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XIII INFORMATION REGARDING OTHER SYNTHETIC FUEL PLANTS

At a meeting of Fischer-Tropsch plant operators in October 1939 tables were prepared to show the expected output and product quality for all plants in West Germany during most of 1940 (Doc. 42). These estimates assumed maximum production of Diesel Fuel and gatsch, with the benefit of various improvements and expansions of plant facilities which were in prospect when the conference was held. Some of these data are summarized in Table XXI, page 88. From other records it has been found that the Rheinpreussen expectation of making 100 octane Diesel fuel with a solid point of -25°C was never realized which suggests that some of the other estimates may be likewise optimistic. The total output estimate for Rheinpreussen proved to be quite accurate and the magnitude of the other production figures does not seem unreasonable. The productive capacity of some of these plants may have been increased subsequent to 1940.

Somewhat earlier (Doc 88) an estimate was prepared for benzin and liquefied gas production by a larger group of plants, which is summarized in Table XXII, page 89.

A summary of the type and capacity of equipment in the West German Fischer-Tropsch plants was included in Doc 42 and is condensed in Table XXIII, page 90.

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TABLE XXI

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West Germany Fischer-Tropsch Plants
Estimated Capacity and Product Quality
July - Sept. 1940
Basis Maximum Diesel Fuel and Gatsch

Essener Steinkohle	Hoersch (Mid.Pres.)	Krupp Treibstkw (Atm.& Mid) Pres.	Rhein- preussen	Ruhr- benzin	Gewk Victor
Total Primary Products: tons/mo.	4400	2750	5200	5700	2500
Benzin: tons/mo.	3650	995	2900	2200	1300
End boiling point °C	165	160	160	145	160
Octane Number	61-62	55-56	60	58-60	62
Vapor pressure, atm.	0.65	0.78	0.78	0.70	0.65
Diesel Fuel: tons/mo.	*	1100	1960	1850	900
Boiling range, °C		130-280	160-310	145-280	150-310
% below 200°C		55-60	40	40-50	55
Cetane number		70	100	80-85	80-90
Solid point, °C		-23.5	-25	-25	-35
Flame point, °C		21	40	21	57
Gatsch: tons/mo.	*	450	360	-	175
% useful for oxidation.		85	-	-	-
Liquefied Gas: tons/mo.	700	300	450	500	400
Wt. % C4		75	50	60-70	65

* Diesel oil and gatschnot to be made because of lack of distillation facilities.

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TABLE XXIIEstimated Capacity of Synthetic Fuel Plants
1940 - 1941*

Metric Tons per year

	<u>Benzin</u>	<u>Liquefied Gas</u>
Gelsenberg	200,000	40,000
Scholven	200,000	40,000
Rheinpreussen	50,000	10,000
Victor	27,000	5,000
Krupp	40,000	8,000
Hoesch	45,000	8,000
Essener Steinkohle	50,000	10,000
Rheinbraun (Wesseling)	100,000	16,000
Ruhrbenzin	<u>60,000</u>	<u>16,000</u>
Total	772,000	157,000

* Capacities for 1941 were expected to be the same except for Rheinbraun (Wesseling) which was to make 20,000 Tons benzin and 40,000 tons liquefied gas.

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TABLE XXIII
Equipment and Capacities
West German Fischer-Tropsch Plants
October 1939

Plant	Rhein- preussen	Essener Steinkohle	Hoesch Benzin	Krupp Troibstwk.	Ruhrbenzin	Gewerk. Victor
Synthesis Pressure	Atm.	Atm.	Middle	Atm. and "Pressure"	Atm. and "Pressure"	Atm.
Raw Material	H.t.coke & gas 10*	H.t.coke & gas 10 (Demag)	H.t.coke	?	Coke	H.t.coke
Gas Producers	6000	9000	6 (Demag)	8	11	3 (Demag) 4 (Pintsch)
Output per unit M 3/hr	1	?	?	?	?	2
Gas Cracking Units	17000	-	-	-	-	20000
Output M 3/hr	60000*	57500	36200	48000	63000	32600
Ideal Gas Production M 3/hr	96	96	68	72A-20P	52A-72P	52
Number of ovens	Optional	48 1 stage 48 2 stage	36 1 stage 32 optional	36 1 stage 36 optional 20 2 stage***	2 stage	41 1 stage 11 2 stage 4 optional
Stages						
Benzin Separation between stages	** No	Yes	No	No	No	Yes
Oil Cracking Unit	Carburel	Carburel	Carburel	Carburel	TVP & UOP	Carburel
Capacity, tons/day	65	125	125	100	100 & 90	50-60
Gas Polymerization Unit	None	None	None	Yes	UOP	Pintsch
Capacity, tons/year	-	-	-	14000	24000	9000

* As of 1 Jan 1940.

** Subsequently changed.

*** Pressure ovens.

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