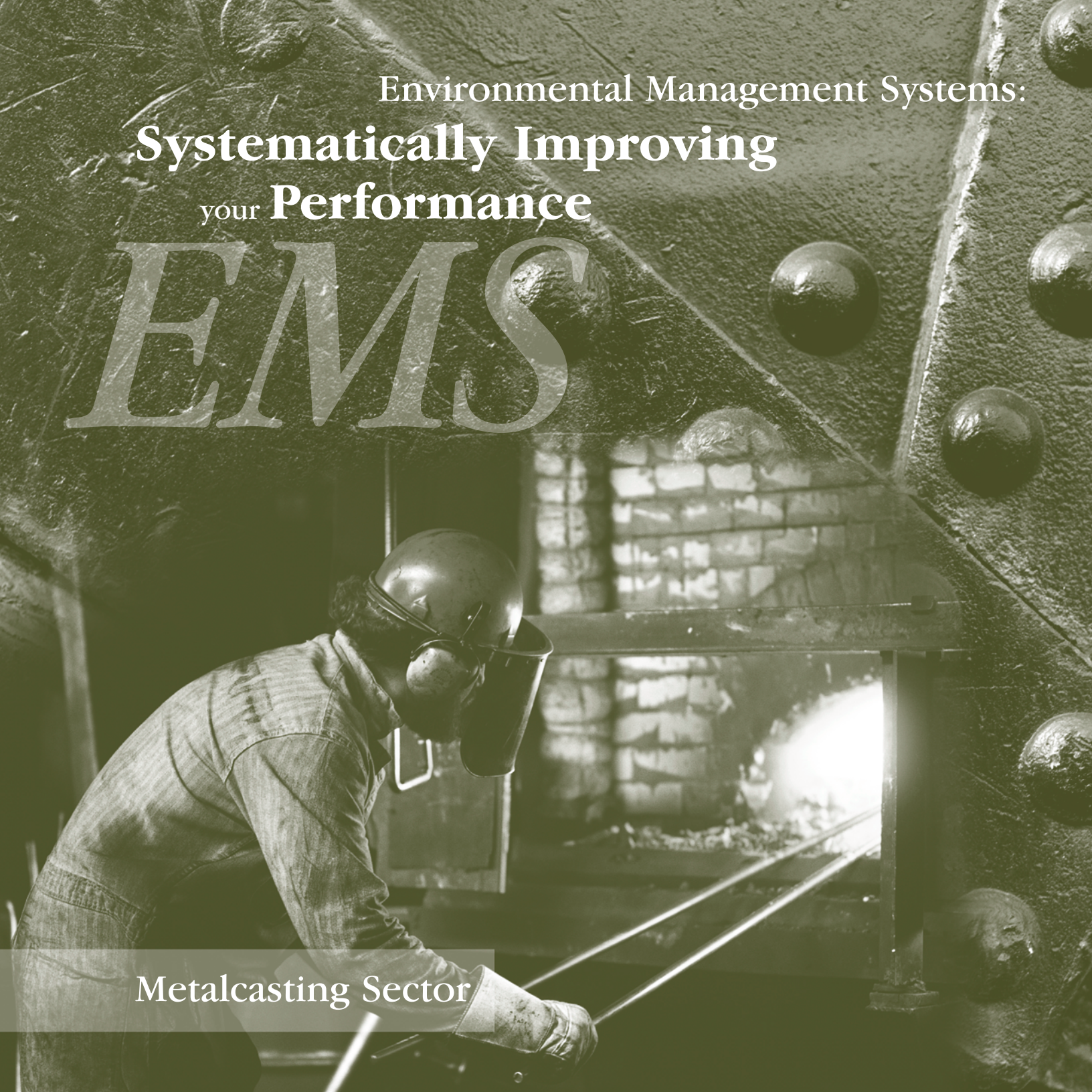
Environmental Management Systems:

Systematically Improving your Performance

EMS



Metalcasting Sector

Metalcasters Shielding Themselves Against Increased Competition

American die casting companies and foundries are facing a period of intense international competition. A weakened economy is putting a financial strain on customers, reducing their budgets, and encouraging them to look for new ways to stretch their dollars—sometimes bypassing American metalcasting facilities for those abroad. American metalcasting facilities are searching for new ways to stay in business and succeed, with some facilities choosing to consolidate while others opt to "mothball" equipment for future use.

