

Anti-corrosive asphaltic material for metallic surface protection

Name: Said A. Abed

Corrosion Department, General Administration of Researches Labs, [Assiut Oil Refining Company (ASORC)], Assiut, Egypt.

Abstract

Soft asphalt not commonly used in coating for its long curing time in spite of it has adhesion properties and low cost while, Long oil alkyd resin (LOAR) is predominantly used, yet it is a weak material. This paper aims to produce modified asphaltic coating for metallic surface overcoming the disadvantages of asphalt and LOAR. To achieve this aim, LOAR was mixed with asphalt of penetration grade 60/70 in ranges of 3 to 12% (w/w). The prepared coatings were characterized mechanically and physically and evaluated for corrosion resistance. The results concluded that the prepared coating produces an effective coating material. The data obtained from the study reveals that the blend of long oil alkyd resin and asphalt cement result in better blend coating properties compared to virgin asphalt and LOAR used separately. The microstructure of the coating blend was studied using SEM and the components present were found to be compatible. Chemical testing indicated that the coating blends offered good coating resistance when exposed to a salt-spray environment for 500 h, This indicates that the coatings ideally suited for application to steel structures that are to be immersed in water, or buried in the earth. The incorporation of long oil alkyd resin improved the asphalt cement drying time, gloss, scratch hardness and chemical and corrosion resistance.

Biography

Dr./ Chemist/ Said Ahmed Abed, Consultative, (Section Head)(MSc /PhD in applied Sciences) of Research and Development in for [Assiut Oil Refining Company (ASORC)]. Dr. Instructor (Consultative) (MSc /PhD in applied Sciences) in Chemistry Department Faculty of Science at various Universities (2012 till now). I have got [Ph.D. in Applied Organic Chemistry; Supervision from external (Paderborn University - Germany) (2018)].

Author details

Full name: Dr./ Said Ahmed Sayed Mohamed Abed

Session name/ number: xxxxx

Category: xxxx (Oral/ Poster)

Email id: Saidabed000@gmail.com

Contact number: xxxxxx