

T.O.M. 155

INDEX MICROFILM REEL 155,
(Original Designation C-15)

SPECIAL NOTE FOR REEL 155

THIS FILM WAS DAMAGED AND GREATLY OVERDEVELOPED DURING PROCESSING IN THE LABORATORY. SINCE THE SUBJECT MATTER HAS ALL BEEN RETURNED FROM THE JIOA GRIESHEIM DOCUMENT CENTER TO LONDON, IT HAS NOT BEEN POSSIBLE TO RE-SHOOT THE DOCUMENTS. HOWEVER, THE FILM HAS BEEN CHEMICALLY TREATED, AND AT LEAST 90% OF THE DOCUMENTS ARE NOW LEGIBLE. ALSO, THE START, INDEX AND END HAVE BEEN RE-SHOT AND SPLICED IN.

General Subject

Miscellaneous Collection of Documents Dealing
Mainly with the OXO Process and Plastics

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Date: 26 December 1945

INDEXFRAME NOS.

In the following index, German subtitles are often not possible. The matter comprises a miscellaneous collection of papers dealing with various aspects and problems of the OXO Process; also miscellaneous chemicals.

1. On distillation, with particular reference to new plant projects. Reports of conferences and correspondence with cost estimates, photos of plant items; drawings and graphs referring to distillation and plant matters. May 12, 1944. 1 - 45
2. Documents on:
 - a. The supply of heavy oil.
 - b. o- and p-benzyl chloride mixtures.
 - c. Separation of C11, C12 from C13, C14.
 - d. Hydrocarbon vapour pressure. December 11, 1943. 46 - 49
3. Aktennotiz. OXO-Verfahren.

Minutes. OXO Process. September 23, 1941.

Im Programm der Besprechung:

On the agenda of the consultation:

 - a. Analytische Probleme.

Analytical problems.
 - b. Filterung.

Filtering.
 - c. Gaswirtschaft und Restgasentspannung.

The handling of gas, the release of waste gases.
 - d. Abführung der Reaktionswärme.

Evaluation of reaction temperature. 50 - 52
4. Viscositätsverhalten von Oxo Alkoholen.

On the viscosity of Oxo alcohols. With 13 tables and 1 graph. May 23, 1944. 53 - 68
5. Aktennotiz. Synthese- u. Filterfragen.

Record of a consultation on synthesis and catalyst filtering problems. February 3, 1942. 69 - 72
6. An interchange of ideas with Leuna on the matter of the cooling of the reaction tubes in the OXO synthesis. February 12, 1942. 73 - 76
7. Btr. Synthese Karbonylauswaschung. Die Herstellung von Fettalkoholen. Monatsbericht Juni 1943.

The rectification of carbonyl. The production of higher aliphatic alcohols. Nov. 7, 1942. Monthly report Oberhausen-Holteln, June 1943. 77 - 82

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8. Molekulargewichtsbestimmung nach Beckmann. Gefrierpunktserniedrigung.
Molecular weight determination by the Beckmann method. Lowering of freezing point. 83 - 85
9. Herstellung v. Olefinen durch Dehydratation v. Fettalkoholen.
Production of olefines by dehydration of higher aliphatic alcohols. Aug. 2, 1944. 86 - 91
10. Betr.: Feinfraktionierung v. o- u. p-Chlortoluol.
Concerning the precision-fractionation of o- and p-chlorotoluene. April 26, 1944. 92 - 96
11. Dicköl-Untersuchung.
Investigation of heavy oils. March 15, 1944. 97 - 99
12. " Über eine Methods zur Bestimmung des Mol.-Gewichtes von Oxo-Alkoholen.
A method for determining the molecular weights of Oxo alcohols. Feb. 5, 1944. 100 - 103
13. Weiterverarbeitung v. Oxo-Produkten/Synthese höhermolekularer Ketone, sekundärer Alkohols u. dergl.
Further work on Oxo products/Synthesis of higher molecular weight ketones, secondary alcohols, etc. Feb. 3, 1944. 104 - 106
14. Bericht über die bisherigen Versuche zur Isolierung v. Olefinen aus Primärprodukten.
Report on experiments to date to isolate olefins out of primary products. Dec. 23, 1943. 107 - 109
15. " Über die Synthese von ungesättigten Fettsäuren.
The synthesis of unsaturated fatty acids (with explanatory chart). Nov. 30, 1943. 110 - 112
16. " Über die Isolierung und Reindarstellung höhermolekularer Olefinen aus Primärprodukten.
The isolation and purification of the higher molecular weight olefins from primary products. Nov. 9, 1943. 113 - 114
17. Vortrag von Geh.Rat Fischer im KWI am 16.4.1943.
Überblick über die Synthesen aus Kohlenoxyd u. Wasserstoff.
Lecture by Geh.Rat Fischer to KWI on 16.4.1943.
Survey of the synthesis from carbon monoxide and hydrogen. 115 - 116

