PROFILE
OF THE AMERICAN IRON AND STEEL INSTITUTE
2010–2011

American Iron and Steel Institute
2010–2011 AISI Officers

Chairman of the Board
Daniel R. DiMicco
Chairman, Chief Executive Officer
Nucor Corporation
Charlotte, NC

Vice Chairman
Regulo Salinas
Vice President
Ternium Mexico
N.L., Mexico

President and CEO
Thomas J. Gibson
President and Chief Executive Officer
American Iron and Steel Institute
Washington, D.C.

General Counsel and Secretary
Kevin M. Dempsey
Senior Vice President, Public Policy and General Counsel
American Iron and Steel Institute
Washington, D.C.

Treasurer
Lawrence W. Kavanagh
President
Steel Market Development Institute
American Iron and Steel Institute
Washington, D.C.

Vice Chairman
David Britten
President
SSAB Americas
Lisle, IL

Vice Chairman
James L. Wainscott
Chairman, President and Chief Executive Officer
AK Steel Corporation
West Chester, OH

COVER: Photo by Jeff Amberg. Photo courtesy of Nucor Steel Berkeley.
CONTENTS

Foreward

1 American Steel: Strength for our Future

2 Building a Sustainable Future

4 Global Leader in Labor Productivity

6 Steel’s Presence Throughout America

7 Automotive

8 Construction

11 Container

12 Steel and National Security

14 Breakthrough Technologies

18 Directory of AISI and its Member Companies
A Message from AISI President and CEO Thomas J. Gibson

America stands at a crossroads whereby our future will be determined by our commitment to restoring America’s economic strength and prosperity. A central strategy to strengthen our economy and competitiveness is to have a healthy and growing manufacturing sector. The American Iron and Steel Institute (AISI) is proud of its history of advocating on behalf of the domestic steel industry, a sector that is fundamental to the strength of American manufacturing and to America’s economic and national security.

In the pages that follow, you will find a profile of the American steel industry: who we are, the achievements of our companies and their skilled workers, and our commitment to sustainability, which is reflected in our products and our performance. Steel’s strength and versatility have helped to establish it as the material of choice in America’s energy and transportation systems, the skyscrapers that grace our cities and the containers that help protect our food supply. Likewise, the new generation of advanced high-strength steel is contributing to the rapidly growing fleet of highly fuel-efficient vehicles on our roads and highways. These and numerous other steel applications are highlighted in the Profile of the American Iron and Steel Institute 2010–2011.

In addition to this industry profile and the directory of AISI member companies that follows, we encourage you to also visit www.steel.org to find out more about America’s hi-tech, innovative and globally competitive steel industry.

Sincerely,

THOMAS J. GIBSON
President and CEO, American Iron and Steel Institute (AISI)
American Steel—Strength for our Future

The American steel industry continues to be a cornerstone of the American economy.

The backbone of manufacturing, steel is a strategic industry, essential to America’s economic growth and stability. The steel sector helped build the face of America, engendering a sense of national pride through famous landmarks, such as the Golden Gate Bridge welcoming visitors to our western states, the St. Louis Arch at the crossroads of America and the Chrysler Building that gives a unique flourish to New York City’s skyline.

Not only is it an essential material in these American treasures, steel is fundamental to American society and our modern way of life. Our nation’s energy supply, transportation system, urban centers, clean water and safe food supply all depend on steel. Innovation and technology have transformed America’s 21st century steel industry into a world leader in quality, performance and sustainability.
Building a Sustainable Future

The American steel industry has had a long-standing commitment to sustainability in both its products and its practices. This commitment is backed by significant investment in state-of-the-art facilities that improve energy efficiency, reduce carbon emissions and heighten productivity. By deploying new steelmaking technologies and through the innovations of the workers on the plant floor, the industry has reduced energy intensity per ton of steel produced by 30 percent and CO2 emissions by 35 percent since 1990. In fact, the steel industry is the only significant industry in the U.S. that reduced its total energy consumption while increasing its production from 1990 to 2008.

