

Tadeusz Abramski

THE OPTIMAL WORKSPACE EQUIPMENT FOR PAINT COATINGS RENOVATION OF PETROLEUM PRODUCTS STORAGE TANKS

Keywords: corrosion, tank, carga

Abstract

The article describes essential works and devices necessary to do renovation works of painting covers on stock containers of oil products.

Aleksandra Baraniak

TALKOR, Gdańsk

Małgorzata Zubielewicz

Instytut Inżynierii Materiałów Polimerowych i Barwników Oddział Zamiejscowy Farb i Tworzyw,
Gliwice

REQUIREMENTS CONCERNING CORROSION PROTECTION OF STORAGE TANKS FOR PETROLEUM PRODUCTS ACCORDING TO OBLIGATORY LEGAL ACTS. TEST METHODS FOR EVALUATION OF COATING SYSTEM SUITABILITY

Keywords: petroleum storage tanks, corrosion protection, coatings, testing

Abstract

Requirements according to obligatory legal acts, especially ordinances of Minister of Economy, concerning corrosion protection of storage tanks for petroleum products are discussed. Attention is paid to the importance of proper corrosion protection for environment protection against leakages of storage medium. Technical requirements for coatings used for internal surfaces of tanks are given and basic tests for evaluation of suitability of coating systems are described.

Adam Bochenek

Paweł Franczak

Wiesław Pieniążek

ANTICOR Wieliczka

THE COATING SYSTEMS FOR FERROCONCRETE BRIDGE OBJECTS PROTECTION BASED ON THE ASPHALT MODIFIED URETHANES

Keywords: corrosion, ferroconcrete construction, urethanes, anticorrosion coatings

Abstract

In this paper the coating systems especially designed for bridges objects are presented. These are an chemical hardening composition of urethanes modified by asphalt. These coating are applied in liquid state by hand or airless spraying. The base and hardener components should be carefully mixed in proper mixing ratio at first. These coatings are have prolonged chemical resistance for most substances and mixtures especially for acids, hydroxides or municipal, biological and manufacturing wastes. More over these have a very good mechanical and excellent abrasion resistance. The several examples from real application are presented in this paper.

Agnieszka Królikowska

Polskie Stowarzyszenie Korozyjne

CATASTROPHES, LOSSES AND HINDRANCES CAUSED BY CORROSION

Keywords: corrosion costs, corrosion education corrosion catastrophes

Abstract

The lecture's subject is the corrosion impact on the public safety, the economy and the environment. The examples of constructions' collapses and other damages caused by the corrosion processes are shown. We also pay attention to the side effects of corrosion in the public domain like increased ugliness of the surrounds. We would like to underline the need of increased awareness of the corrosion related issues by Governments, industry, scientists, and the general public. The appropriate corrosion strategies in these fields mean increased public safety, reliable performance, maximized asset life, environmental protection, and more cost effective operations in the long run.

Andrzej Kubacki

Teknos Sp. z o.o. - Warszawa

PAINTING OF STEEL TANKS USED FOR THE STORAGE OF WATER, FOOD AND CHEMICAL PRODUCTS

Keywords: corrosion, steel tanks, chemical resistant coatings, surface preparation, tank coating

Abstract

The article takes in basic information about chemically resistant coats designed for the protection of steel tanks. It adverts on key problems, which must be solved during the application of chemically resistant coats.

Marek Łukomski

Instytut Techniki Budowlanej, Warszawa

NEW APPROACH IN FIRE TESTS OF FIRE PROTECTIVE COATINGS APPLIED TO STEEL STRUCTURES ELEMENTS

Keywords: Fire safety, steel structure, fire protection materials, intumescent paints, fire tests, thermal activated materials

Abstract

The paper deals with methods of testing and evaluating of thermally activated coatings applied to steel structures. There are described main changes in new approach in testing and assessment amendment in new intumescent paints project testing standard. Author describes the behavior of intumescent paints during fire efficiency tests.

Witold Majewski

Gemite Polska sp. z o.o.

PERFORMANCE STANDARDS OF CONCRETE CORROSION PROTECTION IN BRIDGE BUILDING AND THE ANTICIPATED DEVELOPMENTS

Keywords: durability of concrete constructions, concrete impregnation, coatings on concrete

Abstract

In the coming years the concrete construction and concrete repair industries will be called upon to address two major issues: how to provide an adequate corrosion control in new concrete constructions and how to ensure the quality, longevity and durability of the repairs of the existing, ageing rapidly concrete structures. In bridge building certain progress has been made during the recent 20-30 years. Further progress is hampered by the lack of necessary performance standards. In Poland the existing situation in respect to performance standards for concrete corrosion protection in bridge building is far from ideal. Whereas the new European standard PN EN 1504 brings some promise for the improvements, it is not clear, at the moment, if the standard will play sufficient role in stimulating development of the new concrete corrosion protection technologies and materials. From the weaknesses as well as problems with the existing protective material some predictions may be proposed in regards to the technical developments in the near future.

