

Environment

In the effort to preserve and maintain the fragile ecology of our planet, these recently selected abstracts are represented to help readers of the *Journal of Materials Engineering and Performance* stay current on legislation and compliance with global environment issues and regulations. They are reprinted from Metals Abstracts and Materials Business File with permission from Materials Information, a service of Cambridge Scientific Abstracts, Bethesda, Maryland, USA.

Waste List Concern Continues. With more than two years of negotiations on the definition of hazardous waste behind them, international metals recycling interests are now focusing on the upcoming meeting of the Basel parties where the fate of their recommendations will be decided. In Feb 1997, the last set of scheduled negotiations took place by the Basel Convention working group to put together a recommended list of which materials should be considered hazardous waste and restricted from trade. Among the metals that previously were considered Basel wastes but are now listed as non-Basel wastes according to the working group's recommendations are most scrap metals, including iron, steel, copper, and aluminum.

N. Kertes. Cited: *Am. Met. Mark.*, Vol 105 (No. 53), 18 March 1997, p 6 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199706-G9-0152.

Smelters Falter under Regulatory Weight. The U.S. secondary copper smelting industry can be expected to continue to contract in size because of the high costs of building new smelters and of meeting stringent environmental regulations, Robert A. Stein, general manager of Louis Padnos Iron & Metal, Holland, MI, said. He told the International Copper Study Group's copper recycling conference that the United States one day might find itself "without a viable domestic consumer for very significant tonnages of copper scrap." Stein noted that U.S. brass and bronze ingot makers also have felt pressure from environmental regulation and that a number of ingot makers have closed their doors because of the high cost of environmental compliance.

P. Burgert. Cited: *Am. Met. Mark.*, Vol 105 (No. 47), 10 March 1997, p 2 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199706-G4-0053.

Is There Room for Environmental Self-Regulation in the Mining Sector? In the framework of the growing awareness of potential environmental damages related to extractive activities, mining companies founded the International Council on Metals and the Environment (ICME) and adopted a code of conduct for environmental management. However, while self-regulatory arrangements have emerged in a couple of sectors, mining industry's initiative remains a phenomenon of interest grouping. The central question this paper addresses is if there is room in the mining sector for ICME to become a self-regulatory arrangement in the future. Therefore, the article casts light on the conditions permitting self-regulation to emerge.

O. Bomsel, P. Barkey, and M. Glachant. Cited: *Resour. Policy*, Vol 22 (No. 1-2), March-June 1996, p 79-86 [in English]. ISSN 0301-4207. PHOTOCOPY ORDER NUMBER: 199706-G4-0051.

Processors Dodge Costly Dross Disposal Ruling. In 1996, it was feared that primary and secondary smelting by-products—spent potliner, dross, skins—would no longer be transported for reclamation legally in the United States unless certified containers such as sealed rail tank cars and tank trucks were used. At the end of the year, however, a federal government exemption was granted for the "dangerous when wet" materials, provided that the aluminum by-products be made sift-proof, covered by tarpaulins, and vented so that dangerous gases did not accumulate. The potential problem for the aluminum industry arose from the U.S. government's adoption of a "hazard" definition that came from the United Nations, which called for testing a material by wetting it and measuring the output of any flammable gases. Many aluminum drosses when tested in this fashion do outgas flammable gases for a short time.

E. Worden. Cited: *Am. Met. Mark.*, Vol 105 (Suppl. Aluminum), 25 Feb 1997, p 6 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199706-G4-0050.

Air Attack: Metal Industry Opposes Newest EPA Proposal. Under a U.S. EPA air quality proposal, regulations governing particulates 2.5 μm or smaller in concentrations of 15 mg/m^3 annually and 50 mg/m^3 daily will be added to the current PM-10 standard. That standard pertains to particulates the size of 10 μm or smaller in concentrations of 50 mg/m^3 annually and 150 mg/m^3 daily. The EPA is under a federal government court order to establish its final rule on the new standard by June 1997. Several industry groups have asked for a 60-day extension of the comment period. Various industry watchers are forecasting a gloomy picture for the metals industry if the regulations are finalized in their current form, as the tougher standard, which also includes proposed ozone regulations, reportedly would double or triple the number of areas not in compliance.

