

ON THE  
**On the Steel**  
STEEL FRONT  
**Front**

## Workforce Development Emerges as a Major Challenge for Ohio's Steel Industry

Anticipating a workforce shortage as many steelworkers near retirement, the steel industry is making a long-term, serious effort to cultivate interest in steel industry careers among Ohio's young people.

This effort aims to inform Ohio's youth about the opportunities for good-paying, high-tech jobs in the steel industry. It is also intended to raise interest in subject areas like math, science, physics and chemistry, which can lead to successful careers in steel.

The challenge steel faces, however, is formidable. C. Lee Johnson, **Ohio Department of Development** director and co-chairman of the Ohio Steel Council, believes the number-one problem facing Ohio's economy is workforce development.

"The economy of the 21st century will require that Ohio build upon its efforts to cultivate a broad-based workforce committed to lifelong learning," Johnson said. "By emphasizing the importance of education and training, we will ensure that the state maintains its reputation for workforce excellence, which is an essential component of our sustained economic success."

"It is increasingly the case that jobs in manufacturing, requiring a high school education or two-year college degree, provide excellent career opportunities. Today's manufacturing plant is high-tech, which means fewer workers in better jobs," he added.

In a recent *American Metal Market* survey, one in three said yes to the question, "Would you encourage a son or daughter to pursue a career or job in the metals-producing industries, such as steel, aluminum or copper?"

*continued on page 4*



<b>American Metal Market Survey on Steel Careers</b>			
Would you encourage a son or daughter to pursue a career or job in the metals-producing industries, such as steel, aluminum or copper?			
	<b>Yes</b>	<b>No</b>	<b>Don't Know</b>
<b>Total</b>	33.0	55.2	11.7
Male	35.7	56.4	7.8
Female	30.5	54.2	15.3
<b>Age</b>			
18-34	37.9	51.4	10.7
35-44	34.2	53.7	12.2
45-54	29.6	58.5	11.8
55-64	26.2	65.6	8.3
65+	30.8	52.8	16.4
<b>Annual Income</b>			
Under \$25,000	38.6	51.9	9.4
\$25,000-\$34,900	44.3	43.9	11.8
\$35,000-\$49,900	31.7	57.0	11.3
\$50,000-\$99,900	26.1	61.8	12.1
\$100,000+	34.7	58.1	7.2
<b>Education</b>			
Some high school	41.5	50.6	7.9
High school grad	34.7	51.7	13.6
Some college	29.6	59.3	11.2
Source: <i>American Metal Market</i> (July 16, 1999), a Cahners publication.			

**Employees at Republic Technologies International in Fairlawn work with the latest in high-tech equipment, including computer control systems. Ohio's steel companies are committed to getting the word out that jobs of this quality are available in the steel industry.**

**LTV, Bethlehem Invest in Ohio Joint Venture**

**LTV Steel Company** in Cleveland finalized a \$125 million joint investment with Bethlehem Steel Corp. The two companies invested in Columbus Coatings Co., a hot-dip galvanizing and galvannealing flat-rolled steel manufacturer, and Columbus Processing Co., a steel-slitting and warehousing unit.

**Timken Secures Grant from Department of Energy**

The U.S. Department of Energy awarded a \$1.4 million grant to **The Timken Company** in Canton for the development of a new steel gauging system that uses

laser technology in the manufacturing of seamless mechanical steel tubing.

**Pittsburgh Logistics Systems Launches Online Service**

The Web site [flatbed.com](http://flatbed.com), dedicated to flatbed truck traffic, was recently unveiled by **Pittsburgh Logistics Systems** in Monaca, Pa. The Web site allows flatbed carriers to log on and view available freight lanes across the entire United States and parts of Canada.

**AK Steel Secures Agreement for Special Coating**

An exclusive licensing agreement between HealthShield Technologies and

**AK Steel Corp.** in Middletown will allow AK Steel to coat its carbon and stainless steel products with HealthShield™, which protects products from bacteria and mold.

**WCI Steel Praised for Pollution Prevention**

**WCI Steel, Inc.**, in Warren ranked in the top third among 16 integrated steel mills and was one of five mills to receive accolades in an environmental report by the Environmental Defense Fund. The rankings were based on the annual Toxic Release Inventory from the U.S. Environmental Protection Agency. Since 1988, WCI has reduced its release of by-products by more than 90 percent.

