

Branchedchain paraffin hydrocarbons.

12,000 tons/yr. ex hydrogenation of alcohols higher than  $C_4$ .

Methanol

125,000 tons/yr.

Chlorine

12,000 tons/yr.

Glycol

7,000 tons/yr.

Gasoline and motor benzol.

11,000 tons/yr. made from coal carbonisation gases and by distillation of tar.

Pitch

15,000 tons/yr. ex tar distillation.

Propyl alcohol

5,000 tons/yr. ex higher alcohol synthesis.

Ester lub. oil

4,000 tons/yr.

This is iso-butyl alcohol esterified with adipic acid. It is used as a cold starting lube oil, and has a pour point of about  $-70^{\circ}C$ .

### C. POLITZ-STETTIN

The following preliminary information was obtained by interrogation of Dr. Pier and Dr. Muller Conradi at Ludwigshafen/Oppau. A considerably more detailed account of Pölitz activities will be presented in another C.I.O.S. report following the interrogation of Dr. Wissel (chief chemist of the Hydrogenation Plant) by a U.S. team and the seizure of a very complete collection of plant documents.

The hydrogenation plant at Pölitz was originally planned to make 250,000 tons/yr. of motor gasoline from Upper Silesian coal, and a further 200,000 tons/yr. from cracked petroleum residues imported from Venezuela. It was planned to install six 700 atmospheres liquid phase hydrogenation stalls, two being designed purely as coal stalls, two as liquid phase stalls for petroleum cracked residue or tar and finally two capable of operation on either coal, tar or petroleum residues.

A tube and tank petroleum oil cracking plant has been built at Pölitz during the war, but its capacity is only 250,000 tons/yr. of crude oil. The original plan for Pölitz operation therefore had to be modified, and during the war, 4-5 stalls were normally in service for hydrogenation of Upper Silesian bituminous coal, one treated heavy petroleum residues (mainly uncracked) and another operated on bituminous coal tar or pitch. Pre-saturation of middle oils in the vapour phase has been carried out in three to four 300 ats. stalls, and the vapour phase splitting hydrogenation of saturated middle oils has been conducted in 4-5 stalls also operating at 300 atmospheres pressure.

The peak gasoline output reached at Pölitz during the war was roughly 600,000 tons/yr, the greater part of this being aviation base stock. This output included some 250,000 tons/yr. of D.H.D. gasoline made mainly from naphthas distilled from the crude vapour phase saturation product and from imported petroleum oil (Rumanian and Hungarian). The flowsheets (figures XX to XXV) prepared by Dr. Pier's

(HOURLY QUANTITIES)