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18. Bericht über den Betrieb der Butylöl-Destillier-Kolonne Oppau.
Report on the working of the butyl oil distilling column at Oppau. (With two charts). March 22, 1944. 117 - 124
19. Vorkalkulation der Gesteungskosten der Oxo-Anlage in Oberhausen-Holten zur Herstellung v. 15000 Jato Fettalkoholen.
Estimated production costs of Oberhausen-Holten for a yearly output of 15000 tons per year of higher alcohols. Feb. 26, 1943. 125 - 131
20. Herrn Dr. Landgraf. Betr. Monatsbericht Januar 1944. To Dr. Landgraf. Concerning the Monthly Report, January, 1944. 132 - 133
21. Über Alkohole und Fettsäuren der Ruhrchemie.
Alcohols and fatty acids of Ruhrchemie (with tabular analysis of characteristics in synthetic washing media). March 16, 1940. 134 - 144
22. Analysen-Protokoll (Vordestillation). Rohprodukt für Oxo-Synthese.
Records of primary distillation analyses. Raw material for the Oxo-Synthesis. 145 - 152
23. Ergebnisse der Fraktionierung des C₁₆ Alkohols.
Results of the fractioning of C₁₆ alcohols. (With tables analysing qualities as a washing-medium). 153 - 162
24. Ermittlung der olefinschen Bestandteile u. deren Zusammensetzung in Paraffin-Olefin-Gemisch d. Ruhrchemie.
Determination of the olefin components and their composition in the paraffin-olefin mixture of Ruhrchemie. Jan. 4, 1941. 163 - 171
25. Graphs of boiling points for first distillations, and estimates for the cost of equipment for first distillations from the firm of Bamag-Méguin, A.G. 172 - 200
26. Bestimmung der theor. Bodenzahl der 8 m-Kolonne des F.L. Brechungsindex v. o- u. p-Chlortoluol. Nachtrag z. Schreiben v. 16.5.44.
Theor. plates of the 8 meter column of the F.L. May 31, 1944. Refractive index of o- and p-chlorotoluene. (Addendum to a letter of the 16.5.44.) 201 - 214

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27. Siederverhalten von Primäröl, 179 - 250°, bei verschiedenen Ausführungen der Destillation. Vergleich zwischen Frymring-Siedeanalyse u. Feinfraktionierung von Primärprodukt.
The behaviour of primary oil at boiling point, 179 - 250°, with the distillation carried out in different ways. Aug. 10, 1944. Comparison between the Frymring boiling-point analysis, and the precision-fractioning of the primary product. 215 - 223
28. Figures and tables of various first distillations at the Oxo plant. April 18, 1940. 224 - 238
29. Monatsbericht März/April 1944.
Monthly report March/April, 1944. 239
30. Niederschrift über die Besprechung mit Prof. Martin am 8.11.40.
Record of the consultation with Prof. Martin on the 8.11.40. (About raw materials for distillation). Nov. 9, 1940. 240 - 241
31. Physikalische Konstanten von niedrigmolekularen Paraffinen, Olefinen und Aldehyden.
Physical constants of paraffins, olefins, and aldehydes of low molecular weight. Nov. 20, 1943. 242 - 244
32. Betr.: Wasseraufbereitung. Berechnung der Harte des Betriebswassers nach Ersatz der Abschlämmung und des Verdampfungsverlustes.
Concerning the preparation of boiler water. Working out the hardness of the water used in the plant after allowing for losses from boiler blow-off, etc. April 8, 1944. 245 - 249
33. Miscellaneous rough technical scribblings, sketches and graphs. On such matters as cooling areas in synthesis tubes, and filter surface and its relationship to various amounts of contact, etc. Feb. 1942. 250 - 267
34. The complete minutes of eight meetings of the board of the Oxo-Company. These minutes are in reversed chronological order. They date from the founding of the company on the 20 Nov. 1940, and carry on up to the 5 March 1943. The names of those present at each meeting are included. Naturally, these documents cover the entire field of the activities of the Company, and range from financial matters to problems of plant and production. The problem of labour deficiency is also brought up, particularly at the last meeting. 268 - 357

