

SPRAYED METAL COATINGS – PERFORMANCE IN CORROSIVE ENVIRONMENT

Spray metal coatings give good corrosion resistance leading to extended maintenance periods. Both zinc and aluminium are commonly used, either alone, or over-coated by a paint system, the intention being that the protective effects of the sprayed metal and organic coatings are additive. Both metals have a higher electrode potential than steel, and will therefore corrode preferentially when in electrical contact with it.

The traditional thinking is that aluminium coatings are best for polluted industrial environments, while zinc is more tolerant of marine environments. This assertion is tested in the report, with respect to metal coatings over-coated with the commonly used BR paints.

The study demonstrates that sprayed metal offers significant improvements in the life of coating systems. Aluminium is favoured in polluted urban areas, whilst sprayed zinc is preferred for marine environments.

Other experiments have been performed using mixed metal sprays, which suggest they may be suitable for environments which combine elements of both industrial and marine pollution.