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# *Equipment and Products*

## NEW WALKER MAGNET LINE

A new line of scrap-handling magnets for use with hydraulic cranes was recently unveiled by O.S. Walker Co., Inc., Worcester, Mass., U.S.A.
The magnet is built of high-permeability, low-carbon steel for minimum magnetic leakage and for maximum lifting efficiency. It comes in 1200 mm, 1500 mm and 1700 mm diameters, with average lifts of up to 1 800, 3 000 and 5 000 tons, respectively.
The Walker lifting magnets use aluminium-wound coils encapsulated in a high-dielectric-strength, moisture- resistant, shock-absorbing compound.

## INDUCED ROLL MAGNETIC SEPARATOR

The new four-roll Series 1000 induced roll magnetic separators (Master Magnets Ltd., Birmingham, U.K.) can develop magnetic induction exceeding 2 T. Rolls 1000 mm wide (feed width), have an increased roll diameter and higher tonnages of minerals can be treated. In a recent installation, feed rates approaching 7 t/h of silica sand per roll were, reportedly, achieved.
Series 1000 IR separators are offered in 1, 2, 4 and 6 roll versions with alternative feed systems to suit the particular mineral being treated.
The separators are generally custom-built to suit each application.

## CARPCO NEW METAL DETECTOR

The new ELPAC Series metal detector/separator is featured in Carpco's latest application sheet. This device removes metal contaminants from recycled plastics (PET, PVC, PS etc.) at low material loss (less than 2 per cent).

## ELECTROSTATIC SEPARATOR FOR SCRAP WIRE INSULATION

Recycling scrap wire insulation is a ready source of PVC and PE. Carpco Inc. have developed the HTE Series electrostatic separator for removal of metallic contaminants from chopped wire tailings.

## MAGNETIC FILTRATION OF ALGAE

A magnetic separator developed by Smit Nymegen (The Netherlands) is being used at Lake Windermere, Lake District in England to extract the phosphates from the water.
Pollution in the lake is caused by high concentration algae which thrive on the phosphates in the lake that appear as a result of the breakdown of human waste and household detergents in sewage from the Ambleside sewage works. The algae is threatening to destroy one of the lake's rarest inhabitants, the Arctic Char, a fish which can be traced back to the Ice Age.
A coagulant is added to the water, followed by the addition of the magnetite seed. The magnetic particles coagulate with the phosphate impurities, thereby allowing the flocs to be recovered by a matrix magnetic separator.

## MAGSTREAM INTRODUCES A NEW SEPARATOR

Intermagnetics General Corp. - Magstream announced that it had expanded its Magstream product line. The new separator and basic building block, the Model 50, is a no-frills, low-cost separator module that may be used as- is in most well-equipped minerals laboratories.
A number of options and accessories, some newly available, that allow a user to custom-design a complete magnetogravimetric testing unit.
The Model 50 separator employs Magstream's separation technology. It separates material based on differences in specific gravities and/or magnetic characteristics, over the expanded density range extending from 1.3 g/cm $^3$ to beyond 21.5 g/ $^c$m$^3$.

## MATERIAL RECOVERY FROM MUNICIPAL REFUSE

A custom-engineered system for separating comingled ferrous and non-ferrous metals in municipal refuse facilities has been introduced by O.S. Walker Co. Inc. The system separates up to 100 tonnes of refuse per hour using self-cleaning suspension magnets, conveyors and magnetic pulleys.

## DEVELOPMENT OF A NEW FERROMAGNET

Hitachi Ltd. have successfully developed a new material with properties surprisingly superior to those of conventional magnetic materials. It is a compound with an iron- to-nitrogen ratio of 16:2, which has recorded a saturation flux density of 2.9 Tesla. This value exceeds the theoretical limit and is likely to have a great impact on the physics of magnetism.