Many die casters and foundries have found a way to remain competitive in this tight-fisted and uncertain era through the use of Environmental Management Systems (EMS). These facilities with EMSs have taken proactive steps to ensure environmental compliance while reducing costs, ensuring top management participation in environmental decision-making, and enhancing internal and external communications.

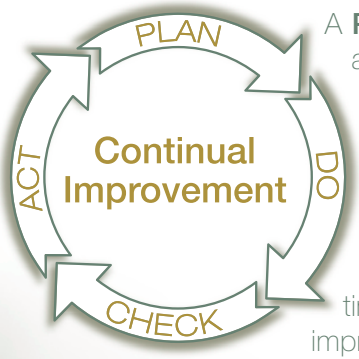
Die casters and foundries have already realized the following benefits by implementing an EMS:

- Reduced operating costs;
- Improved environmental performance;
- Improved internal communication;
- A bolstered corporate image; and
- Enhanced environmental decision-making.

If your facility is looking for a proven, efficient way to improve your environmental performance while improving your bottom line, an EMS may be right for you.

Environmental Management Systems (EMS) Fundamentals

An EMS weaves environmental decision-making into the fabric of a business, facilitating compliance while improving overall performance. Like the Quality Management Systems used at many die casting companies and foundries, an EMS' systematic approach allows facilities to be more efficient and competitive. While each EMS is unique, most follow the Plan-Do-Check-Act model.



A **Plan-Do-Check-Act** approach establishes a framework to examine the environmental aspects of your facility, then develop, implement, monitor, review, and revise the facility's environmental procedures over time to promote continual improvement.

Many metalcasting facilities already have components of an EMS in place that they can build upon, such as written and unwritten procedures, practices, and environmental training. Your facility may also want to consider integrating safety, quality, maintenance, public relations, and other facets of your business into one integrated system.

Evaluate Your **Operations** for **Opportunities** to **Reduce Costs**

Many metalcasting facilities that have implemented an EMS have experienced significant cost savings attributed to:

- Lowered energy usage, resource conservation, and reduced material inputs; and
- Reduced wastes and associated disposal costs.

These cost reductions can be used to help facilities compete with domestic and international facilities—either by reducing overhead costs or by freeing up funds for investments in the facilities or employees. Upfront costs for an EMS can be quickly recovered through EMS' identification of money-saving pollution prevention initiatives and opportunities for continuous improvement in your operations. Phil Gray of Citation Corporation noted that his facility is "seeing benefits on the water reduction side and has found new ways to recycle or reuse materials."

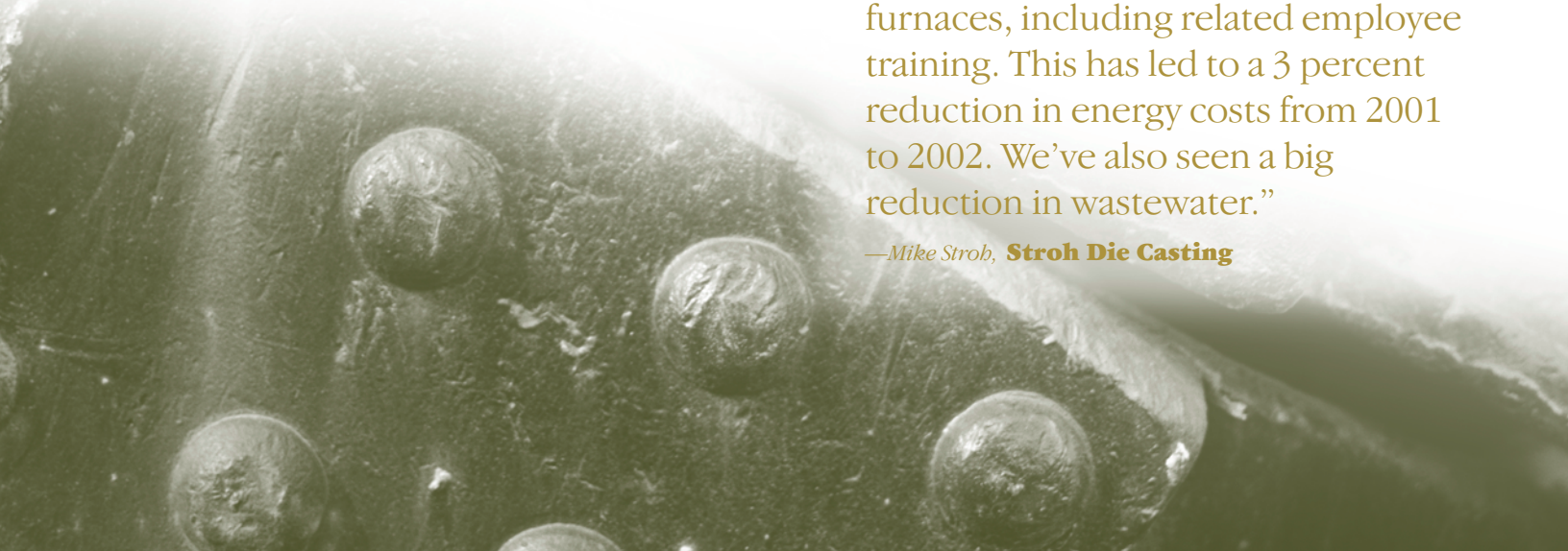
An EMS can identify opportunities for environmental improvements and help you weigh associated costs and benefits to make an informed decision. An EMS can also reduce future liabilities and manage risks as potential environmental problems are identified early and resolved.

