

Twelve Years Working Together for the Betterment of Ohio

To Our Legislators and Other Friends of Steel:

For 12 years, we have worked closely with you, our friends in Ohio's state government, to foster business development in Ohio. We are proud of the record of accomplishments that we share.

If you recall, in 1993 the Ohio Steel Council and state government committed mutually to Ohio Prevention First, a voluntary program to reduce waste and pollution sponsored by then-Gov. George Voinovich. In 1996 state leaders and Ohio steel producers registered their concerns about the Conrail merger and, in the same year, legislators provided financial incentives for the redevelopment of brownfields. In 1999 the General Assembly passed legislation on electricity

restructuring. Between 1998 and 2001, as the imports crisis loomed, Gov. Bob Taft and other state leaders called repeatedly for the expeditious enforcement of U.S. trade laws, and the General Assembly passed legislation requiring the use of domestic steel on all state-funded projects.

The **Ohio Department of Development** (DOD) has been an especially important member of the steel partnership, providing guidance at critical junctures, funds for training and capital improvements, and tax exempt bonds for expansion projects and environmental controls.

In our view, the partnership between state government and the steel industry has been tremendously successful – successful because both parties have communicated openly and honestly, and always with respect.

The Ohio Steel Council's Annual Report 2002 celebrates the success of Ohio steel companies in generating operating efficiencies and quality products, even as the U.S. economy has struggled. We believe that our success – during the past year and over the last dozen years – could not have occurred without your support. Our partnership with you has been central and critical to our success, in no way peripheral or secondary.



Workers at PRO-TEC's process pulpit monitor the continuous galvanizing process with the aid of computers and video imagery.

In the coming year, we will look to your support on several issues, including personal property tax reform, health-care mandates, DOD funding and the use of steel products in state-funded road projects, to name a few. We believe that open, constructive dialogue on these issues and others will bring us closer to an optimum environment for business growth in Ohio, second to no other state or nation.

Respectfully,

Jim Cowan
Co-Chair of the Council
General Manager of V&M Star

Bruce Johnson
Co-Chair of the Council
Director of the Ohio Department of Development

Ohio Steel Council

ANNUAL
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Members of the Council

AK Steel Corp., Coshocton, Mansfield, Middletown,
Walbridge and Zanesville
Ohio Department of Development
Ohio House of Representatives
Ohio Senate
The Ohio State University
PRO-TEC Coating Company, Leipsic
Republic Engineered Products, Canton, Fairlawn,
Lorain and Massillon
Stark State College of Technology, Stark County
The Timken Company, Bucyrus, Canton, Eaton,
New Philadelphia, Wauseon, Wooster and Youngstown
United Steelworkers of America
USS Lorain Pipe Mills, Lorain
V&M Star, Youngstown
WCI Steel, Inc., Warren
Wheeling-Pittsburgh Steel Corp., Martins Ferry,
Mingo Junction, Steubenville and Yorkville



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A Dozen Years Later, Ohio's Steel Industry Still Tops the Charts

Twelve years ago then-Gov. George Voinovich, the **Ohio Senate** and the **Ohio House of Representatives** formed the Ohio Steel Council, with an aim toward enhancing communication and cooperation between state government and Ohio's leading steel producers. That investment has yielded tremendous dividends.

Today, Ohio's steel industry is more efficient and technologically advanced, and it remains the nation's leader in steel production and processing.

According to the most recent Annual Survey of Manufacturers, Ohio produces \$4.59 billion in valued-added steel production and processing, which is more than any other state in the nation.* In addition, Ohio ranks first in capital expenditures and second only to Indiana in the number of people employed in steel.

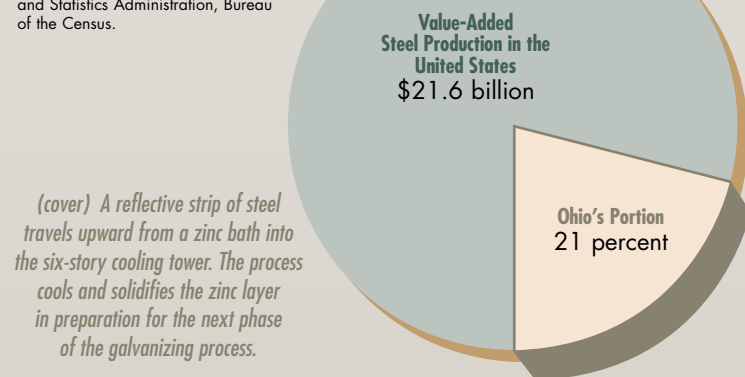
A full one-fifth of all steel produced and processed in the United States comes from Ohio. Ohio's steel output is greater than the combined output of Texas, West Virginia, Maryland, New York, South Carolina, California, Kentucky and Arkansas – all of which are steel-producing states.

No doubt, Ohio's steel industry is smaller than it was 12 years ago. The reduction in the workforce has been significant, from 38,700 to 25,720 – about 33 percent – but the change in value-added production has been relatively modest, from \$5.26 billion to \$4.59 billion – about 13 percent. Ohio's share of the pie remains about the same: 21 percent of all steel produced and processed in the U.S.

The most significant change in 12 years is qualitative, rather than quantitative. Today's Ohio steel companies are less focused on large quantities of raw output and more focused on new technologies and improved processes for the production of value-added or highly engineered, specialty products in demand worldwide.

Top Steel-Producing States	Value-Added Primary Steel Production	Number of Workers Employed In Steel Production	Capital Investment Averages Per Year
Ohio	\$4.59 billion	25,720	\$429 million
Indiana	\$4.27 billion	28,356	\$418.6 million
Pennsylvania	\$2.58 billion	22,679	\$283 million
Michigan	\$1.09 billion	8,050	\$201.6 million
Illinois	\$936 million	10,903	\$105 million

*All statistics in this report are taken from the latest Annual Survey of Manufacturers, U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census.



