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(Orig. Ident. Reel 28A)

2077

Butol Manufacture (Butane-diol 1.3)

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| 70. L-146301-2 | Flowsheet                     |
| 71. L-14631h-2 | Flowsheet-high pressure steam |
| 72. L-11879-4  | Reactor details               |
| 73. L-6257-1   | Distillation details          |
| 74. L-6127-1   | Distillation details          |
| 75. L-6128-1   | Distillation details          |
| 76. L-5540b-1  | Distillation details          |

Butadiene Fractionation

- |                |                      |
|----------------|----------------------|
| 77.            | Flowsheet            |
| 78. L-5936b-1  | Distillation details |
| 79. L-5937c-1  | Distillation details |
| 80. L-5938c-1  | Distillation details |
| 81. L-121586-4 | Distillation details |

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(a) Iso-octane from Isobutylalcohol (Oppau)

- |                    |  |
|--------------------|--|
| 1. N 4186-4        | Fractionation of raw isobutylalcohol                                       |
| 2. Kd 1464         | Flowsheet for fractionation of raw isobutylalcohol                         |
| 3. Kd 1848         | Flowsheet for fractionation of raw isobutylalcohol                         |
| 4. Kd 539          | Material balance for the manufacture of 50,000 tons per year of iso-octane |
| 5. N 5392-4        | Butylalcohol fractionation   |
| 6. N 2640-1        | Detail flowsheet for isobutylalcohol fractionation, Part 1                 |
| 7. N 2641-1        | Same, Part 2   |
| 8. N 2427e-1       | Same, Part 3   |
| 9. N 5321-8        | Isobutylalcohol fractionation. Details column I                            |
| 10. N 5322-8       | Same, column II  |
| 11. N 5323-8       | Same, column IIa   |
| 12. N 5324-8       | Same, column III   |
| 13. N 5325-8       | Same, column IV  |
| 14. N 5326-8       | Same, column V   |
| 15. N 5327-8       | Same, column VI  |
| 16. BKOBs 1978-8   | Isobutylalcohol fractionation Instrument details I                         |
| 17. BKOBs 1978-8-a | Same, details II   |
| 18. ----           | Material balance for 4000 tons per year of iso-octane                      |
| 19. KD 2226        | Proposed tankage   |
| 20. N 5533-2       | Summary flowsheet for the manufacture of iso-octane from isobutylalcohol   |

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	22. N 4903-4	Dehydration of isobutyl alcohol, 800 mm. diam. reactor
	23. Kd 2209	Dehydration of isobutyl alcohol, 1300 mm. diam. reactor
	24. Kd 2208	Flowsheet for the polymerization of isobutylene and fractionation of polymers
	25. N 3707-4	Hydrogenation of di-isobutylene
	26. N 6373b-2	Hydrogenation of di-isobutylene
	27. N 12419-2	Hydrogenation of di-isobutylene
	28. E 913-2	Hydrogenation of di-isobutylene (Electrical wiring diagram)
	29. N 3462b-1	Hydrogenation of di-isobutylene. Pipin Details

(b) Alternate Proposal for Iso-octane Manufacture (Oppau)

30. --- Material balance for the manufacture of iso-octane from mixed C<sub>4</sub> hydrocarbons by chlorination

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32. N 10255-4 Prehydrogenation of propane
33. --- Flowsheet for alkylchloride manufacture
34. N 5947-1 Detail flowsheet. Part I (chlorination)
35. Kd 1865 Proposed chlorination process
36. Kd 1880a Details of quartz illumination arrangement for chlorination
37. Kd 1903 Assembly of internal illuminating apparatus
38. N 5946-1 Detail flowsheet. Part II (distillation)
39. N 5948-1 Detail flowsheet. Part III  
(dehydrochlorination)
40. Kd 1871 Details of dehydrochlorination apparatus
41. N 10253-4 Detail flowsheet. Part IV  
(fractionation after dehydrochlorination)
42. N 5949-1 Detail flowsheet. Part V  
(Removal of HCl)
43. N 13734-2 Plot plan of distillation
44. N 13730-2 Plot plan of chlorination
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- 55. Kd 1516 Butadiene washing and distillation
- 56. Kd 480 Flowsheet for butadiene distillation under pressure
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- 61. N 8218-4 Flowsheet for the polymerization of butadiene
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- 78. ---- Flowsheet for the manufacture of formic acid
- 79. N9629-4 Flowsheet for the manufacture of formaldehyde
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1. Heide - Lube Oil Analysis
2. CO Removal (copper solution)
3. Alkylation, dehydrogenation, isomerization and exchange information
4. Methanization experiments
5. Disclosures (Misc.)
6. Isooctane through chlorination, etc

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