INDEX TO

REEL 10

U.S. GOVERNMENT TECHNICAL OIL MISSION
INDEX - MICROFILM - REEL-10
(Orig. Ident. Reel 10A)
BAG 2734 TARGET No. 30/4.11 - BOTTROP

ITEM INDEX

1. Procedure.
2. Operating Conditions.
3. Product balance

   a. Liquid Products.
   b. Gaseous Products.

4. Charge, conversion.

C. Hydrogenation of a mixture of extract and fuel oil (1:1) by "straight passage".

IV. Final considerations.

V. Appendix (Tables 3 and 9)

This report consists of 20 pages, describing and elaborating in detail the points mentioned in preceeding index. Also a tabulation is presented giving absorption coefficients of H_2, CH_4, C_2H_6, C_3H_8, C_4H_{10}, C_4H_{12}, CO_2, H_2S, NH_3, in same solvent.

B. Report on Experiments to Convert Coal Paste into a Filterable Mixture

October 15,1938-November 22, 1938
Resume'

I. Purpose and Aim of Experiments.

II. Construction of chamber and material flow.

III. Brief summary of experiments 1-5
(Duration of experiments, reasons for interruption)

IV. Experiment No. 6

A. Duration of Experiment
B. Concentration of Coal
C. Quantity to be Injected
D. Temperature.
E. Filterability
F. Residual Concentration of Coal
G. Degree of Dissolution
H. Chamber Resistance and Reasons
I. Power consumption
K. Mechanical and experimental experiences.

V. Summary.

This report consists of 17 pages in all. Five graphs are included as well as detail drawing of the chamber showing position and location of thermocouples and other control instruments.

VI. Analyses.
A total of 11 sheets is given on production analyses
Date: January 1943 - September 1943

VII. Stall Diagrams
A total of 2 diagrams is given:

Diagram No. 1, shows location of temperature measurement devices.

Diagram No. 2, represents a flow diagram for hydrogenation at Weilheim carried out at 700 ats.

VIII. Operational Data
Seven analytical data sheets, all in graphical form, recorded daily from January 1943 to May 1944.
Thirty-one operating data sheets in graphical form recorded daily from June 1941 to May 1944.
Also a letter requesting permission for construction of a vacuum distillation unit, dated November 25, 1940 (4 pages). The letter is accompanied by two detailed drawings of requested unit.
Twenty-six more operational data sheets are given graphical form, too.

IX. Line Diagrams

Thirty-six bituminous coal tar hydrogenation line diagrams are given, showing operating data, process information, etc. No date could be found on material.

BAG 2743 TARGET No. 30/4.09 - SCHOLVEN		No. of Pages
1 - Line Diagrams, Hydrogenation		
Ten flowsheets and material balance sheets (diagrammatic) no dates given.		
2 - Date on Interchangers and Preheaters		
June 18, 1937	Discussion on Using Gas Heat for Preheaters(including two graphs)	5
3 - Equipment List for Hydrogenation plant		
November 1, 1941	Equipment Layout; also describes duties which equipment has to perform	13
November 10, 1941	Office Memorandum	1
November 21, 1941	Additional Information to equipment layout. Space requirements, operating data,etc.	11

	No. of Pages
4 - Design Data, T-52 AT 244 plants (Butane dehydrogenation and alkylation)	
September 13, 1939 Report on a Trip to Ammonia Plant at Merseburg, Leuna Works Subject: 1. Plant for Separation of Iso-C_4 2. Plant for producing 22,000 tons per year of V.T. 52.	4
February 22, 1940 Report on Trip to Engineering Office, Uhde, Merseburg Subject: T-52 plant.	5
March 6, 1940 Report on Trip to Engineering Office, Uhde, Merseburg, Subject: T-52 plant.	8
March 29, 1940 Report on discussion at Hydrogenation Plant, Scholven. Subject: T-52 plant	2
April 6, 1940 Report on Discussion at I.G.Ludwigshafen Subject: Layout and Ordering Material for T-52 plant, Scholven.	8
July 31, 1939 File Memorandum Subject: Production of Polymer-Benzin at Ruhrchemie, Holten.	3
June 9, 1939 Report on Discussion of C_3-C_4 Capacity Regulation.	4
December 16, 1939 File Memorandum Subject: Power Requirements for T-52 and T-16	2
December 27, 1939 Preliminary Measurements of Buildings and Tanks for T-52 and T-16 plants	2
October 24, 1941 File Memorandum Concerning: Steels to be Used for the Dehydrogenators for the T-52-plant.	1
5 - Comparison Products. Ex Gelsenberg and Scholven	
June 12, 1940 Comparisons of Products at Various Steps of the Production Cycle	12
June 3, 1940 File Memorandum on Determination of Aniline point in A-middle oils, and also injection products for 5058 chambers.	6

