

# 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.

**Steel in the U.S. Congress.** Legislation of concern to U.S. steel producers that will most likely be addressed in the 105th Congress is described. Addressed are trade, environmental, electric utility deregulation, and taxation issues.

F. Fenton. Cited: *Acero NASJ/North Am. Steel J.*, Vol II (No. 13), March-April 1997, p 26-28 [in Spanish and English]. PHOTOCOPY ORDER NUMBER: 199709-S8-0453.

**The Debate over the New PM2.5 and Ozone Standards.** On 12 March 1997, the U.S. EPA closed the comment period for its proposed revisions to the national ambient air-quality standards (NAAQS) for ozone and particulate matter (PM). Details of the current standards and proposed revisions are described. There is consensus that the EPA will promulgate new standards. There might be a compromise on the actual level of the ozone standard, but the EPA reportedly is determined to push through the proposed PM standard. Regional implementation will determine the final standards' effects on the steel industry.

R.V. Chalfant. Cited: *New Steel*, Vol 13 (No. 4), April 1997, p 115 [in English]. ISSN 0897-4365. PHOTOCOPY ORDER NUMBER: 199709-S4-0062.

**Citizens for a Better Environment versus The Steel Company.** On 6 March 1995, a group called Citizens for a Better Environment notified The Steel Company of Chicago (IL) that it had failed to comply with the Emergency Planning and Community Right-to-Know Act. The Steel Company processes steel sheet and its equipment includes a pickling line, cold-reduction mills, temper mills, annealing facilities, and lines for slitting, shearing, and burning. The Steel Company reportedly had not filed a single hazardous-chemical-use report in the eight years since the Right-to-Know Act became law. The Steel Company filed its overdue reports, but the citizen group sued to force it to pay associated penalties to the government. The Steel Company argues that only the government, not private citizens, can force companies to pay a penalty for filing its reports too late. The U.S. Supreme Court will decide the matter in Oct 1997. The Court decided to hear the case after reviewing an appeal from The Steel Company after the 7th U.S. Circuit Court of Appeals ruled in favor of the citizens' lawsuit. N.E. Kelly. Cited: *New Steel*, Vol 13 (No. 4), April 1997, p 114 [in English]. ISSN 0897-4365. PHOTOCOPY ORDER NUMBER: 199709-S4-0061.

**Environmentalists Sue to Halt PVC Plant.** Two environmentalist groups have filed suit to stop Shintech Inc.'s proposed Convent, LA, PVC plant. The groups, St. James Citizens for Jobs and the Environment and the Louisiana Environmental Action Network, filed suit 13 June 1997 in Louisiana's 23rd District Court. The suit specifically calls for the court to revoke a coastal use permit granted to Shintech late in 1996 by the St. James Parish Council. The suit disputes Shintech's claims of environmental safety and accuses the company of obtaining information that could be used to influence local officials.

F. Esposito. Cited: *Plast. News (Detroit)*, Vol 9 (No. 18), 30 June 1997, p 6 [in English]. ISSN 1042-802X. PHOTOCOPY ORDER NUMBER: 199709-P4-0025.

**U.K. Processors Win Right to Import Mixed Waste.** Dockgrange and Mayer Parry, U.K. scrap processors, won a High Court judicial review of the U.K. Environment Agency's policy on transfrontier shipments of fragmentizer waste, particularly nonferrous metals. In what is being seen as a significant victory for the waste industry, the U.K. High Court ruled on 22 May 1997 that the agency had "wrongly interpreted the provisions of the EU Transfrontier Shipment of Waste Regulation and had prevented waste companies in England and Wales from carrying on their legitimate

recycling business," according to the plaintiffs' lawyer. The companies claimed that the agency's interpretation of the regulation EC 259/93 was "incorrect" and had made the United Kingdom less competitive in Europe, having a negative impact on jobs.

Cited: *Met. Bull.*, Vol 8182, 29 May 1997, p 12 [in English]. ISSN 0026-0533. PHOTOCOPY ORDER NUMBER: 199709-G4-0085.