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35. Versuche zur Konsentrierung von "Athylen und Acetylen.
Acetylenkonsentrierung.
Experiments in concentrating ethylene and acetylene. The concentrating of acetylene. Oct. 11, 1943. 358 - 372
36. Concerning problems of the piping of acetylene. Oct. 14, 1942. 373 - 380
37. Further material on the matter of the concentration of gases - particularly acetylene - and the scrubbing thereof. Material on an increased accident rate is significantly included. 381 - 465
38. "Schonherrofen."
Details of the Schonherr Furnance - presumably for prospective purchase. May 2, 1940. 466 - 469
39. Bericht "über Entwicklung der Chemischen Werke Hüls G.m.b.H. im II. Vierteljahr 1943."
Report on the development of the Chem. Works Hüls Ltd.
- a. Einleitung.
Introduction; mostly concerning the bomb damage suffered by the firm.
 - b. Entwicklung der Fabrikation.
The development of the manufacturing side.
 - c. Stand u. Ausbau des Werkes.
State and development of the Works.
 - d. Energieversorgung.
The power supply.
 - e. Betriebs- u. Baubelegschaft.
The personnel absenteeism brought about by the large number of the bombed-out.
 - f. Soziales.
Social welfare.
 - g. Prozesse, Rechts-, Vertrags- und Steuerfragen.
Court cases, legal-, contract-, and tax questions.
 - h. Kaufmännisches und Finanzierung.
Commercial and financial; chiefly about profits and costs.
 - i. Werksversicherung.
" Insurance and minor local services, etc.
 - j. Arztliche Betreuung.
Medical care.
 - k. Verschiedenes.
Miscellaneous; chiefly on how well the firm had done for the party.
- 470 - 484

40. Monatsbericht November 1942. Fahrweise.
 Monthly reports on manufacturing procedure.
 November 1942.
 Monatsbericht November 1942. Aldol - Fabrik.
 Monthly reports of the aldol factory. Nov. 1942.
 Monatsbericht der Aldolhydrierung. November 1942.
 Monthly reports on the hydrogenation of aldol.
 Nov. 1942.
 Bilanz der Aldolhydrierung November 1942.
 Balance sheet on the hydrogenation of aldol.
 Nov. 1942.
 Monatsbilanz Oktober 1942. Gesamtausbeute der Aldol
 Butolstufe.
 Monthly balance sheet of the total yield of the
 aldol butylene glycol phase. October 1942.
 The period March 1937 up to and including June
 1940 is covered by correspondence on production
 details, sources and supply of raw materials, etc. 485 - 713
41. Apart from the first three items in the file, the main
 contents are a continuation of the various types of
 reports on the hydrogenation of aldol, covering the
 period from December 1942, and on up to October 1943.
 The dates in each case are included and need not be
 repeated. The first three items are:
 "Wasserstoff-Nachschaltverdichter für 700 atü,
 Hydrogen valve-closing device for 700 atms.
 (It seems that the original was destroyed in
 a bomb attack, and no replacement had so far
 arrived. This reduced output to trifling
 proportions).
 Lieferung von Hydrierkontakten an die Bunawerke.
 Delivery of hydrogenation catalysts.
 Die Hydrierung des Reinaldols bei 700 atü.
 The hydrogenation of pure aldol at 700 atms.
 The whole file is, of course, in reverse-chronological
 order. 714 - 781
42. Dr. P. Baumann, Marl, den 12. Mai 1943: Gross-
 technische Destillation im Haus der Technik.
 Lecture given by Dr. P. Baumann on "Large-scale
 Distillation" on May 12, 1943. 782 - 807 -
- 42a. Betriebsvorschrift für Nekal BX trocken Emulgator
 1000 Pulver.
 Directions for the manufacture of "Nekal BX, dry"
 Emulsifier 1000 powder.
 Ausgangsmaterialien, %/100 kg Ausbeute:
 Raw materials, % per 100 kilograms yield:
 28,6% Butanol rein, wasserfrei.
 28.6% pure, anhydrous butanol.

