl, dated Feb. 29, 1944.
1480-1495	Distillation of hydrogenation residue. Report signed by Hupfer and Leonhardt, dated May 22, 1944. (Five tables included with report.)
1496-1570	Large scale fuel oil research. Chamber 804. July 15, 1941-Sept. 21, 1941. Report signed by Löcker, Rank and Simon, dated Aug. 4, 1943. (Graphs, photos, diagrs. and large number of tables, including thirty-five at end of report, attached.)

Frames	
1571-1576	Diesel oil production in bituminous coal hydrogenation plant. Report signed by Oettinger, dated June 5. 1941. (Two tables included with report.)
1577-1595	Autoclave research for the hydrogenation splitting of paraffins with tungsten sulfide. Report signed by Reitz, dated Sept. 15, 1943. (Four tables and five graphs included with report.)
1596-1604	Testing of laboratory-prepared DHD catalysts in a 1 liter oven. Report signed by Reitz, dated Nov. 4, 1942. (Three tables and one graph included with report.)
1605-1610	De-ashing by moderate hydrogenation. Report signed by Rank and von Hartmann, dated Oct. 17, 1942. (Two tables and one page of graphs included with report.)
1611-1615	Extracting hydrogenation in a 10 liter oven. Report signed by von Hartmann, dated Sept. 18, 1942. (One table and two graphs included with report.)
1616-1619	Catalytic cracking in high pressure or DHD chambers. Report signed by Donath and Free, dated Dec. 3, 1944. (Two diagrs. included with report.)
1620-1623	Catalytic cracking in Moosbierbaum. Report signed by Free, dated Jan. 18, 1943.
1624-1640	Cracking of gasoline and gasol under H_2 pressure. Report signed by Nonnenmacher, dated April 2, 1941. (Nine pages of tables and three pages of graphs included with report.)
1641-1646	The catalytic cracking of middle oils over various catalysts at normal pressure and at pressures of 45 atm. in a H_2 atmosphere. Report signed by Free, dated July 31, 1941. (Three tables included with report.)