**BMF Sues [U.K.] Government over Waste Definition.** The British Metals Federation (BMF) formally served a summons on the U.K. government's Environment Agency on 16 May 1997, as the latest step in its campaign to challenge the official classification of scrap metal as waste, thus making it subject to regulations that the industry regards as inappropriate and costly. The next step in the process is for the agency to make a formal response. When this is received, a date will be set for a hearing in the High Court, perhaps by the end of 1997.

Cited: *Met. Bull.*, Vol 8182, 29 May 1997, p 11 [in English]. ISSN 0026-0533. PHOTOCOPY ORDER NUMBER: 199709-G4-0084.

**Harvey Alter: Basel Flawed, but Goals Are Worthy.** Harvey Alter, resources policy manager at the U.S. Chamber of Commerce, notes that as a result of the Basel Convention, there is virtually a de facto ban on trade in "hazardous materials and waste," which include scrap metals. The European Union announced that effective 1 Jan 1998, all bilateral and multilateral agreements (on hazardous wastes) will be null and void, and the terms of the Basel Convention will prevail. As a result of the Basel Convention, a black market in copper is developing in China, which may serve to explain why official numbers on copper exports and imports in that country do not add up. Mounting secondary-metals-industry problems in India are described also.

M. Chase. Cited: *Am. Met. Mark.*, Vol 105 (Suppl. International Metals Recycling), 26 May 1997, p 9, 11 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199709-G1-0273.

**Environmental Watchdogs Putting Bite on Recyclers.** Environmental watchdogs such as Greenpeace have brought lead-acid battery recycling to a virtual halt in the Philippines, cost 10,000 zinc-related jobs in India, and brought about a situation in Nigeria and Cameroon wherein business executives who import raw materials deemed hazardous or toxic face the death penalty. These developments have hindered industrial development in Third World countries and exports from developed countries. Problems are associated with indefinite definitions of waste and hazardous materials that arose out of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. The convention, to which the United States was a signatory in 1989 but has yet to ratify, was drawn up by delegates whose expertise was primarily in environmentalism, as opposed to trade.

A. Roggio. Cited: *Am. Met. Mark.*, Vol 105 (Suppl. International Metals Recycling), 26 May 1997, p 3, 5 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199709-G1-0271.

**Industry Organizes Task Force in Preparation for MACT Standards.** In 1990, the U.S. Congress passed the Clean Air Act Amendments, and for the last six years, the Environmental Protection Agency has been implementing regulations fulfilling the requirements of these amendments. Potentially, the CAAA's greatest impact on foundries will be the regulation of emission of Hazardous Air Pollutants. The standards implementing this requirement are generally referred to as MACT, or Maximum Achievable Control Technology. Iron and steel foundries were identified by EPA as major sources of HAPs. A group has been formally sanctioned by the American Foundrymen's Society Board of Directors as the AFS MACT

Task Force to help develop standards that meet the requirements of the CAAA without placing unnecessary burden on the industry.

G.E. Mosher. Cited: *Mod. Cast.*, Vol 87 (No. 5), May 1997, p 56-57 [in English]. ISSN 0026-7562. PHOTOCOPY ORDER NUMBER: 199708-S4-0055.

**[U.K.] Steel Industry to Face the Monitoring Facts.** The U.K. Environmental Protection Act became law in 1990, while the Integrated Pollution Control Regulations (IPC), that is, the regulations that control processes, were to be phased in over the following five years. The metals industry came under the IPC control on 1 Sept 1996, and all proscribed process within the industry must now conform with their relevant IPC, enforced by the Environment Agency. Monitoring of emissions from steel industry processes to comply with the regulations is discussed.

N. Wood. Cited: *Stainless Steel Focus*, Vol 174, 17 March 1997, p 15, 17 [in English]. PHOTOCOPY ORDER NUMBER: 199708-S4-0050.