"Our EMS helped us to identify ways to cut costs through recycling and reduced waste generation. We have reduced our general waste hauling expenses by 35 percent annually and through recycling we have reduced our hydraulic fluid expenses by 25 percent annually. We've also reduced our SF6 gas usage, used in magnesium casting, by 45 percent."

—*Eric Treiber,* **Chicago White Metal Casting**

"Since implementing our EMS, we've seen a reduction in our energy costs. In one case, we put a program together to insulate and cover our furnaces, including related employee training. This has led to a 3 percent reduction in energy costs from 2001 to 2002. We've also seen a big reduction in wastewater."

—*Mike Stroh,* **Stroh Die Casting**



Systematically Facilitate Environmental Compliance

Die casting companies and foundries face a variety of air and water environmental regulations. An EMS' systematic approach can bring a sense of order to the environmental compliance process.

Many metalcasting facilities with EMSs agree that they now have greater assurance about maintaining environmental compliance. As noted by Kathy Cole of Fort Wayne Foundry, "Upcoming environmental issues have a brighter light shined on them than before."

By implementing an EMS, your facility can stay in compliance with environmental regulations, avoid violations and fines that can damage your public image, and keep an eye on the future.

"Our organization has improved through EMS. Now, our environmental issues are all in front of us with timetables and we're not doing everything at the last minute. We met deadlines before, but EMS made us more aware and organized. EMS also forces us to look forward at upcoming regulations and we use tools like emails and Web sites to keep us up-to-date."

—*Mike Stroh,* **Stroh Die Casting**

"An EMS can benefit our plant by helping us maintain compliance with environmental rules and regulations and have a way to know what's coming down the pike."