Andrzej Miodek

Petro Kor sp. z o.o.

LIQUID FUELS STORAGE TANKS REPAIRS RENOVATION OF ANTICORROSIVE PROTECTION

Keywords: corrosion, anticorrosive protection, corrosive risk, weather conditions, renovation of coats

Abstract

In the report there were discussed such issues as: technical condition of tanks (both ground and underground) classified for repair; commonly occurring coatings damages; corrosion risk spots and renovation methods (also in poor atmospheric conditions).

Teresa Możaryn

Instytut Techniki Budowlanej, Warszawa

DURABILITY OF BUILDING PRODUCTS AND SUSTAINABLE USE OF NATURAL RESOURCES

Keywords: service life, building products/structures

Abstract

The papers refers to the testing and assessment of building products for the purpose of European Assessment Documents (EAD) in the aspects of the sustainable use of natural resources.

Marek Podgórski

TECH SAFE Biuro Konsultingowe

PRESENTATION ON FIRE PROTECTION SYSTEMS

Štefan Rástocký

Fires s.r.o. Batizovce (Słowacja)

Europejska Jednostka Notyfikowana Nr 1396

**RULES AND TESTING REQUIRED BY EUROPEAN COMMISSION
AND CEN BEFORE THE PRODUCTS INTENDED FOR FIRE
PROTECTION OF STEEL MEMBERS ARE PUTTED ON THE MARKET
AND USED IN BUILDINGS**

Keywords: fire resistance, reaction to fire, fire protection, fire protection system, steel member

Abstract

The aim of the article is to explain the procedures and rules prepared by European Commission and valid for fire protection products of steel constructions before they are putted on the market and incorporate in buildings in member states of European Union. The fire resistance tests, reaction to fire tests and other necessary tests are described as well as the time-temperature curves used for fire resistance tests (standard time-temperature curve, slow heating curve, hydro-carbon curve). Requirements for fire protection systems from different environmental conditions point of view and possible changes of primer or top coat in fire protection systems are also discussed.

Krzysztof Saramowicz

Gemite Polska Sp. z o. o. Warszawa

CORROSION HAZARDS OF ENGINEERING STRUCTURES

Keywords: transportation infrastructure engineering, corrosion processes and their mechanism, “critical points” of constructions

Abstract

Due to the rapid civilization progress there has been a gradual need to develop the system of transportation infrastructure. The increasing number of the construction works on the road networks has presented engineers with an immediate necessity of anti-corrosion protection. In order to carry out this task one has to gain the knowledge of the processes taking place on the structures which are exposed to changeable weather conditions for twenty four hours all the year round. There is no chance for these constructions to repel corrosion without advanced technological support...

Wojciech Sokólski

SPZP CORRPOL

Polski Komitet Elektrochemicznej Ochrony przed Korozją SEP

CATHODIC PROTECTION OF REINFORCING STEEL IN CONCRETE – PRESENT STATE OF TECHNOLOGY, SCOPE OF APPLICATION AND STANDARD REQUIREMENTS

Keywords: reinforced concrete, cathodic protection, applications, standards

Abstract

Reinforcing steel in concrete is not subjected to corrosion until a change in physicochemical properties occurs of concrete under the influence of aggressive agents - carbon dioxide and chloride ions, which with time penetrate inside the reinforced concrete structure. Concrete, especially moist concrete, is a good electric current conductor and hence steel can be protected against corrosion with the use of cathodic protection. The paper describes the basis of reinforced concrete cathodic protection, applied sub-assemblies and protection installation elements, as well as typical technical applications of this technology. European standard requirements also have been described, connected with this anticorrosion protection method.

Wojciech Sokólski

SPZP CORRPOL Gdańsk

Polski Komitet Elektrochemicznej Ochrony przed Korozją SEP

CORROSION PROTECTION OF TANK WALLSHAVING CONTACT WITH THE GROUND AND ELECTROLYTES CATHODIC PROTECTION – STANDARDS, REGULATIONS, PRACTICAL APPLICATIONS

Keywords: tanks, cathodic protection, standards, regulations, applications

Abstract

Consolidated principles exist in world technology for cathodic protection of steel tanks, the walls of which are in direct contact with the ground. No such requirements are in force in Poland and existing regulations are not unequivocal in this respect. In the paper the problem has been discussed of underground steel tank corrosion and basic cathodic protection standards of such objects. Against this background current Polish regulations have been presented. Attention has been focused on ecological problems – the role of cathodic protection in protection of the environment. Typical applications of cathodic protection have been given for underground tanks and bottoms of aboveground fuel tanks.