- 42a. 24,7% Naphtalin.
 24,7% naphthalene.
 51,7% 98-proz. Schwefelsäure.
 51,7% sulphuric acid (98%).
 72,9% 24-proz. Oleum.
 72,9% fuming sulphuric acid (24%).
 0,1% Sulfosaure D.
 0,1% sulpho acid D.
 74,3% 34,5-proz. Natronlauge.
 74,3% caustic soda solution (34.5%).
 10,0% Natriumhypochloritlösung.
 10,0% sodium hypochlorite solution.
 2,9% Kochsalz.
 2,9% sodium chloride.
 0,7% Kalksteinmehl.
 0,7% powdered limestone.
 0,3% Maschinenöl.
 0,3% lubricating oil. 808 - 812
- 42b. Patentanspruch. Verfahren und Vorrichtung zur kontinuierlichen Sulfonierung und bzw. oder Neutralisation. Sulfonierung von Fettalkoholen. Verfahren zur Herstellung von Sulfonierungserzeugnissen aus höhermolekularen Alkoholen. Patentanspruch. Verfahren zur Herstellung von Sulfonierungserzeugnissen aus höhermolekularen Alkoholen.
 Patent application. Process and equipment for continuous sulphonating and/or neutralization. Sulphonating of fatty alcohols. Process for the manufacture of the products of sulphonation from alcohols of higher molecular weight.
 Patent application. Process for the manufacture of the products of sulphonation from the alcohols of higher molecular weight. 813 - 824
- 42c. Patentanspruch. Verfahren zur katalytischen Hydrierung aliphatischer Aldehyde oder Aldole.
 Patent application. Process for the catalytic hydrogenation of aliphatic aldehydes or aldols. 825 - 830
43. Über die Verwertung der 1,4-Butandioldestillationsrückstände der B III-Anlage. Bericht.
 On the utilization of 1,4-butandiol distillation residues at the B III Plant. A report. Nov. 30, 1944. 831 - 838

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44. Referat zur 26. Kulo-Sitzung. 12-13.2.1943.
Über den heutigen Stand des Verbundglases mit Mowitalen. Ueber den gegenwärtigen Stand auf dem Vinylester-Gebiet.
Survey of the 26th Kulo board meeting. Feb. 12-13, 1943. On the position to date of safety glass, with adhesives. On the position to date of the vinyl esters. 839 - 848
45. Aceton-Essigsäure-Abteilung. Propionylchlorid aus Propionsäure und Phosgen. Herstellung von Propionylchlorid aus Propionsäure und Thionylchlorid.
Acetone acetic acid section. Propionyl chloride from propionic acid and phosgene. Nov. 11, 1940. Manufacture of propionyl chloride from propionic acid and thionyl chloride. Aug. 26, 1940. 849 - 863A
46. Pharm. Betriebs-Labor. Jahresbericht 1942. Herstellung v. Lubisan. (Lubisan: Resorcin-mono-n-butylaether-kohlensäure-diaethylamid).
Pharm. Works Lab. Annual report, 1942. Manufacture of "Lubisan". ("Lubisan" is: Resorcinol mono-n-butyl ether carbonic diethylamide). Nov. 28, 1943. 864 - 871
47. Kunstharze. Verbrauch der wichtigsten Rohmaterialien.
Synthetic resins. The most important raw materials employed in the manufacture thereof. (A tabular arrangement of specified raw materials used in a considerable number of I.G.'s synthetic resins). 872 - 986
48. Survey of I. G. products at Höchst covering 1944 and early 1945. The file includes a list of the heads of the various departments, and the name of the chief of the entire Works, who is also the head of the dept. of medicinal remedies (Prof. Dr. Lautenschlager) 987 - 1007
49. Dr. Hagen. Bericht Nr. 20. Versuche mit Butadien-Vinylmethylkautschuck. (Zusammen with Herrn Dr. Gartner).
Dr. Hagen's report No. 20. Experiments with butadiene-vinyl-methyl polymer. Aug. 2, 1939. 1008 - 1025