—*Doug Smith,* **Rochester Metal Products**

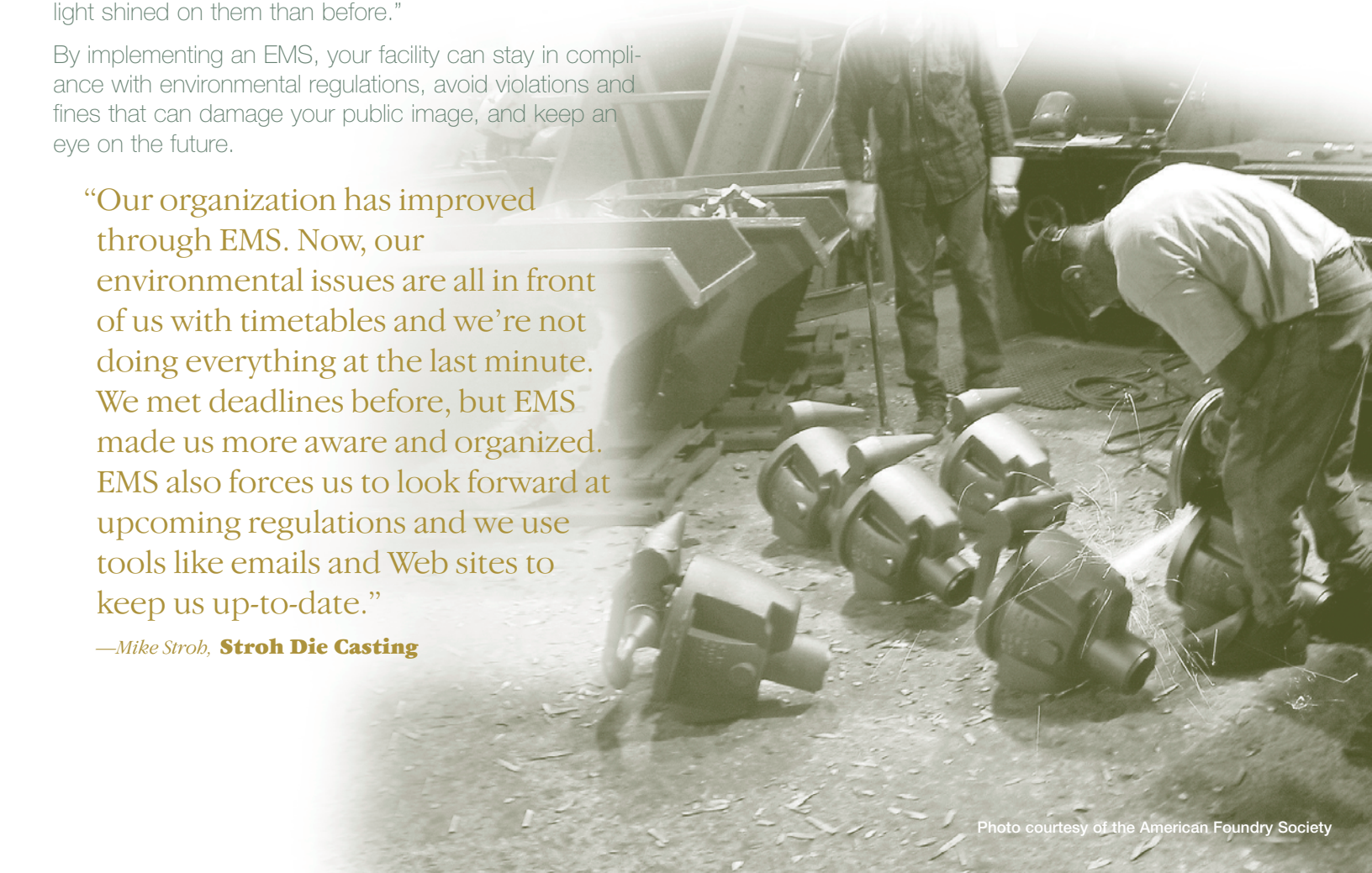


Photo courtesy of the American Foundry Society

Enhance Internal Communication to Encourage Environmental Responsibility

Effective communication among facility employees plays a critical role in improving environmental performance and can also lead to increased employee morale and elevated employee retention rates.

Die casting companies and foundries that communicate well internally often boast more informed, involved, and proactive employees who not only implement their assigned parts of the EMS, but who suggest other potential areas for improvement or cost-saving opportunities.

