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 joint service of ASM International, Materials Park, Ohio, and the Institute of Materials, London, England.

Bayou Steel Comes Out Clean. Bayou Steel Corp., LaPlace, La, has received a clean bill of health from the Louisiana Department of Environmental Quality, assuring its favorable tax status continues in 1996, the company said. But while the department's report clears the mini-mill of allegations that significant environmental problems have not been solved, the debate over the company's environmental record and the appropriateness of granting it state aid and tax breaks appears sure to rage on. On 13 Dec 1995, the Louisiana Department of Environmental Quality issued a report to the state's Board of Commerce and Industry clearing the steelmaker of significant environmental violations.
C.C. Petry. Cited: *Am. Met. Mark.*, Vol 104 (No. 6), 9 Jan 1996, p 6 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199603-S4-0015.

Aspects of Steel Recycling. Less than 20 million tonnes of the total 190 million tonnes of capital (obsolete or old) scrap that are recycled annually present any sort of problem for the steel industry. Indeed, most of the steel in current capital scrap has already been recycled into new products two or three times before and will probably be recycled several more times in the future. However, despite the fact that steel is the most recycled material in the world, the steel industry is faced with the challenge of convincing a general public whose perception of steel's recyclability remains poor. It is in the automotive and packaging sectors, where competition with materials like aluminum is most severe, that the major recycling challenges lie. Other issues include radioactive contamination of scrap, legislation and regulations, emissions from the scrap melting process, and new technologies.
Cited: *Aspects of Steel Recycling*, International Iron and Steel Institute, Brussels, Belgium, 1995 [in English]. PHOTOCOPY ORDER NUMBER: 199603-S1-0035.

Ecology and Plastics. New laws requiring recycling, marking, ecolabeling, and product take-back will change the way designers and manufacturers choose their materials. Materials are used in applications for well-defined reasons. For example, plastics used in electrical and electric applications for enclosures must resist impact and heat as well as ignition. The emergence of "green" products with the requirement for recyclability has added a new dimension to product design. The issue is more than material recyclability, however simple or complex that may be; it involves rethinking the entire end-product life cycle to develop products that have a lesser effect on human health and the environment than do alternative products.
G.L. Nelson. Cited: *Chemtech*, Vol 25 (No. 12), Dec 1995, p 50-55 [in English]. ISSN 0009-2703. PHOTOCOPY ORDER NUMBER: 199603-P4-0018.

Onsan Keeps Eye on Green Regulations. LG Metals, South Korea, is to proceed with its long-planned expansion of its Onsan smelter north of Pusan. By adding 160,000 tonnes/year of smelting capacity, the company will lift its total capacity to 400,000 tonnes/year. Conscious of South Korean government efforts to tighten environmental protection regulations, LG Metals may enlist the help of Outokumpu, which has supplied equipment and technology in the past. Outokumpu's new flash converting process could be used to alleviate LG Metals' emission problems.
Cited: *Met. Bull.*, No. 8033, 27 Nov 1995, p 5 [in English]. ISSN 0026-0533. PHOTOCOPY ORDER NUMBER: 199603-G4-0023.

The "Greening" of Copper. Beginning in Europe, predominantly in the Nordic countries and The Netherlands, and now spreading across the world, the attitude is developing that copper is a hazard to human health and to the environment and should be banned from use in those applications where it comes in contact with the ecosystem. Copper is now coming into focus on at least two regulatory fronts—as a potentially harmful impurity in potable water and as an ecotoxin in rivers, lakes, and oceans. The latter involves the discharge of industrial and municipal waste as well as rainwater run-off from copper roofs, etc. These regulatory initiatives could have profound influence on copper's future use in plumbing tube and roofing and in marine products that include antifouling paints and power plant heat exchanger tubes.
Cited: *Min. J.*, Vol 325 (No. 8353), 17 Nov 1995, p 374-375 [in English]. ISSN 0026-5225 PHOTOCOPY ORDER NUMBER: 199603-G4-0017.

IAQ and Noise Control—Working Together. There has been growing concern that glass fiber products used in air handling and duct systems are a contributing factor to some indoor air quality (IAQ) problems. However, there is inadequate quantitative information to determine the degree of risk involved for the wide range of applications. Also, there is no indication that quantitative data will be achieveable for design purposes for many years. As a result, current regulations and design trends range from the complete elimination of exposed fibrous material to the status quo. Because the main purpose of internal duct lining is for noise control, its removal requires other noise control solutions. The purpose of this article is to examine positions taken by various interest groups and provide examples of current research. Important practical guidelines are offered that provide middle ground qualitative solutions until a quantitative approach emerges.
F. Guenther. Cited: *Heat./Piping/Air Cond.*, Vol 68 (No. 1), Jan 1996, p 59-68 [in English]. ISSN 0017-940X. PHOTOCOPY ORDER NUMBER: 199603-F1-C-0205.

Legal Changes Won for Styrene. Following extensive lobbying from the U.K. composites industry about the place of styrene in environmental protection, the law has been changed. British Plastics Federation environment coordinator, Mercia Gick, has been able to report to members that "the amendment to Section 4.1 and 4.2 of SI 472 (1991) transfers moulding/fabrication of unsaturated polyester resin from a Part A to Part B process, which is under local authority as opposed to HMIP control." In addition, the amendment also raises the threshold from 50 to 100 tonnes styrene usage a year before registration is needed.
Cited: *Plast. Rubber Wkly.*, No. 1618, 12 Jan 1996, p 3 [in English]. ISSN 0032-1168. PHOTOCOPY ORDER NUMBER: 199603-D4-0004.

