

BAG No. 2169 - TARGET 30/4.03  
Ludwigshafen

(a) Catalyst Manufacture and Properties images 0010-0114

1. Supply of sodium sulfide for sulfuric acid
2. Life of Brown oxide catalyst
3. Preparation of Zircon Oxide Gel.
4. Preparation of Tonalon (Water-Soluble Alumina)
5. Preparation of N-catalyst for Ammonia oxidation.
6. Preparation of B. S. catalyst
7. Preparation of B. Z. catalyst.
8. Brown oxide catalyst plant for Frose
9. Sketch of B. S. and B. Z. manufacture.
10. Flow sheet for B. Z. catalyst manufacture.
11. Order for Rotary kiln.
12. Metal requirements for Frose catalyst plant.
13. Drawings of Frose catalyst plant.
14. Miscellaneous information on Brown Oxide catalyst manufacture at Frose and Gabel.
15. Operating Description of Brown Oxide Catalyst Plant

(b) - Manufacture of Ethylene glycol from ethylacetal,  
CO and Hydrogen

images 0115-0120

16. Inspection of Leuna Formaldehyde Plant.
17. Production of Vanol.

(c) - H<sub>2</sub>S Absorption on Activated Charcoal images 0121-0174

18. Cost estimate for a desulfurization plant.
19. Description of plant for gas desulfurization (Scholven III)
20. Flow sheets of activated charcoal desulfurization Plants, for water gas.
21. Request for Bid for desulfurization plant.
22. Activated charcoal plant for Scholven.
23. Conference and notes on desulfurization of water gas (Scholven III)
24. Desulfurization (Scholven III and Brux)
25. F- and M-Charcoal adsorption, Waldenburg.
26. Desulfurization plant for Brux.
27. Desulfurization at Leuna.

(d) Hydrocarbon synthesis starting with CO and Hydrogen

28. Description of I. G. Fischer-Tropsch. image 0175
29. Cobalt Supply Situation. image 0178
30. Priority certificate for experimental CO and H<sub>2</sub> Plant. image 0179
31. Berlin conference on CO-H<sub>2</sub> Synthesis. 0182
32. CO<sub>2</sub> and H<sub>2</sub> synthesis with oil recirculation. image 0187
33. Catalyst for Hydrocarbon synthesis. image 0190

(e) Difficulties with Isoctane from Heydebreck images 0194-0199

34. High Pour Point Difficulties with Isoctane.
35. " " " " " "

(f) Manufacture of Industrial gases images 0200-0289

36. Emergency measures for gas production
37. Gas manufacture at Oppau.
38. Condensation of water from Hydrogen manufacture.
39. Experiments on CO Conversion.
40. Operation of KW synthesis gas plant, 1941.
41. Preparation of Synthesis gas.

42. Comparison of Plant Costs, operating costs, and steel requirements of hydrogen plants of the atmospheric and high pressure type.

(g) Substances for Gasproofing of Textiles Images 0290-0303

43. Method for increasing the efficiency of gasproofing materials.  
 43a. Gasproof fabrics.  
 44. " "  
 45. " "  
 46. " "

(h) Miscellaneous Images 0304-0342

47. Order for experimental work on the reactions of olefins with CO and H<sub>2</sub> in the presence of sodium salt of sulfanilic acid.  
 48. Order for experimental work on the dehydrogenation of light hydrocarbons with fixed bed catalysts.  
 49. Order for experimental work for the preparation of synthetic fats, fatty acids, and glycerine.  
 50. Order for experimental work on the preparation of Toluene with chlormethyl and Benzene.  
 51. Preparation of water emulsions of polyisobutylene.  
 52. Continuous production of Polyisobutylene.  
 53. Fuming acid for artificial fog.  
 54. Removal of artificial fog from intake to air compressors.  
 55. Conference on analytical determination of olefins.  
 56. Drying with silica gel.  
 57. Experiments on the drying of liquids with silica gel.