N. Kertes. Cited: *Met. Technol. Q.*, Vol 3 (No. 1), 19 Feb 1997, p 5, 9 [in English]. PHOTOCOPY ORDER NUMBER: 199706-G4-0049.

Battlefields: Miners, Environmentalists Ready for Legislative Fight. Divisive issues concerning miners and environmentalists in the United States are discussed. Addressed are reform of the 1872 Mining Law and the Superfund, proposals to add metal mining in the EPA's Toxic Release Inventory program and the drive to institute new particulate matter regulations. In the House of Representatives, Rep. Nick Rahall (D-W.Va.) introduced a bill that includes a provision for an 8% royalty fee on net smelter return and proposals to end mine patenting in favor of leasing agreements, which are opposed by the mining industry.

M. Pinkham. Cited: *Met. Technol. Q.*, Vol 3 (No. 1), 19 Feb 1997, p 10 [in English]. PHOTOCOPY ORDER NUMBER: 199706-G4-0047.

Superfund: Everyone Wants Reform, But Can't Agree on How. It is generally agreed in the United States that the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund) and its controversial liability system are highly dysfunctional. Since inception, an estimated \$25 billion has been spent. Of that amount, \$10 billion has gone toward litigation expenses, and only 125 of the 1270 designated sites have been removed from the list. Republicans in the U.S. Senate generally favor a top-to-bottom overhaul of the legislation, including an end to both retroactive liability and joint and several liability. On the House of Representatives side, the most sweeping reform proposals would terminate retroactive liability and also end joint and several liability. There are also proposals that would cut liability off as of a specific date: 1980 in one proposal and 1986 in another. Complications associated with the reform proposals are described.

M. Chase. Cited: *Met. Technol. Q.*, Vol 3 (No. 1), 19 Feb 1997, p 8 [in English]. PHOTOCOPY ORDER NUMBER: 199706-G4-0046.

Big Steel Faces Tougher Air Pollution Standards: Geneva Execs Denounce Proposed Rules. Executives of Geneva Steel Co. were due to testify against a future sharp tightening in U.S. federal air-quality standards that would force a sharp reduction in allowable particulate matter and is likely to result in higher costs for steel producers. The executives of the Vineyard, UT, steelmaker were among business leaders due to appear at a Salt Lake City hearing by the U.S. Environmental Protection Agency on proposed new regulations. Broadly stated, the new standard would impose an additional limitation, on top of the existing 10 ppm standard for large particulates, of 2.5 ppm for fine particulates.

F. Haflich. Cited: *Am. Met. Mark.*, Vol 105 (No. 14), 21 Jan 1997, p 6 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199705-S4-0029.

EPA's Minimill Initiative. In winter 1996, the U.S. EPA Region 5 office in Chicago notified minimills in its region that the EPA will soon implement a multimedia compliance review program. Referred to as the Minimill Initiative, it is part of a national program, and EAF steel mills are part of the national iron and steel priority sector. Key elements of the program include giving minimills advance notice of a multimedia compliance evaluation, encouraging minimills to do self-auditing and resolve violations in accordance with EPA protocol, and reviewing compliance status of the sector beginning on 1 May 1997.

R.V. Chalfant. Cited: *New Steel*, Vol 13 (No. 2), Feb 1997, p 40 [in English]. ISSN 0897-4365. PHOTOCOPY ORDER NUMBER: 199705-S4-0027.

Managing Waste Water at Mini-Mills. While the scale pit for treating contact-cooling waste waters remains a crude but effective operation at the heart of a mini-mills program for waste-water treatment, current regulations regarding waste-water discharges are demanding more extensive waste-water treatment and management practices. Current regulations for the steel industry are the "EPA Effluent Guidelines and Standards for Iron and Steel Manufacturing" (40CFR420). In 1995, the EPA completed a preliminary study of the regulations covering iron and steel manufacturing as a precursor to revising effluent guidelines for the industry. The EPA will propose the new effluent guidelines in Dec 1998 and finalize them in Dec 2000, according to the published schedule. Details of these revised effluent guidelines are discussed.