[U.K.] Legislation Update for Foundrymen. An update on the U.K. Environmental Protection Act with special emphasis on molding and waste minimization was the subject of a recent one-day seminar organized by the Institute of British Foundrymen. The British Foundry Association's John Parker set the scene by giving an overview of environmental regulations relating to foundries, explaining that air-, solid-, and water-borne waste will shortly be encompassed in the Integrated Pollution Prevention and Control Directive (IPPC) which will need to be addressed by much of the industry to ensure compliance by the year 2005. On the subject of Waste Management Licensing, Mr. Parker noted that foundries must have a license if they dispose waste on site and if collection of wet arrestment waste from a cupola

into a settling tank takes place with subsequent discharge of water into the sewers.

Cite: *Foundry Trade J.*, Vol 169 (No. 3512), Nov 1995, p 519-520, 522 [in English]. ISSN 0015-9042. PHOTOCOPY ORDER NUMBER: 199602-S4-0009.

[U.S.] Galvanizers Get Flexibility with Storm Water. The U S. galvanizing industry may have less to worry about by Sept 1996 in terms of storm water pollution prevention due to revisions made to the Environmental Protection Agency's multisector storm water permit. The new permit is part of the EPA's program to give galvanizers "flexibility and incentives to pursue effective storm water controls tailored to their local situations," according to an American Galvanizers Association (AGA) spokesman. By 26 March, a Notice of Intent must be filed, while 26 Sept is the deadline to develop and implement pollution prevention plans, according to the EPA.

S. Fineberg. Cited: *Am. Met. Mark.*, Vol 103 (No. 225), 21 Nov 1995, p 6 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER. 199602-S4-0008.

Bayou Steel Faces Lawsuit over Flue Dust Emissions. Bayou Steel Corp. faces a lawsuit from local and national environmental groups alleging the LaPlace, LA, steel mill has emitted illegal levels of flue dust that contains lead and other toxic metals. In a formal notice sent to the company 20 Nov 1995, the U.S. Public Interest Research Group (USPIRG), the St. John Citizens for Environmental Justice, and several affected individuals allege that since 1992 the steelmaker has violated the federal Clean Air Act, Louisiana law, and its own air emission permit. The lawsuit, to be filed in mid-Jan 1996, will allege that Bayou Steel has repeatedly violated limits on the density of particulates in its air emissions, which contain lead, cadmium and other toxic heavy metals.

C.C. Petry. Cited: *Am. Met. Mark.*, Vol 103 (No. 233), 5 Dec 1995, p 6 [in English]. ISSN 0002-9998. PHOTOCOPY ORDER NUMBER: 199602-S4-0006.

SPI-Backed Language Returns in Environmental Funding Bill. Society of the Plastics Industry Inc.-supported language about the content and enforcement of the Toxic Release Inventory, stripped from a U.S. House-Senate conference bill that would fund the Environmental Protection Agency, has surfaced in that bill's instructive report language. Congress adjourned 20 Nov 1995 without acting on the conference committee compromise measure providing $5.7 billion to the EPA, less than the $6.64 billion given the agency in 1995.

Cited: *Plast. News (Detroit)*, Vol 7 (No. 39), 27 Nov 1995, p 26 [in English]. ISSN 1042-802X. PHOTOCOPY ORDER NUMBER: 199602-P4-0006.

EU Tightens Rules on Environmental Impact. The European Parliament has voted through a series of tough amendments to the 1985 Environmental Impact Assessment Directive, which some industry sources believe was already tough enough. The vote is expected to have far-reaching effects for the EU's metals recycling, refining, processing and mining industries. The scope of the directive has not only been clarified but also widened to include all projects that are likely to have a significant effect on the environment.

Cited: *Met. Bull.*, No. 8022, 19 Oct 1995, p 10 [in English]. ISSN 0026-0533. PHOTOCOPY ORDER NUMBER: 199602-G4-0016.

Cadmium Alert: A Comparison of the Cadmium and Lead Standards. On 14 Sept 1992 in the United States, OSHA published in the Federal Register a final rule for cadmium in the construction industry under Title 29 Code of Federal Regulations Part 1926.63. The rule, effective 14 Dec 1992, establishes a PEL of 5 $\mu g/m^3$ and an action level of 2.5 $\mu g/m^3$ for all cadmium compounds, including dust and fumes, and other protective provisions for cadmium in the construction industry. There are many specific differences between the lead and cadmium standards which require different compliance actions to protect the safety and health of employees. Ten important differences between the standards that employers should be aware of are discussed.

J.W. Rufolo. Cited: *Lead Paint Bull.*, Vol 5, 1995, p 3-4 [in English]. PHOTOCOPY ORDER NUMBER: 199602-G4-0012.

Superfund Bill in [U.S.] House Could Protect Recyclers from Liability. A Superfund reform bill recently introduced in the U.S. House of Representatives contains language that would allow recyclers to be exempt from liability should their materials wind up in a Superfund site. In the reform bill, proposed by Rep. Mike Oxley (R-Ohio) in mid-Oct 1995, a section of the current Superfund law that considers recycling as "arranging for disposal"—and, therefore, subject to possible liability—would be amended to exempt those companies that "arranged for the recycling of recyclable material." Materials considered "recyclables" specifically include scrap paper, plastic, glass, textiles, rubber (other than whole tires), metal, and spent lead-acid and nickel-cadmium batteries.

R. Woods. Cited: *Recycl. Times*, Vol 7 (No. 22), 31 Oct 1995, p12 [in English]. ISSN 1042-0614. PHOTOCOPY ORDER NUMBER: 199602-G4-0011.

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Karl-Erling Trogen, President & CEO, **Volvo Truck Corp.,** gave a speech on the fine line between economic growth and preserving the environment at the SAE International Truck & Bus Meeting & Exposition, 13-15 Nov 1995, Winston-Salem, NC. Trogen said the key to the emerging global society is the balance that comes from having a holistic view of the world and our place in it.