News Section

SECTION REPORT

Personals

A. N. Kappanna has been appointed as Director, Central Salt Research Institute, Bhavnagar.

Advertisements

The Section will accept advertisements for the Bulletin at the following rates per insertion:

Full page, 8" × 6"—Rs. 65
Half page, 4" × 6"—Rs. 35
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Note—Blocks or stereos accepted, matrics not accepted. Screen for half-tone blocks not more than 100.

GENERAL NOTES

Seminar on Caustic Soda Industry in India

The Development Council for Alkalis and Allied Industries, Govt. of India, held a Seminar on 'Caustic Soda Industry in India' at Bombay during December 1960. Twentyseven papers were presented under the following Sections: (1) Brine purification in alkali industries, (2) Power rectification techniques and equipment, (3) Electrolytic cells design and operations, (4) Caustic soda fusion and packaging, (5) Caustic soda by chemical process, (6) Preventive maintenance, (7) Statistical quality control, (8) Instrumentation, (9) Material of construction and corrosion, and (10) Research and development. The list of papers can be found in 'Chemical Age of India', Vol. 12, No. 1, 1961. It is planned to publish the proceedings of the Seminar in 'Chemical Age of India'.

Institution of Metallurgists — Refresher Courses

The 1960 Refresher Course on 'Toughness and Brittleness in Metals' was held by the Institution of Metallurgists during November. The topic for this year's Course is 'Purer Metals', and will be dealt with both from the general engineering view-point and from the more specialized and research angles.

Silver Plating

An interesting report on silver plating has recently been published in Poland, where a bright periodic reverse current plating process has been developed without the use of addition agents. The standard cyanide solution is used with a cycle of 4 seconds plating at 90 asf and 20 seconds deplating at 30 asf. Reflectivity as good as or better than on mechanically polished silver deposits is claimed. The process might well deserve a trial in spite of the fact that many current applications of bright silver require a hard deposit. In this connection the work from East Germany on antimony additions is of some significance. In the USSR, nickel or cobalt have recently been used to increase the hardness and wear resistance of silver deposits plated from a cyanide bath with the use of pulsed current.—Electroplating and Metal Finishing, Vol. 14, No. 3, 99, 1961.

Nickel Sulphamate Bath

A new application for sulphamate nickel has been found in the aircraft industry for the protection of stainless steels on such components as compressor rotors, on which a compressively stressed deposit is required. The parts are degreased, cleaned anodically, rinsed in hot and cold water and etched in chemically pure hydrochloric acid. They are then rinsed and transferred to an activating bath — nickel sulphate at pH 1. From this the parts are transferred without delay to the plating bath, where the parts are struck at 80 asf for 1 minute before plating to the required thickness at 20 asf. If a chloride-free bath is used, it is possible to obtain a deposit with a minimum compressive stress of 7500 psi.—Electroplating and Metal Finishing, Vol. 14, No. 3, 99, 1961.

ECS Meeting in Indianapolis

The Electrochemical Society held its 119th meeting in Indianapolis for four days from April 30, 1961. Technical sessions covered electric insulation, electronics — luminescene and semiconductors, electrothermics and metallurgy, industrial electrolytic and theoretical electrochemistry. The topics for the Symposia were: (*a*) electric insulation — thin dielectric films, epoxy resins, (*b*) electronics — semiconductors — crystal growth and structure, semiconductor surfaces, compound semiconductors, device processing and characterization, diffusion, (*c*) electrothermics and metallurgy—ultrafine particles, (*d*) industrial electrolytic—theoretical electrochemistry—battery—fuel cells, and (*e*) theoretical electrochemistry—modern instrumentation and techniques of electrochemical measurements. Abstracts of the 160 papers are given in the March 1961 issue of the Journal of the Electrochemical Society.

Corrosion of Iron and Tin

A Symposium on the Corrosion of Iron and Tin was held in Richmond, Virginia, U.S.A., during November 1959. The following 5 papers presented at the symposium have been published in the February 1961 issue of 'Corrosion': (1) Accelarated corrosion test for tin plate in grapefruit and other juices, (2) Corrosion resistance of electrolytic tin plate-parts 1 and 2, (3) Coupling shift and hydrogen overvoltage in the protection of steel by tin, and (4) Influence of area of the steel component on behaviour of a tin-steel couple.

Corrosion Problems in the Chemical Industry

The March 1961 issue of 'Corrosion' contains 8 papers on corrosion problems in the chemical industry: (1) Handling mixed corrosives with glass reinforced epoxy well tubing and line pipe, (2) Data sheets suggested to solve corrosion design problems in chemical process equipment (3) Generalized rules for controlling chemical process equipment corrosion, (4) Insurance company's viewpoint on catastrophic explosions of pressure vessels caused by corrosion damage, (5) water treatment change reduces nitrogen plant corrosion rates, (6) Influence of acid and chloride concentrations on corrosion in a nitric acid concentracter, (7) Aluminium satisfactory to resist ammonium nitrate corrosion—if precautions are taken, (8) Corrosion — generated hydrogen explodes in phosphoric acid tank.

Aluminium Bonded to Stainless Steel

Fairmont Aluminium Co., a Subsidiary of Cerro Corpn, announced that it has successfully joined, by molecular bonding, aluminium sheet to stainless steel. In making the announcement the President of the company says "the process by which we developed our stainless clad and our entry into this new field can be expected to have significant effect on the company's future, and "we believe stainless clad's influence will also be reflected throughout the metal working industry".—The Eastern Metals Review, Vol. 14, No. 10, 378, 1961.