(cover) A reflective strip of steel travels upward from a zinc bath into the six-story cooling tower. The process cools and solidifies the zinc layer in preparation for the next phase of the galvanizing process.

Managing Efficiencies in an Economic Downturn

Like companies in nearly all business sectors, Ohio steel producers are working through one of the worst economic downturns in many years. Nevertheless, steel companies are generating efficiencies and profits through strategies focused on management approaches, cooperation with labor, capital investment, technology and product quality. The very latest technical training is especially critical to advancements in efficiency. Steelworkers obtain training through programs provided by the **United Steelworkers of America, Stark State College of Technology, The Ohio State University** and other Ohio institutions.

In 2002, two Ohio Steel Council member companies improved their financial outlooks by changing ownership. North Star Steel in Youngstown became **V&M Star**, while Republic Technologies International in Fairlawn sold many of its assets, forming **Republic Engineered Products**. Early in 2003, Republic was recognized with the 2002 Deal Maker Award from the Association for Corporate Growth, Northeast Ohio Chapter.

New Modes of Management

New management paradigms employed at Ohio steel companies are emphasizing group participation, teamwork, follow-through, accountability on all levels, and direct communication between management and labor.

At **PRO-TEC Coating Company**, team-building training, with an emphasis on ownership and responsibility, enabled the company to respond to an urgent situation with optimum efficiency in 2002. A significant business interruption at a different galvanizing facility led to the sudden transfer of a large volume of exposed outer-body automobile panels to PRO-TEC. The transfer increased the company's total hot-dip galvannealing operations by seven times.

In addition, PRO-TEC has implemented a software-based supply chain management system and formed several specialized teams to evaluate energy efficiency and make recommendations for improvements. In recent years, PRO-TEC has increased the amount of water recycled at its facility by 60 percent.

At **V&M Star**, a program focusing on teamwork and cooperation among multiple disciplines scrutinizes all areas of the business to identify potential causes of failure, in advance of a failure occurring. A single pilot under this program generated 50 recommendations for improving the piercer gearbox in the rolling mill.

In another team-centered project at V&M Star, a group of engineering, maintenance and operational personnel developed a new, high-precision, automated design for a crop bumper,



A high-precision instrument, operated via a touch-screen interface, improves crop-cutting yields at V&M Star.



WCI Steel's Ladle Metallurgy Facility provides precise chemistry control for the production of custom steels.

a machine used for precision cuts to pipe ends. Formerly operated with manual controls, the machine now employs a hydraulic cylinder with linear transducer positioning control. The design has increased yields from an average of 93.8 percent to 95.2 percent – a significant differential when rendered in bottom-line savings.

2002 was a record-setting year for **Wheeling-Pittsburgh Steel Corp.**, which surpassed its previous steel production mark set in 1998 by 3.5 percent and set quality records at each of its facilities.

The improvement in efficiency is attributed to an increased focus on employee participation and attention to detail at every level in the company. The maturation of the company's culture of teamwork depends on a high level of trust between workers and managers.

Product Quality and Innovation

Product quality and innovation are long-term commitments in Ohio's steel industry. They have been sustained through all economic cycles, including the most recent downturn.

The Timken Company implemented a new laser ultrasonic system that measures the wall thickness of steel tubing as it is being manufactured. The system allows for immediate corrections, a reduction in tube eccentricities and tighter tolerances. Timken developed the technology in conjunction with the National Research Council of Canada and the Oak Ridge National Laboratory at a cost of \$3.1 million, 60 percent of which the U.S. Department of Energy funded.

As with many innovations, the benefits of the laser ultrasonic system go beyond product quality to include efficiency. Laser ultrasonic technology reduces waste, emissions and energy consumption. It could save the steel industry as much as \$234 million per year if implemented at all tube and pipe facilities in the U.S.

WCI Steel, Inc., has developed a reputation for cornering niche markets with custom steels for particular customers. Through a joint research initiative with an automotive customer, WCI Steel has developed 135 XF, an ultra-high strength steel for use in automotive bumpers, side-door intrusion beams and other safety applications. WCI produces ultra-high strength steels in cold-rolled and galvanized applications.

As a producer of carbon, stainless and electrical steels,

AK Steel Corp. consistently earns the highest operating profits per ton in the industry. The company is also distinguished as an innovator. One of its newest products, antimicrobial steel, helps to suppress growth of bacteria, molds and fungi and other microbes in kitchens, bathrooms, heating, ventilating and air conditioning systems, food processing environments and medical applications. The steel, available in carbon or stainless, is coated with AgION™, a polymer-based, state-of-the-art coating applied by AK Coatings, a subsidiary of AK Steel.

Republic Engineered Products, the nation's leading supplier of special bar quality steel, completed a \$19.7 million project to establish a new 20-inch bar mill at its Lorain operation, improving quality and bar size ranges (3 inches to 6.5 inches). The project provided upgrades to the existing mill stand and installation of a refurbished shear, a new cooling bed and a new automated abrasive saw line.

Republic also commissioned a new slag rake at Lorain, which enables the processing of higher quality steel bars by improving the vacuum degassing and casting processes. When all phases of the project are complete, including a new platform, operator pulpit and containment bunker, the project will constitute a \$1 million investment.



A high-tech tool at Republic's Lorain facility rakes slag from ladles of molten steel. The process lowers hydrogen levels in the melt and improves the quality of the steel's casting.



AK Steel's state-of-the-art AgION™ antimicrobial-coated steels suppress the growth of various microbes in heating, ventilating and cooling ductwork. The technology won the 2002 "Best of What's New" award in Popular Science magazine.