## State Bill Requires Penalty for Foreign Steel Users

Ohio steel producers have come out in support of a bill in the Ohio legislature that would make it a punishable offense to use foreign-made steel in publicly funded construction projects.

There is already a law on the books requiring contractors to use U.S.-made steel if steel is required in publicly funded projects. However, the law provides only minimal enforcement and penalty provisions.

A new bill, sponsored by Ohio Senator Robert F. Hagan, D-Youngstown, requires regular enforcement of the existing law. It provides a procedure for investigation and mandates a fine for violators.

The new bill would require the Ohio Department of Administrative Service to investigate any suspected violations and make referrals to the Ohio Attorney General's office. Through civil court, violators would be fined at one-and-a-half times the value of the steel being used in the public project. The money would go to the local school district.

George Manos, co-chair of the Ohio Steel Council and director of administrative, governmental and legal affairs for **Republic Technologies International** in Fairlawn, said the bill is a responsible step forward. "This bill would offer some definite assurance that American steel would be used in building projects funded by taxpayers.

"We feel this bill would make an important contribution to the battle against unfairly traded steel imports," Manos said.

The bill is still undergoing revision in a Senate committee.

## Steel Producers Applaud Court Decision on Air Standards

Ohio steel producers applauded a recent court ruling questioning the U.S. Environmental Protection Agency's air standards on "small particles."

The new regulations, announced in 1997, would require states to regulate airborne particulate matter down to 2.5 microns in diameter, which is about 28 times smaller than the width of a human hair. States and cities were to be in compliance by 2003.

However, a U.S. District Court of Appeals in Washington, D.C., struck down the new standards recently. The court said the EPA had failed to state "intelligibly" what level of pollution might be harmful. The federal agency is appealing the decision.

"We appreciate the court's circumspect position in requiring conclusive evidence before steel and other industries incur the cost of upgrading emissions control equipment," said George Manos, co-chair of the Ohio Steel Council and director of administrative, governmental and legal affairs at **Republic Technologies International** in Fairlawn.

"The steel industry believes strongly in clean air and a healthy environment for Ohio residents. Naturally, however, we want to make sure that the standards we are implementing are based in fact and science," Manos said.

Compared with pollutants such as smog, sulfur and large soot particles, scientists know relatively little about the health effects of smaller particles.

The Ohio Steel Council is among those organizations urging the EPA to push ahead with research into the health effects of particles smaller than 2.5 micrometers. A panel consisting of 23 medical doctors and scientists assembled by the National Research Council would like research to continue forward to determine whether the microscopic particles can aggravate asthma or other respiratory diseases.

Congress has also supported the EPA's small particle research, increasing this year's budget to \$47.3 million from \$25.4 million.



### Ohio Steelmakers Tour Worthington Industries

*The Ohio Steel Council held its fall meeting at Worthington Industries in Columbus and then toured one of the company's steel processing plants. Ohio steelmakers have close working relationships with Ohio's many steel processors. The photo shows a Worthington Industries worker measuring the refinished surface of a work roll at the Tandem Mill in Columbus.*

## OHIO STEEL DATA REPORT: Second Quarter 1999

Item	Quarter Ended June 30			Six Months Ended June 30		
	1999	1998	% chg	1999	1998	% chg
Steel Production (tons)	4,371,323	4,449,175	-1.70	8,520,045	8,915,340	-4.4
<b>Shipments (tons)</b>	<b>3,700,992</b>	<b>3,817,675</b>	<b>-3.10</b>	<b>7,218,321</b>	<b>7,996,999</b>	<b>-9.7</b>
Payroll	\$364,074,479	\$374,567,735	-2.80	\$709,308,449	\$753,186,805	-5.8
<b>Average Employment</b>	<b>26,794</b>	<b>28,354</b>	<b>-5.50</b>	<b>27,075</b>	<b>27,886</b>	<b>-2.9</b>
Capital Investment Spending	\$93,672,783	\$111,724,211	-1.62	\$176,336,424	\$200,947,868	-1.2
<b>Healthcare Spending</b>	<b>\$62,693,858</b>	<b>\$59,320,138</b>	<b>5.70</b>	<b>\$122,247,121</b>	<b>\$118,904,493</b>	<b>2.8</b>

# STEEL At Work:

## Steelmakers Offer Lighter, Cheaper Trucks and SUVs

In spite of their popularity, sport-utility vehicles pose a special challenge to manufacturers and consumers in terms of weight and cost.