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Bay 2:077

Target 30/4.03

J. G. Farbenindustrie A. G.

Ludwigshafen

images

A) Analytical Methods and Physical and Chemical Data. 0347-

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1. Definition of carbonyl and acetyl number
2. Determination of carbonyl groups in aldehydes and ketones
3. Table of vapor pressure of methylbutandiol -1,4
4. Determination of 1,4-butanediol in crude solution
5. Heat of combustion of some nitriles, acids and esters
6. Analysis of diisobutylene
7. Vapor pressure of tetrahydrofuran containing water and nickel carbonyl

B) Preparation and Utilization of Pimelic Acid

Images

0365-

0392

8. Use of the hexamethylenediamine salt of pimelic acid for the manufacture of bristles.
9. Use of pimelic acid in the manufacture of polyamides
10. " " " " " " " " " "
11. Ethylhexanol esters of pimelic and related acids as plasticizers.
12. Process for the manufacture of pimelic acid.
13. Preliminary economic balance of pimelic acid manufacture.

C) Explosion Experiments on Acetylene and Its Derivatives

14. Explosion experiments on mono- and divinylacetylene
15. Effect of tube diameter and wall thickness on the propagation of a detonation wave.
16. Explosion experiments on acetylene.

images

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D) Problems of the Butadiene Manufacture.

17. Continuous distillation plant at Schkopau
18. Removal of  $\text{SO}_2$  from crude butymediol solution

0466-0510

E) Manufacture and Utilization of Propargyl Alcohol

0511-

0518

19. Rust remover PL (Propargyl-alcohol + HCl)
20. Plant distillation of propargylalcohol
21. Effect of aqueous propargyl alcohol containing formic acid on iron.
22. Flow sheet for separation of propargyl alcohol from formaldehyde by distillation.
23. Proposed method of manufacture of allylalcohol from propargyl alcohol

F) Chemical Engineering Investigations

0519-0550

- 24. Investigations <sup>on</sup> bubble plate designs.
- 25. Investigations on driers.
- 26. Investigations on filters.
- 27. Various investigations on chemical engineering apparatus

G) Preparation of Organic Chemicals

0551-0574

- 28. Patent application on the preparation of derivatives of  $\Delta$ -3 tetrahydrobenzoic acid
- 29. Patent application on the preparation of salts of hydroxy-carboxylic acids.
- 30. Recycle butadiene from the Buna polymerization as basis for new manufacturing processes.
- 31. Patent application on the preparation of diol derivatives
- 32. Part of patent application on the preparation of nitriles.
- 33. Patent application on the manufacture of carboxylic acids
- 34. " " " " " " " " " "

H) Drawings on Manufacture of Chemicals for Synthetic Rubber.

0575-  
0658

Tetrahydrofuran

Item No.	Dwg. No.	Title
35	L-15175a-2	Tetrahydrofuran Distillation
36	L-6119b-1	" " Reactors
37	L-6120b-1	" " " "

Ethyl Benzene Styrene

38	L-15606a-2	Alkylation
39	L-15607a-2	"
40	L-6083a-2	Benzene-Ethyl Benzene Distillation
41	L-5884a-1	Ethyl Benzene Dehydrogenation
42	L-4225c-1	Styrene Distillation
43	L-14407b-2	" "

Butane-diol Distillation

0594

44	L-15715-2	Material Balance
45	L-5202a-1	Apparatus
46	An19a	Flowsheet
47	L-5707-1	Apparatus & Piping
48	L-5204a-1	Building

Butynediol Manufacture

0603

<u>Item No.</u>	<u>Dwg. No.</u>	<u>Title</u>
49	L-13471f-2	Flow sheet - one reactor Cell
50	L-5769d-1	Reaction chamber
51	L-4118a-1	Degasification column
52	L-5167e-1	Degasification Flow Sheet
53	L-5481e-1	Acetylene Pumps
54	L-5861e-1	Piping-Elmo chamber
55	L-6328b-8	Flowsheet-acetylene residue gas wash.

Butynediol Distillation

0621

56	Lu-128	Material balance
57	IN 22e	Flow diagram
58	IN 25a	Detail flow sheet
59	L-5201d-1	Flow sheet
60	L-5675f-1	Tankage
61	SK 2/1/45	New flow sheet
62	--	New plot plan
63	L-13532b-2	Plot plan
64	L-5167C-1	Degasification

Aldol Condensation of Acetaldehyde

0644

65	L-5942a-1	Flow sheet
66	L-5943a-1	Reactors
67	L-5944a-1	Distillation
68	L-5052b-1	Piping
69	N-12280C-2	Flow sheet (proposal)

Bag 2077 drawings continued on reel 028