2-3 ₁₉₈₆



POLISH TECHNICAL REVIEW

















ZRZESZENIE PRZEDSIĘBIORSTW BUDOWY MASZYN I URZĄDZEŃ BUDOWLANYCH ZREMB (Association of Building Machinery and Equipment Enterprises)
ul. Krucza 16/22, 00-526 Warszawa, Poland, Director of Association, Tel.: 29 69 21, Tlx: 813596, 815667

 ▼ ZREMB is the leading manufacturer of machines for the building and building materials industry ◆ ZREMB is the general supplier for the home market and for export of process equipment for cellular concrete and silica brick plants, cement factories, lime plants and concrete prefabricates works.
 ◆ ZREMB carries out the repairs of machines and equipment of own production and of excavators, loaders, bulldozers or cranes of other manufactures. • ZREMB supplies the building industry with machines, equipment and spare parts of both Polish and foreign make, offers consultancy on a proper selection of machines and equipment, organizes exhibitions of construction machinery both at home and abroad as well as attractive shows of new construction equipment.

2-3



POLISH TECHNICAL REVIEW

X SIGMA

PUBLISHERS OF TECHNICAL PERIODICALS AND BOOKS SIGMA - AN ENTERPRISE OF THE CENTRAL TÉCHNICAL ORGANIZATION ul. Biata 4, 00-950 Warsaw, P.O.B. 1004, Tel: 39 11 99. Tix 814 877 WCT WA PL. Issued in English, French, German and Russian

CONTENTS MEASUREMENT-CONTROL APPARATUS A plasma waves' analyzer An instrument for viscosity determination (patent) A surface roughness measuring sensor (patent) A semi-conductor iron 5 METAL WORKING Pressure welding and fusion welding of strainers (ion exchangers) from shaped wire 7 Equipment for the straightening of metal wagon 10 MOTOR ENGINEERING Production of fuel-water mixtures for feeding Diesel engines Pumping assembly of a Diesel engine injection pump 15 The recovery of uranium contained in phosphorites 17 An indirectly-cooled fluidized crystallizer (patent) . . 19 A cyclone filter (patent) Determination of the liquid phase volume fraction in the gas-liquid flow two-phase system (patent) 20 POLIMEX-CEKOP builds a sulphuric acid plant in the F.R.G AT THE DESIGNER'S DRAWING BOARD Liquid fuels from coal IN BRIEF 6, 25, 26 PRESS SERVICE I-VIII

Production of fuel-water mixtures for feeding Diesel engines

Investigations on the utilization of fuel-water mixtures carried out at the High Naval College, Szczecin have led to the solution of a number of problems connected with the stability and degree of dispersion of these mixtures which are used as a substitute fuel for feeding Diesel engines. Article on p. 12

Recovery of uranium contained in phosphorites

The recovery of uranium from phosphorites during the production of artifical fertilizers is becoming an ever more attractive solution. The Technical University of Wrocław has developed a method for uranium recovery. The method has a number of economic advantages and ensures protection of the environment. For details of the patented method see article on p. 17

Liquid fuels from coal

Within the series At the Designer's Drawing Board, the issue brings an interview with Dr Walter Matula who is responsible for a government programme dealing with the obtention from coal of liquid, gaseous, coke-like fuels and chemical materials. Dr.Matula speaks of the effects yielded by the Polish technological-construction investigations conducted in cooperation with the United Nations on refinling young, ash- and sulphur containing coal from the area bordering on the Vistula river, on the problems already solved and the tasks which still call for further investigations. Details on p. 22

Programmatic council: K. Badźmirowski, J.W. Matusiak, A. Nowik, S. Okoń, W. Przybylski, L. Sender, J. Toeplitz

Editorial staff: J. Toeplitz (chief editor), I. Chmielewska, A. Witkowski (assistant editors), S. Hilscher (managing editor), E. Karska, J. Wolf

English editor: E. Karska Graphic layout: F. Barącz

Production manager: A. Dziewulska-Kijas

Subscription orders should be addressed to the Ars Polona-Ruch, 00-950 Warsaw, P.O.B. 1002, ul. Krakowskie Przedmieście 7 or to one of the representatives of this company abroad.

Printing office: SIGMA – Warsaw Index no 36915