**Firms Face Fallout from EPA Air Rules.** Tenneco Packaging's polystyrene foam products plant in Covington, GA, is preparing to spend \$5 million, ~10% of the facility's book value, to meet tough U.S. Environmental Protection Agency air-quality rules expected by midsummer 1997. AET Films Inc.'s two oriented polypropylene film plants in Virginia and Indiana do not see any problems meeting the new rules. Those different assessments highlight the difficulty in determining the impact of EPA's proposal to tighten ozone and particulate matter emission standards significantly.

S. Toloken. Cited: *Plast. News (Detroit)*, Vol 9 (No. 14), 2 June 1997, p 1, 67-68 [in English]. ISSN 1042-802X. PHOTOCOPY ORDER NUMBER: 199708-P4-0022.

**Study Estimates \$5.6B Cost for Air Compliance.** The first comprehensive study analyzing the economic impact of the U.S. Environmental Protection Agency's air-quality proposals suggests that it would cost the primary and fabricated metals industries a combined \$5.6 billion to comply with the standards. The study, spearheaded by the Reason Public Policy Institute in California, estimated that achieving full attainment would cost the primary metals industry ~\$2.6 billion and the fabricated metals industry \$3 billion. The cost to the mining industry would be \$1.1 billion. Under the EPA proposal, regulations governing particulates 2.5  $\mu\text{m}$  or smaller in concentrations of 15  $\mu\text{g}/\text{m}^3$  annually and 50  $\mu\text{g}/\text{m}^3$  daily would be added to the current PM-10 standard.

N. Kertes. Cited: *Am. Met. Mark.*, Vol 105 (No. 111), 10 June 1997, p 7 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199708-G4-0076.

**Policing the U.K. Environment.** In the one year since the establishment of the U.K. Environment Agency, which replaced the 83 Waste Regulatory Authorities (WRAs) that dealt with matters such as licensing to transfrontier shipments of waste for the scrap and secondary metals industry in England and Wales, new legislation has hit the statute books. In many ways, both the agency and industry have been on a steep learning and adjustment curve in the 12 months since 1 April 1996. How the agency has fared to date and how it aims to respond to the challenges of interpreting new legislation in relation to the scrap trade are discussed.

Cited: *Met. Bull.*, Vol 8167, 7 April 1997, p 11 [in English]. ISSN 0026-0533. PHOTOCOPY ORDER NUMBER: 199708-G4-0074.

**Clean Up Your Act!** In the United Kingdom, the Integrated Pollution Control Regulations (IPC) has been phased in for different industries over the past five years. Since 1 Oct 1996, the metals industry has had to conform to strict requirements enforced by the Environment Agency (EA). The IPC regulations cover emission released to air, water, and land, and accurate

monitoring and benchmarking of the regulations is seen as fundamental to successful implementation. Monitoring of environmental performance and benchmarking are discussed.

N. Wood. Cited: *Mater. World*, Vol 5 (No. 5), May 1997, p 274-275 [in English]. ISSN 0967-8638. PHOTOCOPY ORDER NUMBER: 199708-G4-0071.

**The [North American Mining and Smelting Pollution-Control] Alphabet Game.** Federal pollution-control regulations, under which mines and smelters operate in the United States, include the Clean Air Act, Clean Water Act, Comprehensive Environmental Response Compensation & Liability Act, Resource Conservation & Recovery Act, Pollution Prevention Act, Emergency Planning & Community Right-to-Know Act, and the U.S.-Canada Air Quality Agreement. In Canada, U.S. standards for pollution control and other environmental issues set the tone generally. Like the United States, the Canadian federal government supplies the provinces with guidelines on smelters and mines, and the provincial government can make them stricter if desired. But unlike the United States, each smelter is given a specific emission tonnage limit. The same is true for water effluents, where the national standards are set forth in the Canadian Federal Fisheries Act and then each province can either use the federal law or employ their own, as long as it is not less stringent than the federal law.

S. Christiansen. Cited: *Met. Bull. Mon.*, Vol 314, Feb 1997, p 33-35, 37 [in English]. ISSN 0373-4064. PHOTOCOPY ORDER NUMBER: 199708-G4-0069.

