

INNOVATIVE PROTECTION OF METAL AGAINST
CORROSION
ASMOL

2020

Asmol characteristics

A unique feature of asmoles insulating materials is the ability to chemically react with the metal surface to form a strong iron-oil polymer complex. Due to this, insulating asmol coatings have high coating adhesion to metal and polymers, low corrosion rate of metal under coating, high resistance to cathode polarization and retain all these properties during long-term operation.



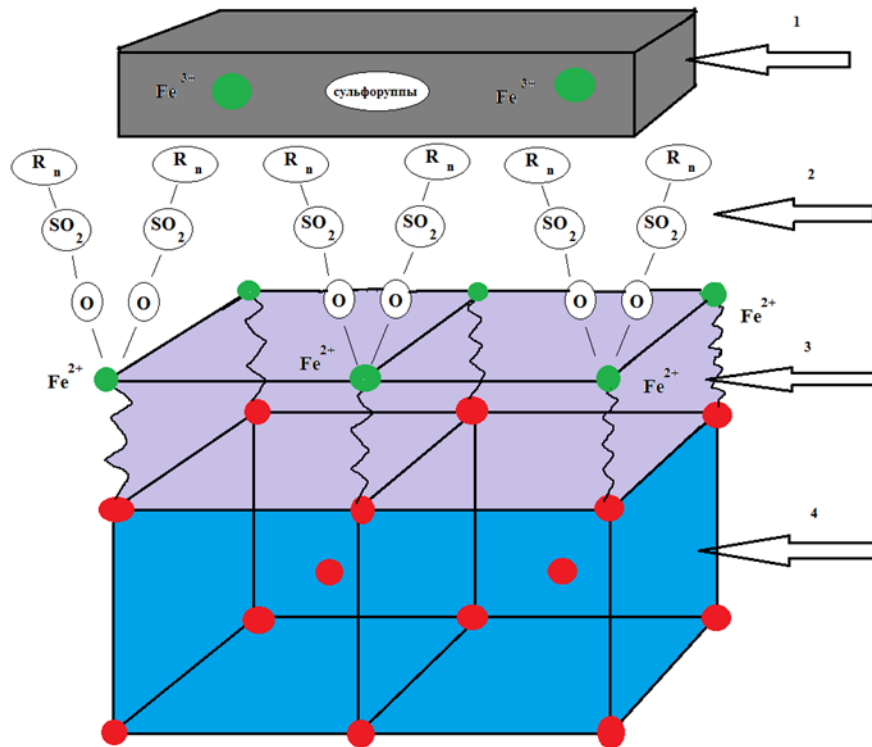
Asmol characteristics

- Does not require high degree of metal surface cleaning
- Does not require preliminary heating of metal surface
- Creates conditions of chemical interaction with metal surface and stops the process of metal oxidation and corrosion under coating
- Can be applied in a wide range of temperatures (down to -30°C)
- Pull-off testing has a cohesive nature
- No adhesive detachment of the coating, no access of electrolyte to the metal, no hydrogen generation
- The coating's sulphonic acid groups act as "traps" for oxygen
- Materials have the ability to modify and transport corrosion products into the coating, which prevents peeling of the coating from the protected surface

Asmol composition and action principle

Includes compounds containing highly polar functional groups characterized by chemical and surface activity:

- sulphonic acids
- high molecular weight carboxylic acids
- phenols



1 layer – Asmol

2 layer – surface layer of the products of interaction between Asmol's sulphonic acids and rust

3 layer – metal interlayer with modified structure

4 layer – metal

Protective properties

- Water retaining properties
- Deactivates corrosive water molecules
- Promotes self-healing of defects due to swelling in water media



Application

- corrosion protection of metal structures as a primer for any coating
- insulation of ground-to-air transitions
- pipeline surface treatment



Application

pipeline surface treatment



treatment of metal structures in maritime industry



railway tank treatment



insulation of ground-to-air transitions



- Asmol-treated metal structures' service life is increased by up to 30 years
- as per the results of pull-off testing, the original Asmol-based film has 1.5 times higher strength and almost 5 times higher percentage elongation than those of PVC
- absence of metal loss from pipeline surface
- halving of the number of cathodic protection stations
- polymer savings due to base thickness reduction from 0.6 mm to 0.2 mm

Asmol coating versions

- Asmol primer
- Asmol lacquer
- Asmol mastic composition
- Polymer-Asmol anticorrosion band LIAM
- Asmol-based web material reinforced with ARMAS fiberglass mesh

