

Target Nos.: 30/301, 301a, 301b, 309

Opportunity - Hamburg

REEL I

I. German Army Specifications

1. Specification for fuel F2 - April 1945
- 1a. " " " B<sub>4</sub> and C<sub>3</sub> - November 1944
2. " " " J2 and break-in fuel J2 - October 1944
- 2a. " " aviation diesel fuel
3. " " fuel A3
4. Supplement to fuel specification for A3 and B4
5. Specifications for diesel fuel and carburetor fuel
6. Specifications for diesel fuel and carburetor fuel for German Army, Summer 1944
7. Specification for aviation fuels A3 and B4. May 1944
8. Specification for aviation fuels April 1944
9. Gum determination in aviation fuels
10. Specifications for gasoline blending components
11. Determination of inhibitors in aviation gasoline
12. Specifications for blending components of aviation lube oil S3
13. Specification for starter fuel for spark ignition engines
14. Specification for aviation fuels - May 1942
15. " " gear and motor oil - June 1944
16. " " motor oil (winter) - July 1944
17. " " motor oil (summer) - July 1944
18. " " water pump grease
19. " " protective grease 40 L
20. " " airplane instruments grease
21. " " airplane water pump grease
22. " " airplane axle grease
- 22a. " " airplane grease (blue)
23. " " airplane rockerarm grease
24. " " chassis grease
25. " " low-temperature gun oil
26. " " airplane lube oil S5607
27. " " aviation lube oil ASM (V2)
- 27a. " " " " S3 and V2 - May 1943
28. " " " " S3 and V2 - March 1943
29. " " " " S3 (SS960) - March 1943
30. " " " " SS1006
31. " " instrument grease
32. " " hydraulic oil
33. " " rust preventive oil
34. " " hydraulic oil
35. " " rifle cleaning oil for use at low temperature
36. " " protective grease 40
37. " " protective grease 40 (Tropical)
38. " " gun oil
39. " " rust preventive oil 39
40. " " gun grease
41. German Navy specifications

II. Research Reports from the Rhenania-Ossag Laboratory

42. Comprehensive research report for 1942
43. " " " " 1941
44. " " " " 1940
45. " " " " 1939
46. Report on: The separation of constituents from synthetic lube oils by selective adsorption

47. Report on: Effect of cracking conditions on the properties of the products
48. Report on: The structure of gel greases and their change
49. Report on: Effect of the amount of HCl on the speed of polymerization and the viscosity of oils
50. Report on: The reaction mechanism of the polymerization of cracked distillates to olefins
51. Report on: Chromatographic analysis of mineral oils
52. Report on: Regeneration of used oils containing voltolized oil
53. Report on: Regeneration of filter clay
54. Report on: Decomposition of  $AlCl_3$  sludge from manufacture of synthetic lube oil
55. Report on: Use of  $AlCl_3$  sludge for cracking of paraffin hydrocarbons
56. Report on: The composition and refining of oil from  $AlCl_3$  sludge.
57. Report on: Reactions in the cracking process
58. Report on: Resistance against spent sulfuric acid of various tank linings
59. Report on: Chemical composition of voltolized oil and the reactions during voltolization - I. part
60. Report on: Same - II. part
61. Report on: Filter aids for dewaxing
62. Report on: Regeneration of filter clay
63. Report on: Practical experiences with the extraction of filter clay
64. Report on: Neutralization and refining of crude lube oil polymerizates
65. Report on: Polymerization of cracked distillates to lube oils

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III. ZWB Reports and DVL Reports

66. Determination of peroxides in fuel and their effect on engine behavior
67. Effect of tetraethyl lead in fuel on the construction materials of the engine.
68. Same - supplement
69. Collected papers from meeting on lubricants, May 1943 (oxidation resistance)
70. Collected papers from meeting on lubricants, December 1941 (wear and friction)
71. Collected papers from meeting on behavior and storage stability of fuels
72. Ring sticking tests with light metal pistons in the Siemens test engine

IV. Reports on lube oil tests in the BMW - one cylinder engine carried out at the Rhenania-Ossag laboratory

73. Experimental synthetic oil blends
74. SS1060
75. Control test runs on production batches
76. Effect of the addition of inhibitor on ringsticking and sludge formation
77. SS1006, 200 ton batch
78. Army winter oil with and without the addition of Oppanol
79. Summary of all previous test reports
80. Rotting oil with and without special voltolized oil

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81. Inspection data on synthetic steam cylinder oil
  82. Flowsheet of Pölitz plant
  83. Memorandum on plant operation
  84. Improvement on plant during 1942-1943
  85. Reports on cracking various waxes
  86. Report on experimental runs of cracking chamber
  87. Plot plan of Pölitz plant
  88. Plot plan and elevation for proposed gas absorption plant
  89. Proposal for gas polymerization
  90. Lurgi proposal for gas polymerization
  91. Memorandum on gas polymerization
  92. Memoranda on oil absorption
  93. Lurgi proposal for gas absorption plant
  94. Proposal for the construction of additional plant facilities for manufacture of aviation lube oil
  95. Same
  96. Inspection data on slack waxes
  97. Memorandum on operational details
  98. Inspection data of plant products
  99. Iodine number of synthetic lube oils
  100. Design calculations for heater
  101. Design calculations for cracking unit
  102. Flowsheet for paraffin wax treating
  103. Flowsheet for polymerization unit
  104. Flowsheet of entire Pölitz plant
- VI. Utilization of  $AlCl_3$  sludge from the manufacture of synthetic lube oil
105. Pumps for  $AlCl_3$  sludge
  106. Memorandum on  $AlCl_3$
  107. Corrosion tests with  $AlCl_3$  solutions
  108. Memorandum on utilization of  $AlCl_3$  sludge
  109. Same
  110. Same
  111. By-products obtained at Pölitz
  112. Working-up of sludge containing  $AlCl_3$
  113. Inspection data on oil from decomposition of  $AlCl_3$  complex
  114. Utilization of  $AlCl_3$  sludge
  115. Same
- VII. Exchange of information on manufacture of synthetic lube oils
116. Memorandum on quality of products from Rhenania
  117. Comparison of operations and products of I.G. and Rhenania
  118. Laboratory tests on synthetic lube oil manufacture from various cracked waxes
  119. Plant experiments at Oppau
  120. Same
- VIII. Research reports from the Amsterdam laboratory of N.V. ~~Bata~~ <sup>Petroleum</sup> Maatschappij
121. Aniline point of petroleum fractions
  122. Relation between the U.O.P. characterization factor and other properties of petroleum fractions (in Dutch)
  123. Short review of the work on combatting plant diseases
  124. Investigation of the structure of olefins in cracked distillates by the peracetic acid method
  125. Glueing of paper with Lubex ( $SO_2$  extract of lube oil)
  126. Pilot plant manufacture of propane peroxide
  127. Use of Raman spectroscopy in the analysis of hydrocarbons (in Dutch)