50. Dr. Hagen. Bericht Nr. 8. "Über lichtechte Buna-Stabilisatoren. Kurze zusammenfassung: In taps - Butylphenolsulfid wird ein Stabilisator für Buna gefunden, der im gegensatz zum Vulkanisaten keine Lichtverfärbung zeit.
Dr. Hagen's report No. 8 on light-fast Buna stabilizers. Short summary: A stabilizer for Buna has been found in tertiary butylphenol sulphide, which, in contrast to phenyl-beta-naphthylamine (which was hitherto in use), shows no light-discolouration in the lighter vulcanisations. Jan. 11, 1937. 1026 - 1041
51. Charakterisierung von Stabilisatoren durch Messung der Saurestoffaufnahme.
The characterizing of stabilizers by measuring the amount of oxygen they absorb. The account includes a number of graphs and an addendum. Jan. 18, 1940. 1042 - 1047
52. Thioglykolsäure-Athylester.
Thioglycolic acid ethyl esters. 1048 - 1049
53. Technical opinions and reports, names, and various types of correspondence on the stabilizers used with Buna S, Buna SS, Buna SS Sauer, and Perbunan. 1050 - 1127
54. XI. Hauptversammlung der Deutschen Kautschuk-Gesellschaft vom 26.-28. Sept. 1938 in Hamburg.
11th Main Assembly of the German Rubber Association, held on Sept. 26-28, 1938 in Hamburg.
- a. Auszug aus dem Referat von Prof. Dr. Kuhn, Kiel: "Beziehungen zwischen Konstitution und elastischem Zustand hoch-polymerer Verbindungen".
Extract from the survey by Dr. W. Kuhn of Kiel, on: "Relationship of structure to the state of elasticity in high-polymeric compounds".
 - b. Auszug aus dem Referat von Dr. H. Hagen, Leverkusen: "Die Plastizierung von Buna".
Extract from the survey by Dr. H. Hagen, Leverkusen: "The plasticizing of Buna".
 - c. Auszug aus dem Referat Dr. Ing. P. Nowak, Bln.-Charlottenburg: "Über den Einfluss kautschukähnlicher Hochpolymerer Auf die physikalischen Eigenschaften von Buna-Mischungen".
Extract from the survey by Dr. Ing. P. Nowak, Bln.-Charlottenburg: "The influence of high-polymer of a rubber-like character on the physical qualities of Buna compounds".

- d. Auszug aus dem Referat von Dr. P. Stöcklin, Opladen: "Über die hitzebeständige Buna-Mischungen".
Extract from the survey by Dr. P. Stöcklin, Opladen: "On heat-resisting Buna mixtures".
- e. Auszug aus dem Referat von R. Ecker, München: "Die Wertestreuung als Mass der Reproduzierbarkeit insbesondere bei Kerbzahigkeit-untersuchungen".
Extract from the survey by R. Ecker, Munich.

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55. Betreff: Versuchsanlage für synthetischen Kautschuk, Ker-Anlage in Debica, Polen. Bericht über die Besichtigung der Ker-Zahlenbuna-Fabrik in Debica am 1940. Polnischer Kautschuk "Ker".
Concerning: experimental plant for synthetic rubber, The Ker Plant, Debica, Poland. Report on the survey of the Ker "Zahlenbuna factory", Debica, on May 7, 1940. The Polish rubber "Ker".
Three documents on the proposed purchase of Polish Synthetic Rubber Plant at its scrap-value (70-80 000 Reichsmarks), its transport to Leverkusen, and its incorporation in I.G.'s own synthetic rubber works.

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