MAKE-UP GAS 71,000 M<sup>3</sup> 96% H<sub>2</sub>

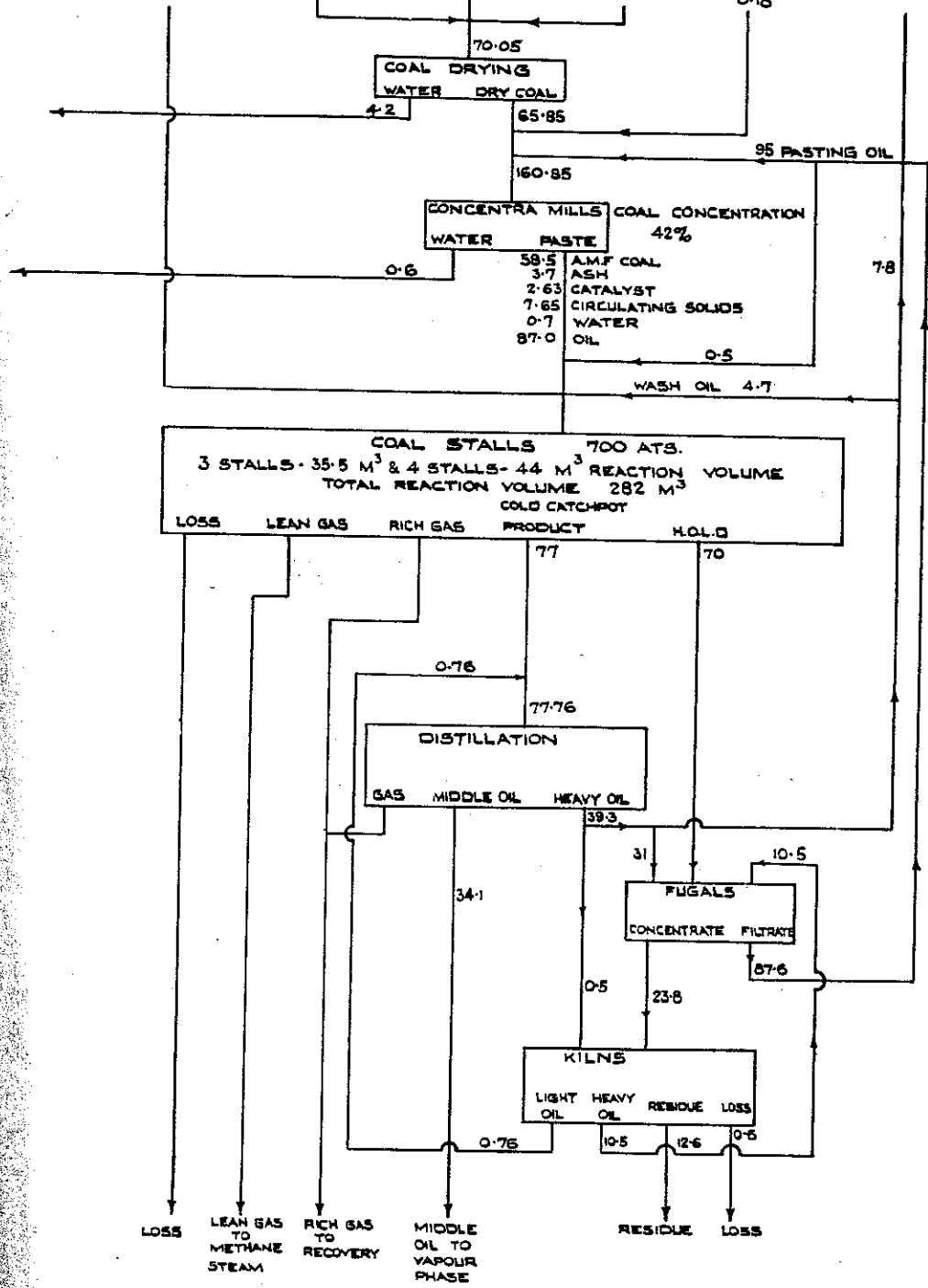
IRON SULPHATE 1.0

BITUMINOUS COAL 67.6

BAYERMASSE 1.45

SULFIGRAN (NaSH) 0.18

HEAVY OIL MAKE-UP 0



POLITZ  
COAL HYDROGENATION  
FIGURE XX  
LIQUID PHASE

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FIGURE XXI

PÖLITZ

LIQUID PHASE STALL ON PITCH

(HOURLY QUANTITIES)

MAKE-UP GAS  
14,000 M<sup>3</sup> 96% H<sub>2</sub>

PITCH  
12.0 T

CATALYST 10927  
0.24 TNE.

