

Welding Abstracts

(IWJ publishes regularly abstracts of articles appearing in technical and other publications received by the Institute. The publications themselves will be available at the Institute for reference.—Editor).

(1) New Cold Pressure Welding Machines

Equipment developed in the U.K. for cold pressure welding of copper wire is described with illustrations.

("Copper" May 1969)

(2) Codes for Petroleum Industry Structures

by J G WILSON AND P D THOMAS.

The article reflects the modern thinking in the USA in regard to effective utilization of carbon steel in structures such as pressure vessels, tanks, pipelines and drilling platforms. The importance of high strength materials, sophisticated design approach and stringent quality assurance programmes is emphasized.

("Welding Engineer", May 1969)

(3) Are you clear on Pressure Vessel Code Requirements ?

by ROBERT CHUSE

This article explains certain aspects of the ASME Code relating to pressure vessels with a view to preventing misinterpretation by users.

("Welding Engineer", May 1969)

(4) Welded Cellular Steel Towers Support first major Orthotropic Bridge

by C SEIM

This discusses design, fabrication and erection of the San Mateo-Hayward Bridge near San Francisco. This bridge made of welded steel was declared by the American Society of Civil Engineers to be the most outstanding civil engineering achievement of 1967 in the USA.

("Welding Engineer", May 1969)

(5) Welding Literature for Engineers

by P S R K AYYAVARI SASTRY

A useful list of books and other publications relating to welding is provided which should be of interest to all engaged in welding.

("Machine Building Industry", July-August 1969)

(6) Tubes for Transit System

by E F BRUMMERSTEDT AND C M WILSON

A description of the fabrication of an under-water tunnel between San Francisco and Oakland, California. The tunnel is constructed with 366 ft. long sections consisting of arc welded steel tubes around which concrete is cast.

("Welding Journal", June 1969)

- (7) **A Brazing Alloy for Ammonia Service**
by R N STENERSON

This describes development of a brazing alloy suitable for ammonia service such as is required in the refrigeration industry.

("Welding Journal", June 1969)

- (8) **Embrittlement of Type 347 Stainless Steel Weldments by Sigma Phase**
by E L CREAMER,
I ROZALSKY AND R W LEONARD

This article discusses laboratory studies performed on type 347 stainless steel weld metal and plate to investigate the inter relationship between Sigma phase formation, temperature and the degree of embrittlement which can occur.

("Welding Journal", June 1969)

- (9) **New Developments and Applications in Manual Plasma Arc Welding**
by E F GORMAN

This paper describes the characteristics of manual plasma arc welding of foil thickness and light gauge materials such as stainless steel. The thicknesses range from 0.001" to 1/8" and currents used range from 0.1 to 100 amps.

("Welding Journal", July 1969)

- (10) **A New Concept in Resistance Welding Electrode Design**
by R L MOMENT AND S A BUSH

A composite design is described wherein the electrode base portion is a high conductive alloy to which is attached a surrounding cap of low conductivity material. Such a design is claimed to lead to a wider degree of application freedom.

("Welding Journal", July 1969)

- (11) **Vermin-proof Food Plant**
by V V NETCH,
C WILSON AND B J BRUGGE

The use of a frame made up of welded boxed beams and columns ensured that there was no port of entry for insects, a very important consideration in the storage of food products. The stringent vermin-proof requirements laid down by the user insisted that there should be no channels, cracks or recesses in the frame work that would harbour the smallest insect.

("Welding Journal", July 1969)

- (12) **PVRC Support of the ASME Boiler and Pressure Vessel Committee Activities**

by W D DOTY

The article reviews the objectives and progress of Vessel Research Committee in the USA. The work done by the three divisions in the field of materials, design and fabrication closely support the activities of ASME.

("Welding Journal", July 1969)

- (13) **A Model for Toughness Studies of Welds**

by L. L. J. CHIN

The role of inclusions in determining the Charpy V-notch toughness of welds is shown to be through a discontinuous mode of crack propagation involving coalescence of cracks initiated by individual inclusions.

("Welding Journal", July 1969)

- (14) **Modern Techniques of Hardfacing**

This article is a summary of current hardfacing processes and endeavours to give an overall view of the processes and materials available.

(IOL "Welding Digest", October 1969)