**Geneva, SMA Criticize EPA's Proposed Air-Quality Standard.** The current U.S. EPA particulate matter (PM) 10 standard sets maximum limits for daily and annual concentrations of airborne particles that are 10  $\mu\text{m}$  or smaller. A new PM 2.5 standard proposed in Nov. 1996 would add limits for particles 2.5  $\mu\text{m}$  or smaller in concentrations of 15  $\mu\text{g}/\text{m}^3$  annually and 50  $\mu\text{g}/\text{m}^3$  daily. The PM 2.5 standard would require many steel plants to further reduce emissions of volatile organic compounds, sulfur dioxide, and nitrogen oxides. Geneva Steel and others maintain that epidemiological studies do support adoption of the new standards. The EPA must issue a final standard by 20 July 1997.

Cited: *New Steel*, Vol 13 (No. 3), March 1997, p 8-9 [in English]. ISSN 0897-4365. PHOTOCOPY ORDER NUMBER: 199707-S4-0047.

**Basel Treaty Issues Still Unresolved.** Under the Basel Convention's provisions, any scrap or waste labeled as a hazardous material cannot be shipped to Third World countries for recycling, and any waste destined for final disposal is banned from international trade. Among the metals that were previously considered Basel wastes, but are now listed as non-Basel wastes according to a working group's recommendations, are most scrap metals, including iron, steel, copper, and aluminum. Clarification of the Basel Convention's international treaty definition of hazardous waste is expected in the fall of 1997.

N. Kertes. Cited: *Am. Met. Mark.*, Vol 105 (Suppl. Metals Recycling), 14 March 1997, p 5 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199707-G8-0526.

**Government Affairs Conference Draws Attention to Current and Potential Government Regulations Relating to Foundry Industry.** Three central issues regarding U.S. government regulation in areas relating to the foundry industry emerged as priorities during the American Foundrymen's Society's (AFS) Government Affairs Conference in Washington, D.C. The three issues—maximum achievable control technology (MACT) standards, OSHA reform, and ergonomics—are discussed.

Cited: *Incast*, Vol 10 (No. 4), April 1997, p 18-20 [in English]. ISSN 1045-5779. PHOTOCOPY ORDER NUMBER: 199707-G4-0060.

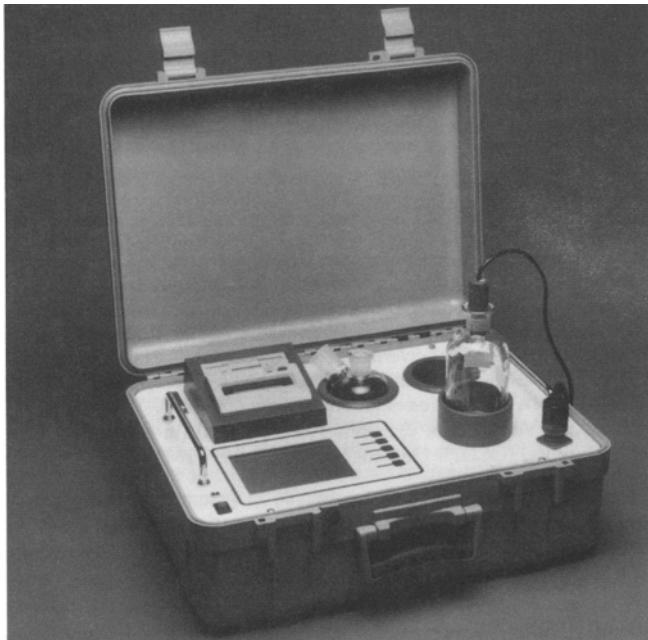
Photocopies of complete articles are available from the Document Delivery Service at ASM; please call 440/338-5151, ext. 5450, for order and price information.

## Furthermore...

**The EPA recently changed its classification of scrap metal to clarify that scrap is not a "solid waste."** The Institute of Scrap Recycling Industries, which had lobbied for the change, notes that many of the problems recyclers have had with the EPA stem from the agency's failure to distinguish scrap from waste and recycling from disposal. For more information, contact: ISRI, 1325 G St. N.W., Ste. 1000, Washington, D.C. 20005-3104; tel: 202/737-1770; fax: 202/626-0900.

