

HAMBURG October 3rd, 1945.
Alsterufer 4-5.

BLATT 1

000277

Re: Questionnaire No. 3
Special Products / Bitumens.

- (1) To what extent are bitumens of petroleum origin used in road construction, and to what extent are hot application, cut-back, and bituminous emulsion application used ?

Consumption of bitumen in 1938 amounted to ... 600,000 tons
used in road construction abt. 50% = 300,000 t

These 300,000 tons are distributed
as follows:

for hot application .	148,000 t
" emulsions	130,000 t
" cut-backs	22,000 t
	<u>300,000 t</u>
	=====

During the war the quantities of bitumen at
disposal decreased considerably and amounted

in 1940 to	200,000 tons
" 1943 "	126,000 "

used in road construction	" 1940 - 45,000 t
	" 1943 - 20,000 t

thereof for manufacture of emulsion	" 1940 - 31,000 t
	" 1943 - 13,000 t

The remainder was used for hot applications,
whereas cut-backs were no longer produced
owing to lack of solvents. Thus the consump-
tion of bitumen used for road construction
during the war was -in percentages- smaller
than in pre-war times, as the small quantities
of bitumen at disposal were mainly required
for industrial purposes.

- (2) What advances, if any, have been made in bitumen emulsion manufacture, and what crude sources are preferred for this purpose ?

Advances in bitumen emulsion manufacture have not
been made during recent years; to the contrary,
only unstable (quick-setting) emulsions for surface-
dressings were produced whereas, in former times,
also semi-stable and stable emulsions for mix work
have been manufactured. Formerly bitumen from
Mexican (Panuco) and Venezuelan crude oils were
preferred for the emulsion manufacture. During the
war the less-suitable German and East-European
petroleum residues had to be emulsified, which was
made possible by applying to the bitumens larger
quantity of emulsifier and by adding saponifying
substances (Montan Wax, Resin, etc.)

- (3) Are emulsions of any other pitch residues used for any purposes ?

During the war also coal tar emulsions have been used for road construction. Emulsions from coal tar and lignite tar were used as binder for paints.

- (4) What work has been done on soil stabilisation, and to what extent has this process been used for airfield runways, etc.? What types of emulsion have been found most suitable, and how are they made ?

Soil stabilisations have only been made on sandy ground of airfield runways. For this purpose cut-backs have been used

in 1938 abt. 10,000 t
" 1939 " 20,000 t

Later-on no more cut-backs were produced because there were no solvents at hand; emulsions for soil stabilisations have not been used in Germany.

- (5) To what extent are bitumens and other residues used for:

- (a) Paper impregnation ?
(b) Roofing ?
(c) Insulation ?
(d) Paint-applications ?

What fillers, if any, are used ?

(a) Paper impregnation

<u>1938</u> t	<u>1940</u> t	<u>1943</u> t
9,000	10,000	12,000

(b) and (c) Roofing and Insulation.

155,000	53,000	29,000
---------	--------	--------

(d) Paint-applications

<u>25,000</u>	<u>7,000</u>	<u>6,000</u>
189,000	70,000	47,000
=====	=====	=====

000279

EBANO ASPHALT-WERKE
AKTIENGESELLSCHAFT

Technical Department
Dr. B/AW.

HAMBURG October 3rd, 1945
Alsterufer 4-5.

BLATT 3

It is not possible to separate (b) Roofing and (c) Insulation. It is presumed that from 1940 to 1943 abt. 20,000 t of bitumen have annually been used for damp-proofings.

In consideration of the small quantities of bitumen at disposal, larger quantities of coal tar products have been used for roofing and insulation during recent years.

When using bitumen it was, in general, not customary to add fillers for roofings and insulations whereas, when using coal tar, fillers, such as lime-stone powder and shale powder, were applied.

EBANO ASPHALT-WERKE A.-G.



ppa Dr. W. Becker

(A) Risch 11 Oct 1945 - Eckhardt
(7)

000280

EBANO ASPHALT-WERKE AKTIENGESELLSCHAFT

H a m b u r g 36

Alsterufer 4-5.

Crude Run and Yield 1936 and 1940

<u>Run</u>	<u>1936</u>		<u>1940</u>	
			(Topping process only)	
total	Mex.Crude	to <u>301.736</u>	German Crude	to <u>251.886</u>
Monthly average		to <u>25.145</u>		to <u>20.988</u>

<u>Yield</u>	<u>weight %</u>	<u>weight %</u>
Raw Benzine	3.66	6.55
Kerosene Dist.	.63	.19
Dieseloil	-	1.86
Gasoil	21.83	15.48
Lube Dist.	2.29	-
Bottoms	-	74.66
Asphalt	71.09	-
Dist.Loss	.50	1.26
	<u>100.00</u>	<u>100.00</u>

Hamburg, den 4. Oktober 1945
Cl/Ld.