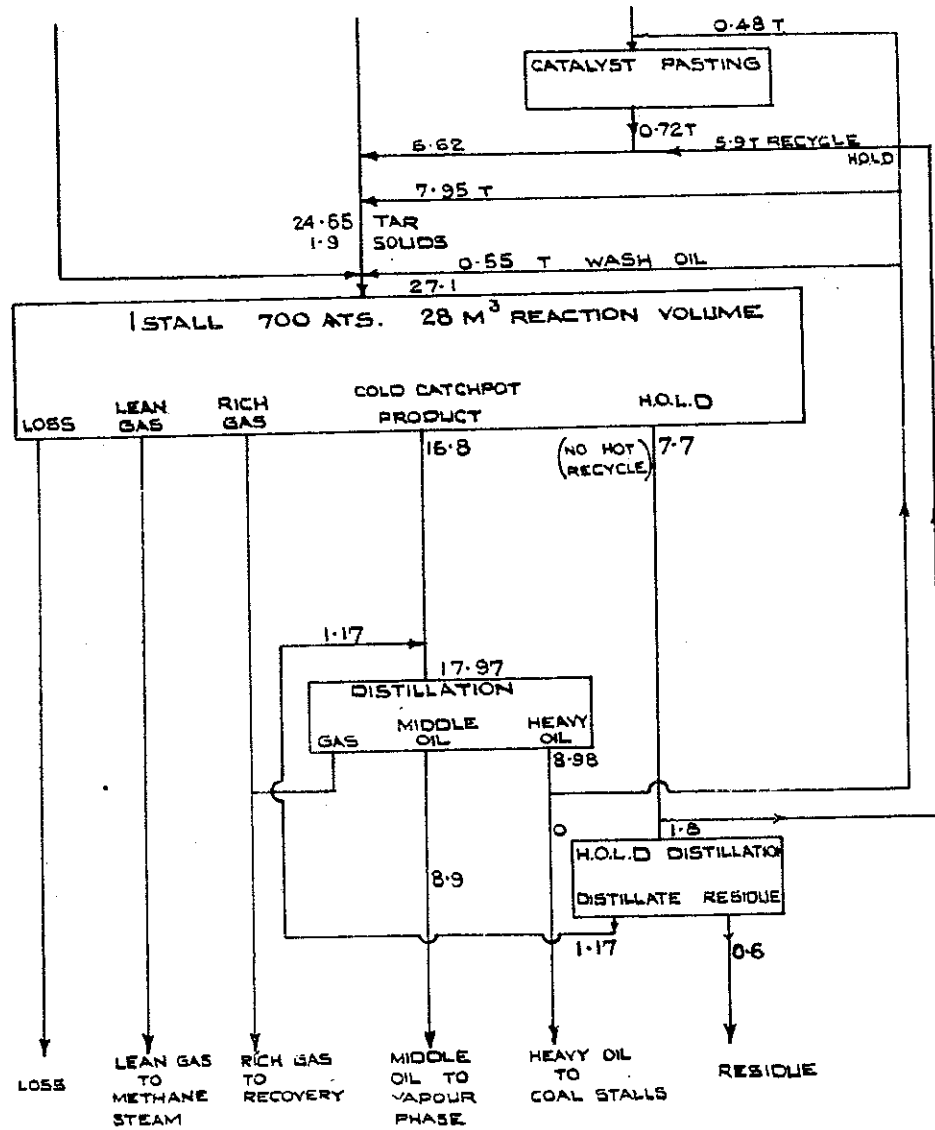
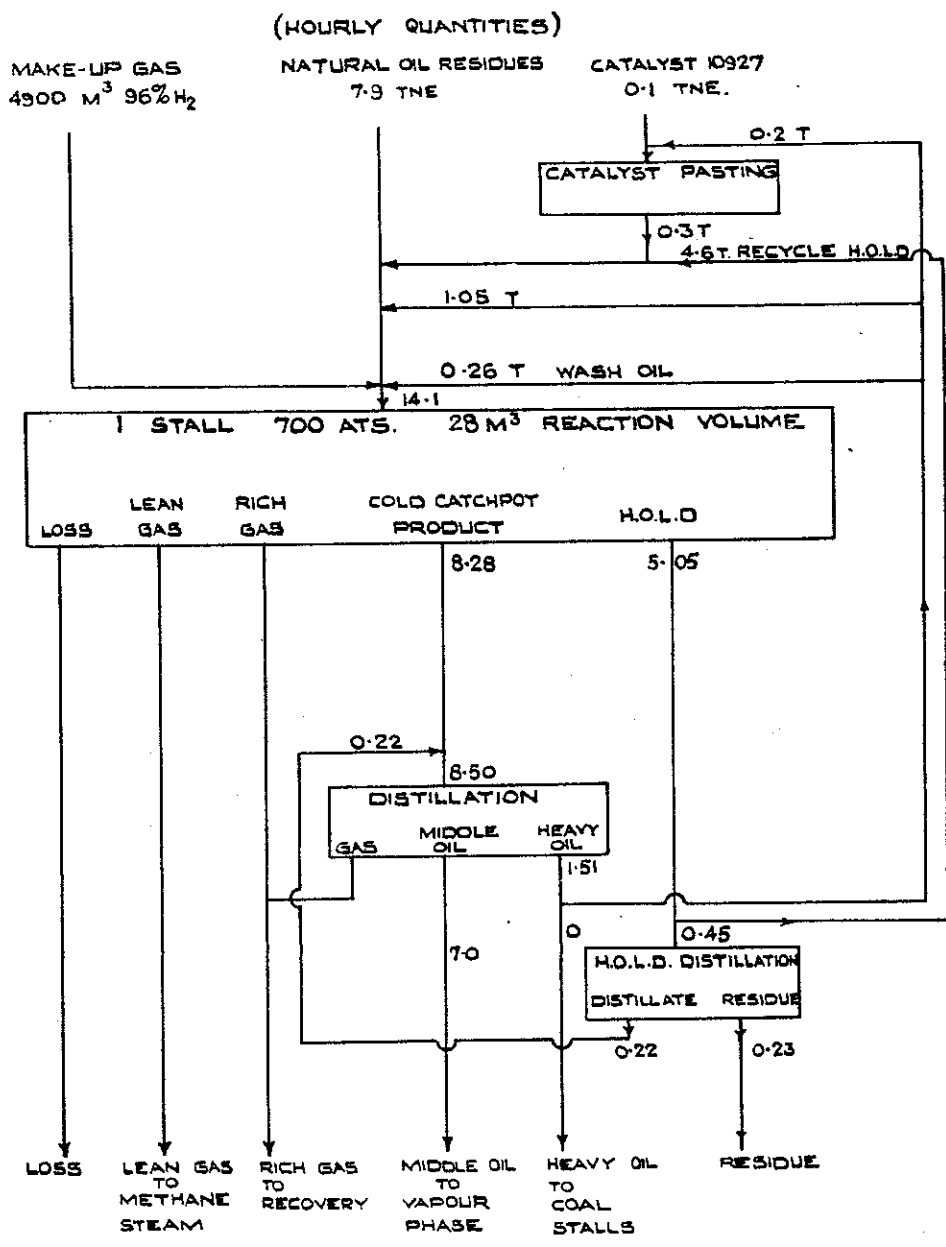


