

UNITED STATES - DEPARTMENT OF THE INTERIOR - BUREAU OF MINES - OFFICE OF SYNTHETIC LIQUID FUELS - LOUISIANA, ACCOUNT

W. M. Sternberg, December 9, 1947 T - 427 1402

from Dr. Pier's Private Files  
 Comparative tests of Samples of Coal-HOLD Produced at Different Works.  
 --- Samples Taken Michls of Jan. 1942

Table -

Sources of HOLDS Investigated at:	Scholven				Gelsenberg				W. Polizey				L. Weingarten		
	Scholven	Gelsenberg	Politz	Lu.	Weiher	Scholven	Gelsenberg	Politz	Lu.	Scholven	Gelsenberg	Politz	Lu.	Scholven	Politz
In the total product:															
Benzol insoluble, percent	27.7	27.3	27.0	27.4	20.8	20.7	21.5	21.0	21.9	17.7	13.8	18.3	19.8	19.7	19.2
Ash in benzol insol., percent	30.3	29.5	26.6	29.8	60.0	58.4	59.5	60.6	60.0	39.2	38.9	38.2	38.1	37.5	50.2
In the solid-free oil:															
Sp. gr. at 100°C	1.159	1.141	1.125	1.144	1.073	1.094	1.076	1.064	1.076	1.100	1.076	1.102	1.076	1.076	1.086
B.P. curve: start °C	140	-	183	265	-	174	-	230	268	171	-	270	270	270	295
Percent - 325°C	3.4	2.6	3.3	3.0	9.0	9.1	5.4	7.5	4.9	3.6	5.0	3.3	3.3	3.3	4.0
S. asphalt percent	31.5	-	-	-	8.4	19.5	-	-	-	23.9	-	-	-	-	-
with Kahlbaum gasoline	-	33.9	-	-	-	-	17.9	-	-	-	22.0	-	-	-	-
with Merck gasoline	-	31.8	25.0	28.6	8.3	15.8	16.6	16.0	14.3	16.3	21.9	11.9	11.2	15.0	15.7
with Rhenania gasoline	16	16	16	16	15	16	16	16	16	16	16	16	16	16	16
Vac. curve at 16 mm Hg															
Wt. percent - 225°C	14.8	15.0	11.0	11.8	18.3	18.4	18.0	17.0	19.4	23.1	27.0	21.0	21.0	21.0	25.0
Wt. percent - 275°C	24.8	38.0	30.0	30.5	43.9	44.1	57.0	41.0	42.6	41.5	53.0	36.0	42.8	41.0	37.0
Wt. percent - 325°C	49.0	52.5	43.0	40.6	63.6	60.2	69.5	57.9	57.2	57.2	65.0	48.0	53.2	57.2	50.8
Wt. percent Residue 325°C	50.0	47.5	57.0	59.4	35.4	39.0	30.5	42.0	42.8	43.6	35.0	51.0	43.0	43.0	40.0
L. T. C. Analysis:															
Percent tar	45.7	45.4	44.5	44.9	56.7	58.7	56.8	59.0	57.3	48.7	57.0	44.0	48.0	48.0	53.6
Percent coke	53	-	51.6	49.5	41.5	39.0	-	6.5	34.3	39.0	-	34.0	31.0	37.0	31.0
Percent water	0.3	-	0.4	0.5	0.7	0.5	-	0.5	0.6	0.5	-	0.5	0.5	0.5	0.6
Percent gas + loss	1.0	-	3.5	7.1	0.1	1.8	-	4.0	7.8	1.8	-	5.1	0.3	1.0	1.0
Percent oil yield	63.3	62.9	61.0	59.2	71.6	74.2	72.1	74.6	73.7	71.3	69.9	64.0	72.0	73.0	68.7

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Table 2

Source of Hot Let Down Oils and Benzol - Containing Filtrates of

HOLD for Their Asphalt Contents

Source	Politz	Gelsenberg	Benzol
Received	2/18/42	2/18/42	3/9/42
Account	2007	2008	2008
Description	Hot let down oil delivered from the Benzol filtrate 1)	Hot let down oil delivered from the Benzol filtrate 1)	Hot let down oil delivered from the Benzol filtrate 1)
Percent asphalt (Netern. W. Rheinania Gasoline	18.5	17.9	28.1

1) 21 percent hot let down oil was isolated from benzol filtrates from Politz and Gelsenberg.

2) Residue contained benzol even after 96 percent have been distilled off; for this reason not investigated.