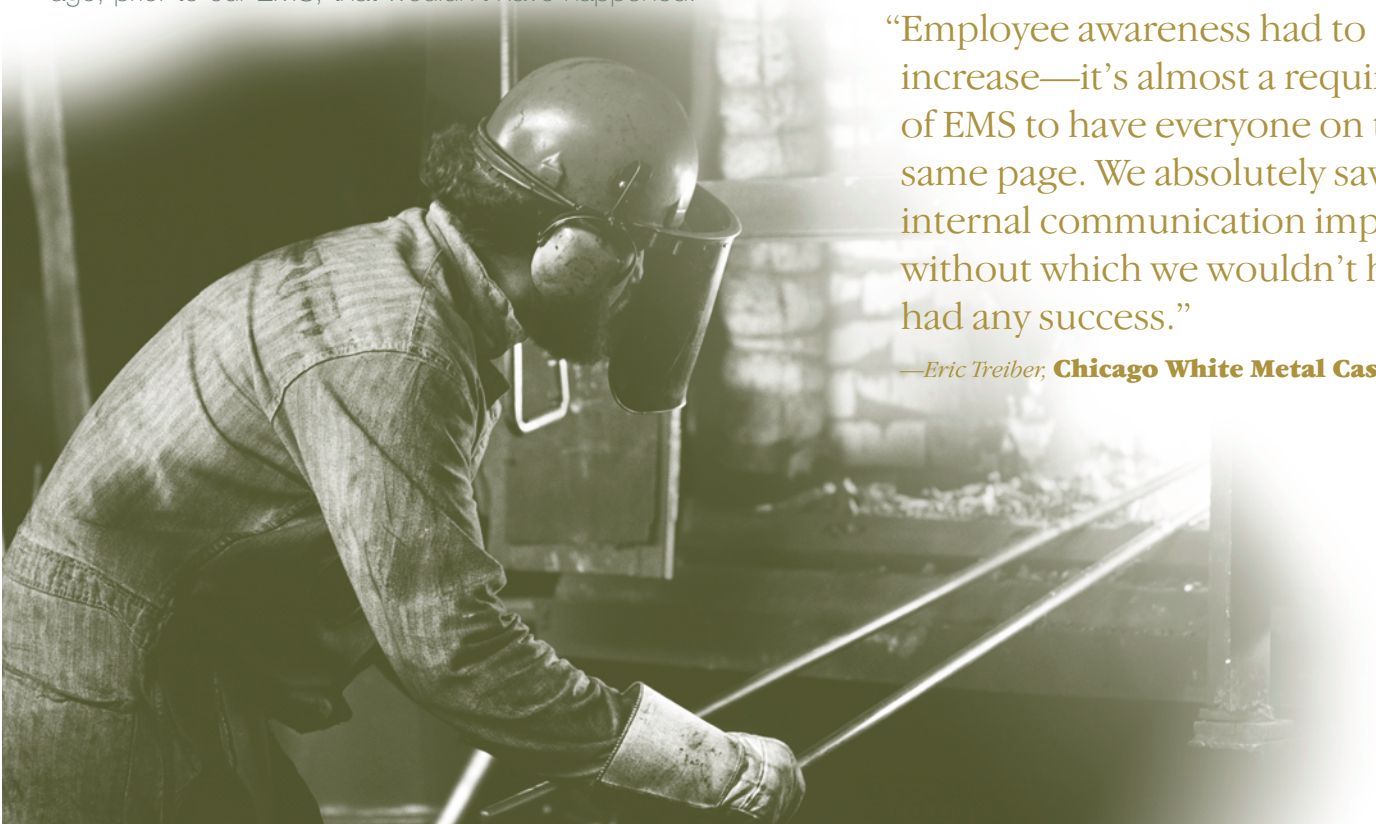
In the case of Quad City Die Casting, Dick Adams reported that their "employees are now notifying their maintenance supervisors about new leaks to ensure that we recycle as much oil as possible. A couple of years ago, prior to our EMS, that wouldn't have happened."

"Following ISO 14001 increases the involvement of people at all levels the company, and in doing so automatically increases awareness of requirements, eliminates islands of knowledge, and makes decision-making more proactive, thus avoiding the classical knee-jerk, reactive decisions."

—*Jim White,* **Grede Foundries, Inc.**

"Employee awareness had to increase—it's almost a requirement of EMS to have everyone on the same page. We absolutely saw internal communication improve, without which we wouldn't have had any success."

—*Eric Treiber,* **Chicago White Metal Casting**



Take a Proactive Stance on the Environment to Bolster Your Facility's Image

By sharing information about your environmental performance with your customers, state, and community, you can build credibility and trust. An EMS can also help you establish a dialogue with others directly impacted by your facility's operations.

A positive image can help your facility compete with foreign companies while reassuring your customers that your facility will endure for years to come. According to Kathy Cole of Fort Wayne Foundry, "Having an EMS shows that we're going to continue to be a viable supplier years down the road, which gives us a head's up over some of our competitors. Customers want to be assured that a company is not going to suddenly get shut down due to an environmental problem."

Your facility can build a positive relationship with regulators by taking advantage of available state and national programs. States such as Texas, Virginia, Oregon, and Massachusetts and national programs such as the U.S. Environmental Protection Agency's National Environmental Performance Track offer incentives ranging from public recognition to regulatory flexibility to facilities that consistently perform beyond regulatory compliance.

Your facility's image can also improve your facility's relationship with its community. According to Paul Kennedy of Kennedy Die Castings, Inc., "Implementing an EMS and communicating it to the community is a strong selling point."

"EMS is a good marketing tool to potential customers and to employees. To inform our community about our EMS, we hung a banner outside and added information about the EMS to our Web site. Two of our customers even sent congratulation letters."