FIGURE XXII  
POLITZ

LIQUID PHASE STALL ON NATURAL OIL RESIDUES.



HOURLY QUANTITIES.

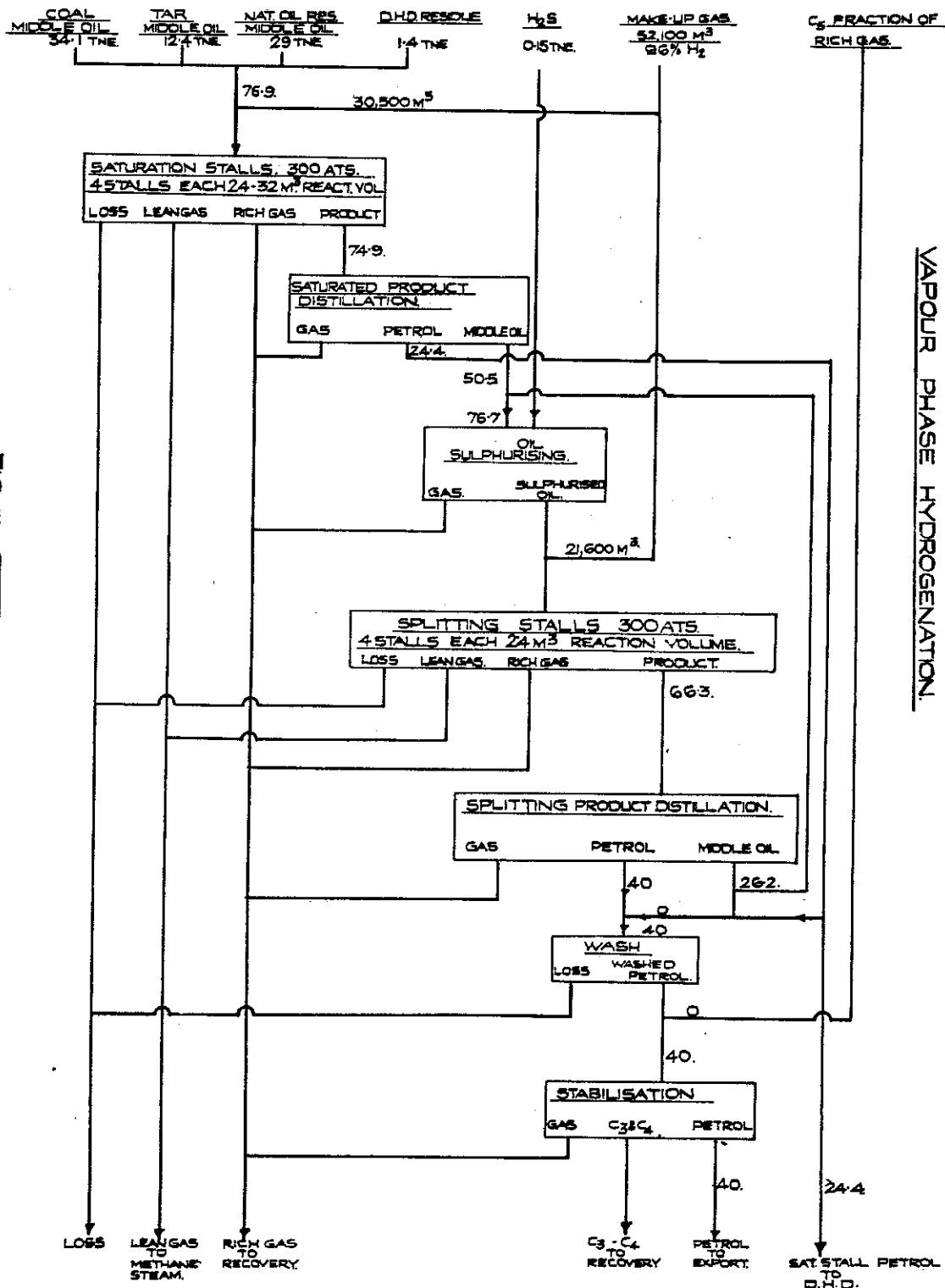


FIGURE XXIII

