

Company Notebook

MAGNEQUENCH POWDER TO BE PRODUCED IN JAPAN?

General Motors announced that, as part of a rationalization, they had ceased production of Magnequench powder, the raw material for anisotropic Nd–Fe–B magnets, in the USA. GM have sought a partner in Japan to produce the powder. Lack of success is attributed to the insistence of GM on keeping the patent and on maintaining sales rights. Nd bonded magnets face competition from Sm–Fe–N and Nd–Ti–N magnets under development by Asahi Chemical Industries. Nd–based magnets have the advantage of being less expensive to manufacture than Sm–based products, however.

MAGNETIC SEPARATORS FOR A CHINESE POWER COMPANY

Boxmag–Rapid of Birmingham, U.K. has supplied six magnetic separators and two metal detectors to the Shenzhen Mawan Power Co. in China. This coal–fired power station uses locally produced coal and in order to protect the coal processing and handling installations two oil–filled magnetic suspension magnets and four oil–filled overband separators were installed to remove the contaminating tramp iron and steel.

AGREEMENT BETWEEN F.W. BELL AND MAGNET–PHYSIK

Two major manufacturers of magnetic measuring instruments, magnetizers and demagnetizers, F.W. Bell, USA and Magnet–Physik, Germany entered into a cooperation agreement. Magnet–Physik will market the F.W. Bell gaussmeters and Hall–effect probes via its world–wide distribution network, under its own name. Similarly, F.W. Bell took over the distribution of the Magnet–Physik product range and the USA and Canada.

LABORATORY SEPARATOR OF NON–FERROUS METALS

A laboratory magnetic separator capable of separating non–ferrous metals from ferrous metals and non–metallics has been developed by Steinert Elektromagnetbau. It consists of a belt conveyor with two drums, one of which is the drive motor, and a secondary drum driven at a much greater speed to provide the magnetic field. Both belt speed and the magnetic drum speed are infinitely variable to provide optimum separation conditions. The separator can treat material in the size range 3 to 50 mm.

SUPERCONDUCTING MAGNETS FOR THE US AIR FORCE

Two superconducting magnets have been delivered to the US Air Force's Aeronautical Systems Center at Wright-Patterson Air Force Base in Ohio. Their future applications will be in spy-in-the-sky satellites and in compact generators for electric utilities. American Superconductor Corp., Watertown, Mass., USA coil, about the size of a portable telephone and weighing only 150 kg will be used in a 5-MW generator. The coil, cooled to 20 K will produce a peak magnetic field of 0.3 T. Another prototype coil from Intermagnetics General Corp., Guilderland, N.Y., USA has been wound with 984 turns of Ag-clad Bi-Sr-Ca-CuO tape and is currently undergoing tests. Each of the first two coils has been developed under separate US\$500,000 contracts awarded by Wright Laboratory.

AUSTRALIA'S BHP TO PLAY A ROLE IN MINERALS SANDS

Broken Hill Pty. (BHP) is set to play the major role in developing a mineral sands project in Mozambique. It has signed a deal with Kenmare Resources which could lead to BHP spending \$24.1M to earn a 75% share in the Congolone project on the northern coast of Mozambique. The scheme would process ilmenite to produce 500 kt/y of titanium slag. No development decision would be made before 1997, however, and this would be dependent on the Mozambican government offering further tax incentives. It is estimated that a combination of Beenup project in Western Australia and Congolone would give BHP more than 20% of the market for titanium oxide.

NEW PLATINUM MINE DUE TO START WORK

Potgietersrust Platinums (PP Rust), South Africa, JCI's new platinum mine, will start production of precious metals concentrates in May 1993. The first concentrate is expected to be transported to associate Rustenburg Platinum for toll refining later in May. The open-cast mine is expected to process 2.4Mt of ore a year, yielding 170 000 oz of platinum and 13 000 oz of rhodium, at an average grade of 6.2 g/t PGM and gold when it reaches full production towards the end of 1993. It is expected to be South Africa's lowest-cost producer.

SUPERCONDUCTING MAGNET TO TEST ORGANISMS

M. Shoda, Tokyo Institute of Technology, in cooperation with Kobe Steel Corp., has developed high magnetic field-generating equipment which is used to examine the effect of magnetic field on organisms. Superconducting magnet, with diameter of 160 mm generates the field ranging from 0.5 T to 7 T. Shoda is studying microorganisms, plant cells, animal cells, gene recombination and enzymes using this equipment.