However, the American Iron and Steel Institute, in conjunction with Porsche Engineering Services, is developing the Light Truck Structure — the light truck counterpart to the Ultralight Steel Auto Body. The Light Truck aims to provide manufacturers of sport-utility vehicles (SUVs) and light trucks with a lighter, stronger, more cost-efficient alternative.

“Steel plays an integral role in the popular appeal of the SUV and its growth as a rugged, durable vehicle,” said Dave Althoff, vice president, sales-automotive,

at **LTV Steel Company** in Cleveland. “It is imperative, therefore, that the steel industry keep up with the automobile industry’s need for reductions in weight and cost.”

The SUV is typically designed through modifications to the pickup truck. However, Porsche engineers determined that it was more effective to start with a design for the Light Truck SUV and then modify it for standard and extended-cab pickup trucks.

Compared to 11 benchmark SUVs, the Light Truck program showed significant savings in weight, cost and improved structural performance, according to AISI. The Light Truck is 19 percent lighter and 20 percent cheaper to produce. In addition, 32 percent fewer body parts are used.

“The Light Truck reverses the trend

toward bigger, heavier vehicles,” Althoff said. “With the Light Truck Structure, consumers could eventually purchase a large SUV that would be the same weight as today’s small SUVs.”

Porsche designed the Light Truck Structure with today’s production facilities in mind. No major overhauls to assembly facilities would be necessary to accommodate the Light Truck. Any advanced manufacturing technologies available in the future would only improve the weight, cost and structural integrity of the Light Truck.

Besides LTV, members of AISI’s Automotive Applications Committee include **AK Steel Corp.** in Middletown and **WCI Steel, Inc.**, in Warren.

## MIT Study Debunks Aluminum’s Environmental Claims

The Massachusetts Institute of Technology concluded in a recent study that mass producing aluminum-intensive cars would do more harm to the environment than good.

The study, sponsored by the American Iron and Steel Institute (AISI) and conducted by the MIT Material Systems Laboratory, refutes the claim that aluminum is better for the environment than steel as a component in automobiles. MIT’s study shows that producing one ton of virgin aluminum generates approximately 10 times more carbon dioxide (CO<sub>2</sub>) than the production of one ton of steel.

The aluminum industry claims that a one-ton increase in aluminum instead of steel would reduce CO<sub>2</sub> emissions by 20 tons over the life of an average vehicle. Aluminum producers have explained that it would take five or six years of driving aluminum-intensive vehicles to offset the amount of CO<sub>2</sub> released into the air during aluminum production.

However, the MIT study estimates that it would take not five or six years, but 32 to 38 years for aluminum-intensive vehicles to offset the amount of CO<sub>2</sub> released into the air during aluminum production. This estimate is based on a comparison between a group of aluminum-intensive automobiles and a group of automobiles employing the Ultralight Steel Auto Body.

Even compared to steel-based automobiles presently on the road, aluminum-

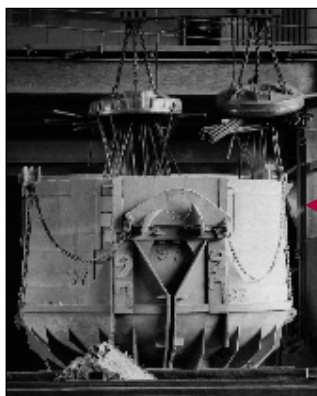
intensive automobiles would need 15 to 17 years to bring their total carbon dioxide emissions — including those from manufacturing — in under steel’s mark. MIT included in its estimates the amount of time it would take for the aluminum industry to put a full “fleet” of aluminum-intensive automobiles on the road.

“As cleaner power sources become more prevalent, the need for expensive, difficult solutions, like aluminum, diminishes and the virtues of steel become increasingly clear,” said Thomas Helinski, vice president of purchasing for **Wheeling-Pittsburgh Steel Corp.** in Steubenville.

The Ohio Steel Council believes that if automobile companies remain committed to steel-based solutions, such as the Ultralight Steel Auto Body, and if they continue with improvements to powertrain efficiency, there will be no need for less environmentally friendly materials, such as aluminum.

