



MODIFICATION OF BITUMEN WITH ADDITIVES THAT IMPROVE THE PHYSICO-CHEMICAL PROPERTIES

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ABSTRACT

Oil again work factories , mainly in the country chemistry industry for high good quality fuel and lubrication materials , motor fuels and raw material working to release specialized is oxidized bitumen working The remainder bitumen with In comparison , it is low- level aromaticity and this with together high asphaltene amount (from 20% with more than) separated [1].

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Table 1 - Penetration bitumen addition concentration dependency

Under study bitumen	Penetration
Initial bitumen	100.1

+0.5% Supplement №1	73.2
+1% Addendum № 1	56.3
+1.5% Addition № 1	48.9
+2% Addendum № 1	44.1

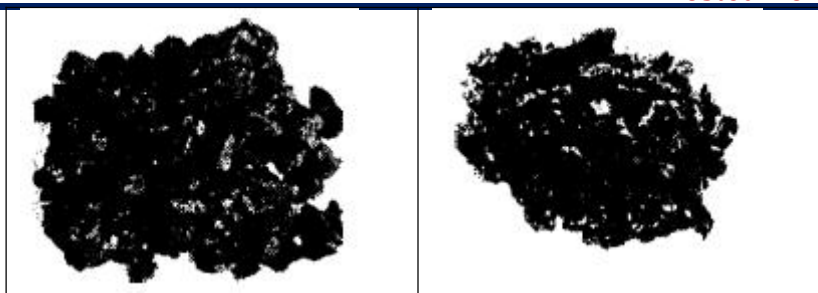
Bitumen compositions work to the characteristics temperature the impact in learning , additions amount increase soften point increase and fragility temperature reduce experimental accordingly was determined [5]. This of parameters improvement bitumen service to show suitable temperature range expanded shows . Test The results are presented in Table 2 .

Table 2 - Fragility temperature and ring and balloon dimensions temperature bitumen add concentration connection

Materials	T. ring and balloon according to size about °C	T. degree of brittleness, °C
Initial bitumen	44.4	-13
+0.5% Supplement №1	48.9	-16
+1% Addendum № 1	54.1	-16
+1.5% Addition № 1	60.55	-15.9
+2% Addendum № 1	63.8	-15

Minimum temperature at a concentration of 0.5-1% of the additive is achieved. Properties main from the indicators one his/her to bitumen adhesion to mineral materials adhesion [6]. In Belarus used the most wide disseminated mineral materials - dolomite and It is granite . Therefore for this we minerals on research take We went . This in materials adhesion from us visual evaluated and the results are presented in Figure 1 [7].

1) Bitumen-Gomel. Mineral material - dolomite	2) Bitumen - Shabanar + 0.5%. Addendum 1. Mineral material
	
3) Bitumen - Gomel. Mineral material	4) Bitumen - Gomel + 0.5%. Mineral material



1 - bitumen to dolomite adhesion ; 2 - modified bitumen to dolomite adhesion ; 3 - bitumen to granite adhesion ; 4 - modified bitumen to granite adhesion

Figure 1 - To the filler smeared modified bitumen From photographs visible as it stands , modified bitumen viscosity features unmodified bitumen than much good

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