VAPOUR PHASE HYDROGENATION

POLITZ

FIGURE XXIV

PÖLITZ

D.H.O. FLOWSHEET

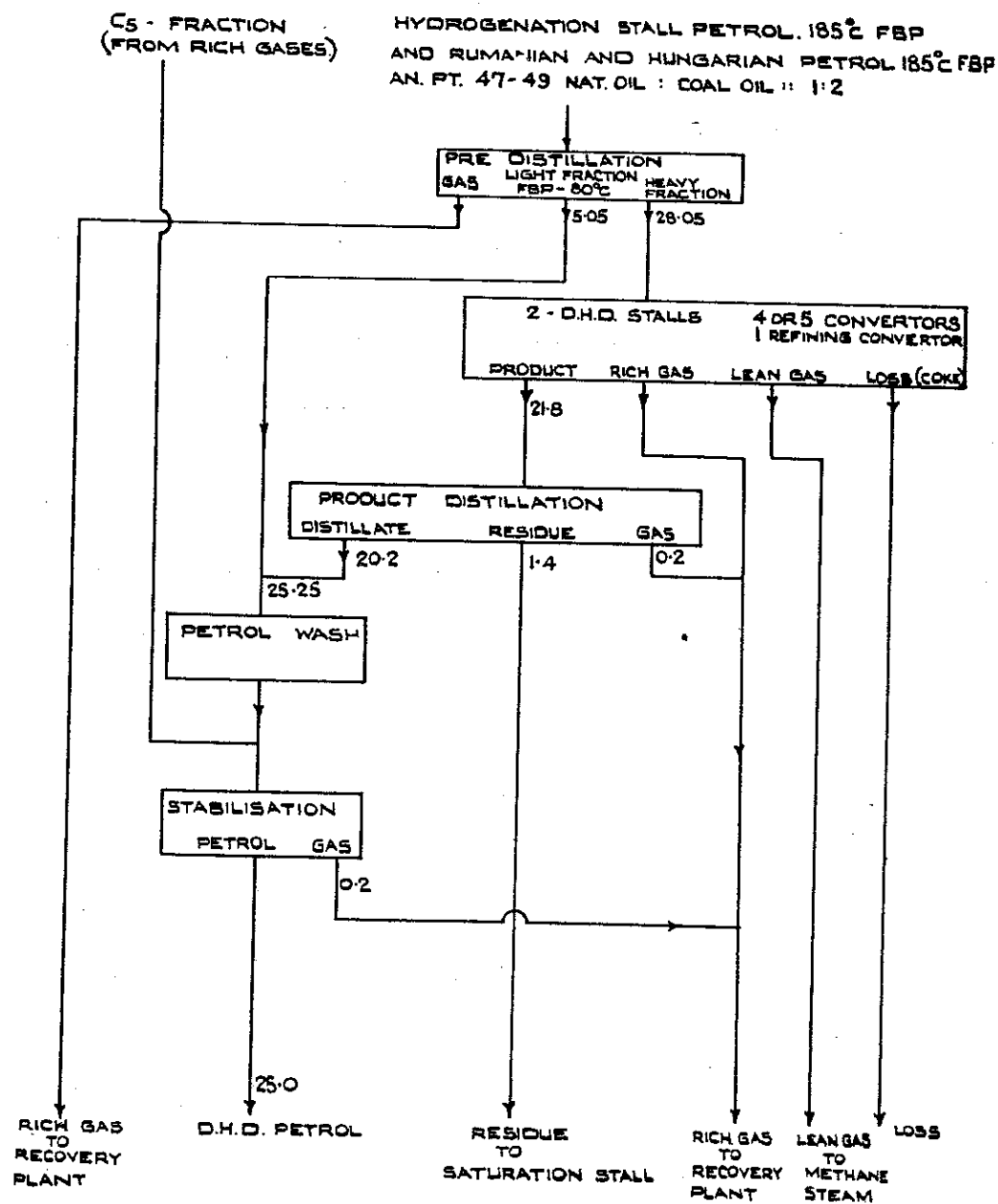


FIGURE XXV

PÖLITZ

RICH GAS FLOWSHEET