“Consumers who would buy an aluminum car with the intention of helping the environment would be making a mistake,” Helinski said. “Using aluminum sheet instead of steel presents a range of

manufacturing problems, in addition to the problem of higher CO<sub>2</sub> emissions. These problems include higher costs and more difficulty in fabricating and handling, whereas steel is known for its ease in stamping, assembly and repairing. Steel is also more recyclable than aluminum.”



*Steel is more recycled and recyclable than aluminum. According to studies, steel is easier to manage during the recycling process, as in the photo, where steel is being sorted with large electric magnets.*

## Resolution on Unfair Imports Garner Further Support

The National Conference of State Legislatures adopted a resolution at its recent meeting urging Washington to employ “the aggressive use of U.S. trade laws and international dispute resolution mechanisms” to address unfairly traded steel imports.

The resolution was sponsored by Sen. Anthony Latell, D-Girard, who has sponsored similar resolutions passed by the Council of State Governments, as well as the **Ohio Senate**. A similar resolution also passed the **Ohio House**.

# Steel Producers Contribute \$5 Million to Local Communities

Since 1997, Ohio steel producers and employees have donated more than \$5.1 million in contributions to their communities, according to figures reported quarterly to **Youngstown State University's** Urban Studies Department.

Through United Way, Habitat for Humanity and scholarship programs, Ohio's steel producers have helped to improve the quality of life in Ohio's communities.

Steel producers have donated dozens of new steel-framed homes through Habitat for Humanity, providing not only steel framing but also engineering, tools and fastening and training. Steel framing is a national trend in

new housing developments because of the superior strength and cost-efficiency of steel.

In the last three years, **LTV Steel Company** in Cleveland has contributed steel framing for about 45 new homes in Bicentennial Village, Cleveland. **WCI Steel, Inc.**, in Warren donated Trumbull County's first steel-framed house.

In addition, LTV Steel and **AK Steel Corp.** in Middletown were among those businesses sponsoring the 1999 River Sweep, a river bank cleanup extending along the Ohio River as well as the Allegheny, Monongahela and Kentucky rivers. The cleanup encompassed six states.

Through the Middletown Regional Hospital, AK Steel in Middletown funds AK Steel Foundation Community Diabetes Resource Library. AK Steel also funds the AK Steel Diabetes Education Center in the Middletown Public Library.

LTV Steel chaired last year's Cleveland-area United Way drive, increasing contributions \$1 million over the previous year for a total of \$43,234,952. LTV Steel's annual company drive for United Way is a cooperative effort with the **United Steel Workers of America**.

These are just a few of the many contributions from Ohio's steel companies and their employees, but they illustrate their commitment to the growth and success of Ohio communities.

## Workforce *continued from page 1*

Younger respondents registered a more favorable view of the steel industry than older respondents. About 38 percent of those aged 18 to 34 answered yes to the survey question, while only 28 percent aged 45-60 answered yes.

Ken Hagan, 27, manager of primary metallurgy for **Republic Technologies International** in Fairlawn, is one member of the younger generation who changed his mind about the steel industry. Hagan decided on the steel industry after touring a Republic mill. He realized that the demographics of the steel industry would

create great opportunity for an enterprising young person entering the field.

Hagan said most of his college professors stressed the excitement of the polymers and composites industry, rather than steel, which was perceived as low-tech. "Steel has a good story to tell, but we have to get out there and make it known," he noted.


Many Ohio steel companies provide scholarships and other educational incentives to encourage interest in the steel industry. For instance, **The Timken Company** in Canton funds high school vocational academies designed to develop abilities in mechanics, electronics or engineering. **LTV Steel Company** in Cleveland

operates the LTV Science and Technology Center for high school students in Cleveland.

In addition, the Ohio Steel Council this winter will be publishing its inaugural issue of *Forging Knowledge*, a newsletter for seventh- and eighth-grade educators containing practical classroom tools and creative lessons relating to the steel industry.

Earlier this year, the Council launched the *Careers in Steel* section of its Web site ([www.ohiosteel.org](http://www.ohiosteel.org)), which contains detailed information on specific positions in the steel industry, with salary information and profiles of successful steelworkers.

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