The Steel Industry Improved its Energy Efficiency by 30% Since 1990

Source: American Iron and Steel Institute
Recycling

The overall recycling rate of steel has reached an all-time high of 103 percent based on the most recent data compiled by the Steel Recycling Institute (SRI) through 2009. More than 66 million tons of domestic steel scrap were charged into furnaces. All steel is 100 percent recyclable and more steel is recycled each year than aluminum, copper, paper, glass and plastic combined.

Steel is the engine that drives the recycling of many consumer goods, as evidenced by recycling rates for the following products: automobiles (106 percent), appliances (90 percent), steel containers (65.2 percent), structural steel (97.5 percent) and construction reinforcement steel (70 percent). Recycling rates for automobiles are often near or over 100 percent, as older vehicles being recycled are often heavier than new cars, which are lighter and more fuel-efficient through the use of advanced high-strength steels.

As a result of the steel industry’s commitment to sustainability, we are aggressively seeking ways to reduce our environmental footprint even while producing the advanced and highly recyclable steel that our economy needs. In fact, the American steel sector has been recognized as having the steepest decline of total air emissions among nine manufacturing sectors studied in the U.S. Environmental Protection Agency’s (EPA) 2008 Sector Performance Report. A helpful tool that the industry is using as part of this process is the Life Cycle Assessment (LCA) approach, which is essential to measuring the real environmental impact of a material. Among other things, LCA considers the total environmental impacts generated by the production, as well as use and end-of-life (recycling or disposal) phases of a product. Steel has life cycle advantages because of its relatively low energy use, high recyclability, the conservation of natural resources, such as water, and the extensive re-use of by-products.
Global Leader in Labor Productivity

For every one of the steel industry’s 135,000 direct jobs, the steel sector generates seven jobs in upstream and downstream industries, adding an additional 945,000 jobs to the economy. Labor productivity has seen a five fold increase since the early 1980s, going from an average of 10.1 man-hours per finished ton to an average of two man-hours per finished ton of steel in 2010. Many North American plants are producing a ton of finished steel in less than one man-hour. These achievements are only possible through a highly-skilled workforce. In that regard, member companies of the American Iron and Steel Institute are committed to continuous improvement in safety and health and to achieving an injury-free workplace.

Steel Industry Labor Hours per Tons of Steel (1980–2010)

Despite such strong performance by the steel industry and its workforce, American steelmakers’ ability to compete globally is being threatened by nations unwilling to abide by international trade rules set by the World Trade Organization and by American trade laws. Nations that habitually circumvent U.S. anti-dumping and countervailing duty laws in order to send unfairly traded imports into our market, must face consequences. To counter such illegal practices, America must establish and enforce trade policies that will truly level the international playing field for all manufacturers, including keeping our trade laws strong and strictly enforcing them.
China’s currency undervaluation by as much as 40 percent is an example of unfair trade practices which harm the economies of the United States as well as our trading partners by keeping China’s export prices artificially low.

**American manufacturers, including U.S. steelmakers, can compete with anyone in the world**, but we cannot compete with governments. That is why AISI is urging our government leaders to embrace and put in place a national manufacturing strategy. Such an approach can restore our manufacturing sector and create millions of new jobs through a comprehensive program to rebuild our infrastructure, achieve energy independence—which will also significantly reduce our trade deficit—and enforce our trade laws. It must also remove artificial barriers built by our trading partners and ensure that domestic policies are pro-manufacturing.
The North American steel industry consists of healthy, world-class companies that are internationally competitive.

Steel’s Presence Throughout America

Steel has long been considered the backbone of the American manufacturing sector, providing an essential material for downstream manufacturers in the automotive, energy, machinery and equipment, container, appliance and rail industries. Steel is a critical building material for the nation’s energy, transportation and water infrastructure; and to commercial and residential construction.

In addition, steel products are a critical component in virtually every military platform and are essential to our national defense.

As we enter the second decade of the 21st century, the steel sector is recovering from the worst global recession since World War II. Prior to the global recession, the steel industry enjoyed five consecutive years of robust demand and strong performance. The North American steel industry consists of healthy, world-class companies that are internationally competitive.

