



Corrosion Control Coating

INVENTION

The invention is an anticorrosion coating for the protection of steel. The invention is using encapsulated clay in waterborne polyurethane dispersions. Different monomers and their ratio have been used in two different processes to obtain a long shelf life dispersion. At certain monomer concentration the dispersion showed a longer shelf life. Water has been mainly used as the solvent in the manufacturing of the coating to protect the environment from toxic organic solvents. The eco-friendly nature of the proposed coating is needed by the industry that want to protect steel against corrosion.

MARKET NEED

The anti-corrosion coating are required in oil and gas, ships industry and power generation. The anti-corrosion coating is applied on metal surfaces in aforementioned industries. The market for protective coating is steadily growing with total revenues exceeding \$17.29 billion in 2013. With the 10 years forecast in view, this market is projected to grow by 4.3 times.

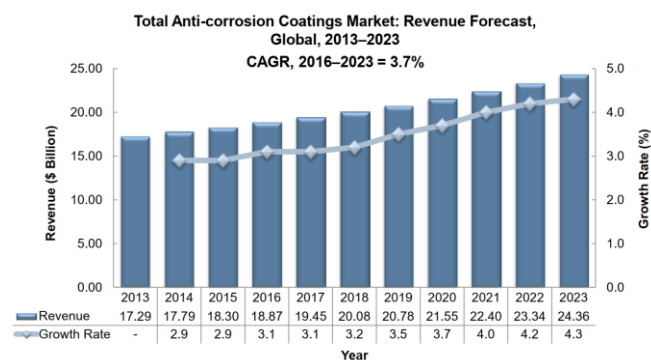


Figure 1: Revenue forecast¹

APPLICATIONS

The invention can be used for corrosion and fouling protection of metals; in particular steel.

PROJECT STATUS

This invention in its current form has been tested at laboratory scale. The invention is proven to be stable and viscosity analysis showed promising results.

ADVANTAGES

This invention has the following main advantages over the existing ones:

- Improved storage time of dispersion (twelve months)
- Long shelf life
- Environment friendly
- Cheaper due to use of water as a main solvent

LOOKING FOR A DEVELOPMENT PARTNER

Although the devised invention has been proven at the lab scale, it needs to be tested for industrial usage. King Fahd University of Petroleum & Minerals (KFUPM) seeks an industrial partner for its development and possible commercialization.

PATENT PROTECTION

A U.S. patent application has been filed with application number 15/994,239. The intellectual property is owned by KFUPM.

ABOUT KFUPM

KFUPM is a leading educational organization for science and technology. KFUPM's Innovation & Technology Transfer office is tasked with taking innovation from lab to market place.

For further information, please contact:
Email: ip-license@kfupm.edu.sa

¹ Source: Frost & Sullivan