—*Mike Stroh,* **Stroh Die Casting**

"We absolutely did external outreach and we're a charter member of EPA's National Performance Track. We've posted information to our Web site about ISO 14001 and added links to the Performance Track Web site. We've also recently invited an environmental club of a local high school to come visit us."

—*Eric Treiber,* **Chicago White Metal Casting**

Lead Environmental Decision-Making at Your **Facility**

Your participation in the environmental decision-making process can ensure that your facility's environmental policy is relevant, that your facility is meeting its regulatory obligations, and that it is applying resources appropriately. The senior management review process established by an EMS ensures your continued involvement in environmental decisions and can lead to improved operations and reduced liabilities.

Facilities that have implemented an EMS have noted the benefit of increased senior management involvement in establishing metrics and plans. According to Dick Adams from Quad City Die Casting, "Environmental decisions are now an added consideration during our quarterly management review board meetings."

> "Meetings and discussions about the environment are now held more frequently, and the meetings are more formalized with action items on each topic."
>
> —*Kathy Cole,* **Fort Wayne Foundry**

> "Environmental decision-making has become more elevated. Now, when we look at new work, we check to see what kind of impact that work would have on the EMS."
>
> —*David Littler,* **Littler Diecast**

Get Started with Environmental Management Systems

Now that you've learned how an EMS can reduce costs, improve your business processes, and enhance your internal and external communication, here are steps you can take to get started.

Take Advantage of Assistance and Tools Tailored to Metalcasting Facilities

The American Foundry Society and the North American Die Casting Association are working with EPA's Sector Strategies Program to encourage die casting companies and foundries to adopt EMS. If your facility is a member of either of these associations, contact your association representative to take advantage of the customized training resources, expertise, and support available through this partnership. You can also work with your association to ensure that your facility's voice is heard in discussions with EPA about future environmental programs.

To begin developing your facility's own customized EMS, visit EPA's Sector Strategies Web site at **www.epa.gov/sectors/metalcasting** for EMS implementation tools created specifically for the metalcasting industry. You can also find many resources related to EMS development and implementation as well as a list of Technical Assistance Providers near you on EPA's EMS Web site at **www.epa.gov/ems/**. Other organizations, such as state environmental agencies and universities, may also offer EMS expertise.

Start Small and Build Momentum

An EMS is based on common sense and intuitive business decisions. Learn from the tools listed above, then start by taking small, doable steps and build momentum from there. To be effective, you'll need proactive involvement from senior management, front-line workers, and supervisors throughout your facility. Keep the big picture in mind, but define reasonable expectations, set goals and time frames in line with your expectations, then monitor progress, making corrections where necessary. Capitalize on any elements of an EMS your facility may already have in place to advance to the next level in environmental management.

Die Casting Companies and Foundries Already Implementing EMS

Chicago White Metal Casting
Bensenville, IL
www.cwmdiecast.com

Littler Diecast
Albany, Indiana
www.littlerdiecast.com

Citation Corporation
Birmingham, AL
www.citation.net

Quad City Die Casting
Moline, Illinois
www.quadcitydiecasting.com

Fort Wayne Foundry
Fort Wayne, Indiana
www.fortwaynefoundry.com

Rochester Metal Products
Rochester, IN
www.rochestermetals.com

Grede Foundries, Inc.
Milwaukee, WI
www.grede.com

Stroh Die Casting
Milwaukee, WI
www.stroh.com

Kennedy Die Castings, Inc.
Worcester, MA
www.kennedydc.com

Discover what other leading metalcasting facilities across the country are finding—

EMS is a Good Business Decision

"Of all of the initiatives that have come down through business consultants in the past 10 years, establishing an EMS is perhaps the most beneficial because it provides benefits over so many different parts of our company."

—*Eric Treiber,* **Chicago White Metal Casting**

"The single most important thing I can say about ISO 14001 is the fact that it makes the EMS so deeply ingrained in the normal course of daily business that it continues to function despite the absence of a critical person here or there."

—*Jim White,* **Grede Foundries, Inc.**

SectorStrategies

Insight • Innovation • Results

EPA's Sector Strategies Program is a cooperative working relationship among government, trade groups, and other stakeholders to reduce pollution and ease the burden of regulation. For more information, visit **www.epa.gov/sectors** or contact your trade association.

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