**The European Commission has proposed placing solvents, lead acid, mercury dry cells, fluorescent tubes, aerosols, printed circuits boards, transformers and capacitors that contain PCBs and PCTs, and other items on a list of hazardous waste items.** For more information, contact: Michele Raymond, Raymond Communications Inc., 6429 Auburn Ave., Riverdale, MD 20737; tel: 301/345-4237; fax: 301/345-4768; e-mail: michele@raymond.com; web: <http://www.raymond.com/recycle>.

**Republic Engineered Steels has joined two Ohio environmental initiatives on pollution prevention and on buying recycled products.** The goal of Ohio Prevention First is to reduce pollution in Ohio by 50% by the year 2000. Republic is one of 11 steelmakers and 160 companies that are taking part in the program. The Ohio Buy Recycled Business Alliance promotes the purchase of recycled-content products and materials. Each year, Republic uses 726,000 metric tons (800,000 tons) of purchased scrap and 227,000 metric tons (250,000 tons) of internally generated scrap to make steel products. For more information, contact: Republic Engineered Steels, 410 Oberlin Rd. S.W., P.O. Box 579, Massillon, OH 44648-0579.

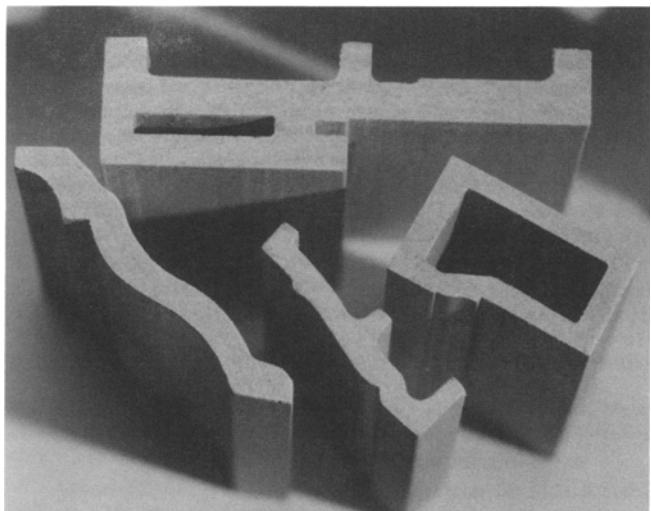


Bioscience

A portable BOD meter from Bioscience evaluates the biomass activity and toxicity of a specific waste stream in about 15 min. The device reports milligrams of oxygen consumed per hour per gram of biomass and can be used to evaluate the activity of an activated sludge mixed liquor or the stability of digested waste activated sludge. A 2 h test evaluates the immediate and recovery oxygen uptake associated with the introduction of an influent stream or compound to a biomass. Both tests can be performed by placing a sample of microbial biomass in the test bottle with the wastewater to be analyzed. A DO probe is inserted and instructions for conducting the test appear on a liquid crystal display. For more information, contact: Bioscience, 1550 Valley Center Pkwy., Ste. 140, Bethlehem, PA 18017; tel: 610/974-9693; fax: 610/691-2170; e-mail: bioscience@aol.com.

**Innovative Technology has developed eight models of the Protector transient voltage surge suppression devices for protecting monitoring equipment at wastewater plants.** Each model of the conduit-fitting series varies according to the type of stainless steel conduit used and operating voltage capacities. For more information, contact: Innovative Technology, 15470 Flight Path Dr., Brooksville, FL 34609; tel: 352/799-0713; fax: 352/796-0316.

**Eaglebrook Products has developed Durawood EX, an alternative to wood made of 70% industrial wood waste and sawdust and the remainder recycled high-density polyethylene from milk containers.** This engineered wood product is an economical alternative to wood for manufacturers of such items as door frames, architectural moldings, and decking systems. For more information, contact: Eaglebrook Products, Chicago, IL; tel: 312/491-2500; fax: 312/491-2501; e-mail: info@eaglebrook.com.



Durawood EX