

**STUDY OF PREPARATION OF PRESERVATIVE LIQUID AND AS CORROSION INHIBITOR BY
ADDING AMIDOAMINES BASED ON OLEIC ACID TO T-30 OIL IN DIFFERENT MOL
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Abstract

The conducted studies show that the high corrosion protection effect of the conservation liquids made on the basis of these compositions is explained by the strong chemisorption relationship with good physical adsorption of the compound to the metal surface due to the unused electron pair or partial protonation of the nitrogen atom in the nitrogen atoms in the inhibitor molecule. Basically, these conservation liquids create a protective layer on the surface of the metal, which prevents water vapor from entering the surface of the metal.

Keywords: corrosion, oleic acid, amidoamine

In recent years, the increase in aggressive environments and also increase in temperatures and pressures in the industry has increased the speed of the corrosion process, which has become the cause of serious danger in industrialized countries with high metal reserves. Under these conditions, due to the occurrence of dangerous corrosion processes-cracking corrosion, intergranular corrosion, pitting etc. the specific weight of damages has increased significantly. The effect of the corrosion process on selected areas of chemistry, reaction products and their purity is defined. Thus, the huge economic losses of corrosion in metals have been investigated by experts from different countries, and in industrialized countries this loss is estimated to be up to 2-4%.

Based on the current environmental conditions, the preparation of conservation compositions with high protection against corrosion is very important for the protection of metal equipment in our country. As a corrosion inhibitor, in recent years, more compositional reagents have been preferred [1-3]. It is known that various chemical reagents are widely used in oil extraction

and oil refining industries to protect equipment from corrosion, salt precipitation, and bactericides.

The presented work is devoted to the synthesis of organic matter obtained with the participation of oleic acid on the basis of monoethanolamine and to the investigation of corrosion properties.

Example-1: Amidoamine synthesized on the basis of oleic acid and monoethanolamine in a 1:1 mol ratio

Example-2: Amidoamine synthesized on the basis of oleic acid and polyethylene polyamine in a mol ratio of 2:1

Example-3: Amidoamine synthesized on the basis of oleic acid and polyethylene polyamine in a mol ratio of 4:1

Example-4: Amidoamine synthesized on the basis of oleic acid and polyethylene polyamine in a mol ratio of 6:1

Example-5: Imidazoline synthesized in 1:1 mol ratio based on oleic acid and polyethylene polyamine

Amidoamines prepared by us were added to T-30 oil in different percentages to prepare preservation liquids.

	Conservation liquids	%	Thermo humidity chamber	Sea water	0.001% H ₂ SO ₄
№1	T-30 oil 93% + Example-1 7%	7	361 days long	125	120
№2	T-30 oil 90% + Example -1 10%	10	361 days long	125	120
№3	T-30 oil 93% + Example-2 7%	7	230 days long	218 days long	218 days long
№4	T-30 oil 90% + Example-2 10%	10	230 days long	218 days long	218 days long
№5	T-30 oil 93% + Example-3 7%	7	230 days long	155	161
№6	T-30 oil 90% + Example-3 10%	10	230 days long	218 days long	218 days long
№7	T-30 oil 93% + Example-4 7%	7	230 days long	162	160
№8	T-30 oil 90% + Example-4 10%	10	230 days long	202	200
№9	T-30 oil 95% + Example-5 5%	5	210 days long	83	80
№10	T-30 oil 90% + Example-5 10%	10	210 days long	172	165

The testing process was carried out in a thermo-humidity experimental chamber, in sea water and in a 0.001% H₂SO₄ environment within the framework of existing standards. Based on the obtained results, it can be said that it is appropriate to use the synthesized amidoamine based on oleic acid to create more effective preservation liquids.

References:

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