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	No. of Pages
6 - Costs	
January 7, 1942 File Memorandum. Cost estimation of Gladbeck Plant operation	3
January 5, 1942 Comparison of Costs of Gladbeck Plant Operation on January 21, 1941 and January 2, 1942	2
January 2, 1942 Cost Estimination of Gladbeck Plant Operation	12
January 21, 1941 Cost Estimate, Gladbeck. Various other cost estimates	8
March 12, 1942 File Memorandum Subject: Yield of Benzine from Coal, and H_2 Consumption in January & February, 1942	3
(no date) Production Costs.	9
July 12, 1937 Letter on costs and other cost data	7
March 28, 1939 File Memorandum. Plant Installation Costs for Iso-Octane Plant. 10,000 tons per year capacity.	2
May 13, 1939 Discussion on T-52 Production	12
November 25, 1939 File Memorandum Capital required for 22,000 tons per year of T-52	14
March 29, 1941 File Memorandum Erection Cost of AT 244 (Alkylation)Plant	1
7 - Flowsheet. Pott-Broche	
(No date) Flowsheet for Coke Production	

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1 - Alkylation, AT 244	
February 10, 1941 Report on Trip to Uhde Office Merseburg Ammonia Plant. Subject: Alkylation (AT 244 Plant)	7

	No. of Pages
1 - Alkylation, AT 244 (continued)	
October 27, 1941 File Memorandum Subject: AT 244 Plant, Scholven, Design Data	8
March 13, 1941 Letter: Subject: AT 244 Scholven	3
February 4, 1941 Flowsheet and Description of AT 244 Plant	4
March 13, 1941 Subject: AT 244 Plant	3
March 11, 1941 Explanations to AT 244 Plant. Details for AT 244 Plant (2 flowsheets)	12
November 23, 1941 Enlargement of Benzine Extraction and Liquid-G as Separating Plants, Scholven (6 flowsheets, 1 text, and 1 material balance)	8
August 24, 1942 File Memorandum. Isomerization Plants	5
December 15, 1942 File Memorandum. (Subject not readable)	6
November 17, 1942 File Memorandum Discussions on AT 244 Plant. (Contains 2 flowsheets and 1 material balance)	6
2 - T-52-Butane dehydrogenation plant.	
(no dates) Ten flowsheets on T-52 Plant	18
October 24, 1941 File Memorandum Steels which may be used as construction material for reaction tubes for dehydrogenation of T-52 (gives composition of recommended steels).	1
December 4, 1942 Report on Trip to Merseburg Ammonia Plant. Subject: Dehydrogenation furnace, Catalyst "demixing", Slot Tubes, Temperature distribution, T-52 questions, Furnishing Intermediate Contact, Treatment of Catalyst for Reclaiming. AT Plant: Starting up at Leuna, Stabilization of Condensate.	4
November 27) December 4) December 2, 1942) 4 questionnaires on operating conditions of process. (Temperatures, Pressures, G as Volume, others)	4

No. of Pages

3 - Scholven III or Gladbeck

June 9, 1943 The material is a series of letters dealing apparently with a hydrogenation plant. Such data as raw material needs, labor requirements, dimensions of building sites, etc., are given. Four detail drawings of hydrogenation equipment are given. Several tabulations are presented giving information on such things as production data, cost, energy requirements, auxiliary plants, etc. 63

4 - I. G. Catalyst 7019 and Early DHD Process

(No date) Comparison of production method for "Aromaten Benzine" (50-55%) by catalyst No. 7019 and by catalyst No. 5058/6434 and dehydrogenation. The comparison is done schematically showing quantities, temperatures, vaporization, etc. 1

September 12, 1940 Gasification by hydrogenation with catalyst 7019. Production figures. 2

(No date) Comparison between 7019 process and DHD Process 2

May 12, 1941 Heating up of 7019 chambers gives data on charge, initial temperature, final temperature, and temperature of refining furnace 6

November 25, 1939 Two flow diagrams of Benzine dehydrogenation. Catalyst 6718 and gas-phase 6434. Design data. 2

(No date) Material quantities and working hour distribution for 240,000 tons per year of Auto Benzine. Flowsheet of DHD process. 2

August 9, 1945