Editorial

CATHODIC PROTECTION

CATHODIC Protection is an important and elegant tool today for the corrosion engineer in fighting the battle against corrosion. The progress in the application of the principles of cathodic protection in corrosion prevention has been phenomenal during the last decade or so. Marine corosion is a fertile field for the practice of cathodic protection. This process can save over 20,000 pounds per year on the maintenance of a 25,000 ton ship. The oil industry is another. It has been found that cathodic protection is the most effective method for prevention of acid attack on steel during acid cleaning. A relatively recent entry is the thermo-electric generator generally used for the protection of gas pipelines; the cost of this current at present is about 9 pounds per watt. It is worthwhile to investigate the economics of the application of cathodic protection combined with corrosion inhibitors where feasible.

This subject is adequately represented in Corrosion Conferences. The Second International Congress on Metallic Corrosion, the Third Congress of the European Federation of Corrosion and the Commonwealth Corrosion Symposium at Kanpur had technical sessions on cathodic protection. There has been an awareness of the importance of this technique in India. Several papers have been published. The Council of Scientific and Industrial Research has set up a Committee on Cathodic Protection and Inhibition. The oil pipelines are being protected cathodically.

Under certain conditions cathodic protection can be applied for the prevention of the corrosion of aluminium, and is becoming an established practice for buried aluminium. This problem is one of special interest in India where aluminium has to take the place of steel as far as possible. Further, the protection of steel by aluminium as a galvanic anode, and by aluminium scrap as a consumable anode in impressed current system, need particular emphasis. Corrosion courses for the training of personnel should give sufficient attention to the principles and practice of cathodic protection.

In keeping with the industrial expansion in India, cathodic protection should be recognised as an effective weapon in corrosion control. Research work needs also to be intensified in this field. In addition to the theoretical aspects, the topic is one of considerable economic significance. It is to be hoped that cathodic protection will receive greater impetus amongst research workers, technologists and engineers in India in the future.

—T.L.R.