R.V. Chalfant. Cited: *New Steel*, Vol 13 (No. 1), Jan 1997, p 81 [in English]. ISSN 0897-4365. PHOTOCOPY ORDER NUMBER: 199705-S4-0026.

SPI, Greenpeace Tussling over Waste Treaty. The possibility of a future ban on shipping waste such as PVC and some fluorinated polymers was not ruled out by negotiators of an international hazardous waste treaty. It was decided that nonhalogenated polymer waste, such as polycarbonate and some fluorinated polymers, can continue to be shipped overseas. The treaty would ban shipment of waste from nations in the Organization for Economic Cooperation and Development to non-OECD countries. The Society of the Plastics Industry Inc. (Washington, DC, USA) and the U.S. Commerce Department wanted delegates at the Basel Convention meeting to put all plastics on the safe list. However, questions from some developing nations and pressure from groups such as Greenpeace led the delegates to say they needed to study all chlorinated polymers and two fluoropolymers: ethylene tetrafluoroethylene and polytetrafluoroethylene.

S. Toloken. Cited: *Plast. News (Detroit)*, Vol 9 (No. 2), 10 March 1997, p 4 [in English]. ISSN 1042-802X. PHOTOCOPY ORDER NUMBER: 199705-P9-0070.

Guide to EU Legislation and Health and Safety in the European P/M Industry. The European Powder Metallurgy Association has updated its *Guide to EU Legislation and Health & Safety in the European P/M Industry*. The 108-page document presents an overview of current European Union legislation and European/ISO Standards as related to "environment, health and safety," and offers guidelines for the preparation of "material safety data sheets" and a "labeling guide" for metal and alloy powders that fall within the scope of materials classified as "Dangerous

Substances" and "Dangerous Preparations." Also included are guidelines on EU legislation relating to safety requirements for machinery sold in the EU. The guide is available from the EPMA, priced £ 55 (EPMA members), £ 185 (non-EPMA members).

European Powder Metallurgy Association, Old Bank Buildings, Bellstone, Shrewsbury, SY1 1HU, UK, 1997, p 2 [in English]. PHOTOCOPY ORDER NUMBER: 199705-G7-0108.

Compliance Date Extended. Primary aluminum plants have an additional six months to comply with the U.S. Environmental Protection Agency's new land disposal restrictions and treatment standards for spent aluminum potliners. According to the EPA, the agency pushed the compliance date back to 8 July from 8 Jan 1997 because the only commercially available treatment facility has experienced difficulties in effectively treating the waste. The Reynolds Metals Co. facility in Gum Springs, AK, currently is trying to solve a leachate problem that has led to high levels of arsenic, cyanide, and fluoride, the agency said. The agency classified the contaminants from spent potliners, generated from basic aluminum production, as hazardous material in 1989, and the waste is now subject to treatment rules before final disposal under the Resource Conservation and Recovery Act. In 1996, the EPA established new limits for the toxic constituents of the waste. Until the new rule goes into effect in July, aluminum companies are expected to continue sending the spent potliner waste to hazardous waste disposal facilities.

Cited: *Am. Met. Mark.*, Vol 105 (No. 9), 14 Jan 1997, p 6 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199705-G4-0039.

Canadian Miners Keeping Commitment on Emissions. The Canadian mining industry said it is living up to its commitment to reduce emissions, but claims that Ottawa is not keeping its end of the bargain to reduce government red tape. In 1985, Ottawa passed a law requiring mining companies to reduce their sulfur dioxide emissions by half by 1994. Since 1988, emissions of 12 major substances, including arsenic, zinc and cadmium, have been reduced by 68% without government assistance, according to the Mining Association of Canada.

B. Dunn. Cited: *Am. Met. Mark.*, Vol 104 (No. 252), 31 Dec 1996, p 6 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199704-G4-0037.

OSHA Looking at Metalworking Fluid Exposure. OSHA says it will form a Standards Advisory committee to make recommendations regarding a proposed rule for occupational exposure to metalworking fluids in the United States. The committee is in response to a petition from the UAW asking that OSHA take emergency regulatory action to protect workers from the risks of occupational cancers and respiratory illnesses due to exposure to metalworking fluids. The USW is seeking a decrease in allowable exposure levels from 5.0 to 0.5 mg/m³. The committee will include a cross section representing industry, labor, federal, and state safety and health organizations, professional organizations, and national standards setting groups. It will advise OSHA as to the scope of the rulemaking and whether it should concern only metal-removal fluids or a broader range of metalworking fluids.