Titanium Metallurgy

The July-August 1960 issue of 'Metallurgiya i Toplivo' (Metallurgy and Fuels) contains a section of 14 papers devoted exclusively to the metallurgy of titanium. The topics include electrochemical properties of potassium titanium fluoride—sodium chloride—titanium oxide, electrolysis of titanium oxide and chloride in molten salts, electrolytic separation of titanium alloy components, electrorefining, hydrometallurgy, and corrosion properties of titanium alloys. Abstract of the papers have been given in the December 1960 issue of Crerar Metals Abstracts.

First International Congress on Metallic Corrosion

London was the venue of the First International Congress on Metallic Corrosion held during April 10-15, 1961. 84 papers were presented by scientists from 19 countries: Belgium, Canada, Czechoslovakia, Finland, France, Germany, Holland, Hungary, India, Italy, Japan, N. Ireland, Norway, Poland, Rumania, S. Africa, U.K., U.S.A. and USSR. There were 14 sections covering various aspects of corrosion: inhibitors, fundamental studies, cathodic and electrolytic protection, metallic coatings, practical experience, corrosion in atomic energy, boiler corrosion, integranular and stress corrosion, experimental methods and laboratory corrosion testing, atmospheric corrosion, high temperature oxidation, corrosion fatigue, underground corrosion and paints. Four plenary lectures were delivered by Prof. Y. Kolotyrkin (USSR), Prof. P. Lacombe (France), Prof. H. H. Uhlig (USA) and Dr U. R. Evans (U.K.). The programme included works visits and social gatherings. Preprints of the papers have been made available prior to the Congress, and the proceedings will be published by Butterworths, London.

The two papers from India were: 'Inhibition of the Corrosion of Aluminium Alloys in Acid and Alkaline Solutions' by T. L. Rama Char and J. Sundararajan, Bangalore, and 'The Mechanism of Breakdown of Paint Films on Metals under Immersed Conditions' by C. P. De and V. M. Kelkar, Bombay.

Conference on Temperature

A Symposium on 'Temperature—Its Measurement and Control in Science and Industry' was held at Columbus, Ohio, U.S.A. during March 1961, with several hundred participating scientists from different countries. This was the fourth in a series of notable symposia on temperature, and was sponsored by the American Institute of Physics, the Instrument Society of America, and the National Bureau of Standards, U.S.A. A total of 228 papers covered temperature measurements from absolute zero to 10 million K. The proceedings will be published as an addition to the two previous volumes of this series of authoritative references on the subject of temperature from the very lowest to the very highest.

IMF Anuual Conferonce

The Institute of Metal Finishing held its annual Conference at Llandudno from May 2 to 6, 1961. Sixteen papers were contributed in 4 technical sessions: (1) nickel and chromium, (2) process industries, (3) general research, and (4) selection and testing of coatings. Amongst the interesting papers mention may be made of the following: electrodeposition of ruthenium; electrodeposition in manufacture of plain bearings; an improved technique for measuring the cathode overpotential during electrodeposition.

First International Industrial Finishes Exhibition and Convention

The First International Industrial Finishes Exhibition and Convention (This Bulletin, Vol. 9, No. 4, 1960) was held in London during May 8-11, 1961. For the first time, the phenominal advances that have been made in modern finishing techniques over the last decade were brought under one roof. The exhibition included finishing equipment, materials, plant and processes. At the technical convention papers were read on the practical aspects of the use of finishes in many industries. Preprints were made available to the delegates.

AES Meeting

The forty-eighth annual convention of the American Electroplaters' Society was held at Boston from June 18 to 23, 1961. The programme included educational sessions, plant visits and social gatherings. There were 29 papers together with a Symposium on the finishing of light metals. A wide variety of topics were covered: plating — metals and alloys; chemical conversion and anodic coatings; quality control; electroforming; organic finishes; corrosion testing.

International Meeting on Water Research

An International Meeting on Water Research (This Bulletin, Vol. 10, No. 1, 1961) was organized for 5 days from June 5, 1961 at Liege, Belgium. Three days were devoted mainly to problems concerning corrosion through industrial waters — raw, treated, recycled and waste, and the programme constituted the 14th session of the European Federation of Corrosion. The last 2 days were allotted to sessions on: pumping of charged waters; plastics, quality and control. 14 papers were contributed under three sections on corrosion: general problems; special problems; corrosion of heat exchangers and, corrosion and deposits. The topics included protection of wood, corrosion of aluminium, metallic corrosion under a coat of tartar, protection of water mains, corrosion of concretes, detergents in metallic corrosion, corrosion by thermal and mineral waters, corrosion in high-pressure boilers, corrosion microcells on allied copper tubes for heat exchangers, and corrosion problem in central heatings. The proceedings of the meeting will be published in 'CEBEDEAU'.

Gordon Research Conference on Electrodeposition

The 1961 Gordon Research Conference on Electrodeposition will be held at Tilton, N. H, U.S.A. from July 31 to August 4, 1961. The purpose of the programme is to bring experts up to date on the latest developments. Sessions have been scheduled on: (1) Mechanism of electrodeposition, (2) Addition agents in electrodeposition, (3) Effect of structure on properties, (4) Electrodeposition of alloys, (5) Electrodeposition on unusual substrates, and (6) Current problems in the utilization of plated coatings. Titles of the 21 papers are given in Plating, Vol. 48, April 1961.

T. L. R.