Cited: *Ind. Net Rep.*, Vol 6 (No. 13), Dec 1996, p 26 [in English]. PHOTOCOPY ORDER NUMBER: 199704-G4-0033.

Photocopies of complete articles are available from the Document Delivery Service at ASM; please call 216/338-5151 ext. 5450 for order and price information.

Furthermore...

Gorham Advanced Materials Institute held a conference, *Steel Mill Wastes and By-Products: Recycling, Recovery, and Disposal*, devoted to a discussion from 2 to 4 June 1997 of the handling, treatment, and disposal of steel mill wastes in Toronto, Canada. The recoverable materials from by-products are valued at more than \$500 million a year and the cost of disposing of these wastes is estimated at another \$500 million. For more information, contact: Andrew Molloy, Gorham Advanced Materials Institute, P.O. Box 250, Gorham, ME 04038-0250; tel: 207/892-5445; telex: 95-0012; fax: 207/892-2210.

NSF International an independent certifier of products affecting public health and the environment, *has determined that AISI 304, 304L, 316, and 316L stainless steels are suitable for use as drinking-water system components*. The four steels met the requirements of the ANSI/NSF Standard 61, which deals with the maximum allowable level of contaminants that migrate or extract into water. The Nickel Development Institute, the Specialty Steel Industry of North America, and the Specialty Tubing Group supported the research. For more information, contact: NSF International, 3475 Plymouth Rd., Ann Arbor, MI 48105; tel: 1/800/NSF-MARK.

DuPont Automotive and Ford Motor are recycling used carpeting from Ford's world headquarters and engineering buildings into Ford and Lincoln-Mercury engine air cleaner housings for nearly 3 million vehicles a year. The nylon from the carpet is used in DuPont's Minlon mineral-reinforced nylon 6/6. The polymer has 25% postconsumer content. Polypropylene backing and calcium carbonate filler, other carpet materials, are also being recycled by DuPont. For more information, contact: DuPont Automotive, 950 Stephenson Hwy., P.O. Box 7013, Troy, MI 48007-7013; tel: 810/583-8000.

The U.S. Environmental Protection Agency presented Superior Graphite with an award for the company's participation in the

33/50 program. The award commemorates a reduction in aromatic solvent emissions from the company's No. 2 Chicago plant, where it manufactures graphite-based lubricants. The program set out to reduce the 675 million kg (1.5 billion lb) of industrial chemicals emitted in 1988 by 33% in 1992 and by 50% in 1995. Superior eliminated trichloroethane and xylene, two targeted chemicals, at the plant. For more information, contact: Superior Graphite Co., 120 S. Riverside Pl., Ste. 970, Chicago, IL 60606; tel: 312/559-2999; fax: 312/559-9064.

The EPA's Office of Air Quality Planning and Standards has released *a report on "Strategies for an Integrated Air Toxics Program,"* a plan for managing hazardous air pollutants (HAP). The report recommends a 75% reduction in HAP emissions by the year 2000 and more community involvement in the regulatory process. For more information, contact: Enviro Update, Flint Ink Corp., 33105 Schoolcraft, Livonia, MI 48150.

According to *an environmental compliance survey of 700 Michigan industrial companies conducted by Applied Science & Technology Inc.*, Ann Arbor, MI, 74% of respondents indicated that the cost of compliance had increased in 1996 and would increase again in 1997, while 16% indicated that the cost had been and would be unchanged, and the remaining 10% that the cost of compliance had decreased. 58% of companies stated that Title V of the Clean Air Act (and not the Clean Water Act, RCRA, or CERCLA) was the Federal Environmental Act expected to have the most impact on Michigan industrial firms in 1997. The survey also found that the Michigan Environmental Act was the state act expected to have the most impact on local firms in 1997, that most respondents did not expect to use the Audit Privilege Act in 1997, that the majority of firms have no full-time environmental manager, and that environmental management staffing at most firms was unchanged in 1996 and will be unchanged in 1997.