In 2011, the steel sector expects to see gradual progress in comparison to 2010, with the market experiencing improvement in steel demand. Following is a summary of selected 2010 statistics for the American steel sector:

### 2010 Steel Shipments by Market Classification

- **Construction**: 42%
- **Automotive**: 24%
- **National Defense and Homeland Security**: 3%
- **Energy**: 7%
- **Other**: 4%
- **Machinery and Equipment**: 12%
- **Container**: 4%
- **Appliances**: 4%

Source: American Iron and Steel Institute
Automotive

The American steel industry’s continual investment in advanced technologies has led to the introduction of a wide variety of new steels. In fact, 50 percent of the steels used to make automobiles today did not exist just 10 short years ago. Take for example the efficiencies gained from using lighter-weight yet higher-strength steel components in today’s increasingly fuel-efficient fleet of automobiles and light trucks.

The total steel in the average vehicle is approximately 63 percent. A substantial portion, about 57 percent, is made up of these new, advanced high-strength steels, which have grown in usage by auto manufacturers by 44 percent over the last decade, according to industry analyst Ducker Worldwide. These sophisticated steels provide a superior combination of high strength, crash energy management, excellent formability and dent resistance, making automobiles safer and more fuel-efficient.

Such mass savings not only conserve material but, when taken in the context of life cycle assessment (LCA), help achieve significant emissions reductions. If, for example, currently available advanced high-strength steels (AHSS) were applied throughout the present U.S. automotive fleet, greenhouse gas emissions from automobiles would be reduced by approximately 12 percent—an amount greater than the emissions generated by the entire American steel industry today. This reduction in emissions is in fact occurring already as automotive designers around the world use increasing amounts of AHSS in their vehicles.

The Steel Market Development Institute’s (SMDI—a business unit of AISI) annual Great Designs in Steel seminar is the industry’s go-to forum for the latest trends in automotive steel designs. This all-day, multi-track program featured more than 27 technical presentations in 2010 on advanced high-strength steels, life cycle and emissions considerations, and automotive safety and manufacturing technologies. Automotive design engineers increasingly view steel as the innovative material for strong, safe, affordable, environmentally friendly light vehicles and the ideal material for reducing mass.
Construction

The National Institute of Standards and Technology notes that “steel has become one of the most reliable, most used and most important materials of the age.” As an advanced engineered material, steel is the material of choice by engineers and architects because of its strong performance characteristics, its reliability, its versatility in design and consistency as a product, not to mention its decidedly “green” profile.

Residential and Commercial Construction

For example, the average steel-framed house can be made from four recycled cars, while it takes more than 40 trees to build a wood-framed home. Under the U.S. Green Building Council Leadership in Environmental and Energy Design (LEED®) green building rating system, steel is always a net contributor to the two available points provided for recycled content under Materials & Resources Credit 4: Recycled Content. Both commercial and residential steel buildings and steel roofs offer energy efficiency, longer life expectancy, low life-cycle costs and greater durability.

Recent advances in high-performance, pre-painted steel roofing and exterior wall products and systems have made steel attractive to commercial designers and builders. In the residential market, steel’s fire-retardant characteristics along with its durability and enhanced visual appeal have increased its market share in the home re-roofing market. SMDI continues its active work with builders and design engineers to standardize and simplify product lines, and to offer sustainable steel solutions for American communities, whether for residential or commercial structures.
Bridges

Bridges connect us as a nation. We need them to transport billions of tons in freight each year. We need them to travel from state to state just as much as we need them to travel coast to coast. We count on bridges to be strong, reliable and low-maintenance.

Yet the Federal Highway Administration (FHWA) estimates that over 25 percent of America’s nearly 600,000 bridges are either structurally deficient or functionally obsolete. Steel bridges offer viable design solutions for bridge owners for short, medium and long spans because they are durable, cost-effective, modular, and offer ease of maintenance and construction. In fact, high-performance steels can save up to 18 percent of a bridge project’s cost. And new permanent modular bridges are now available that can be constructed in a single weekend. Billions upon billions of dollars are needed to upgrade our crumbling infrastructure, with the Federal Highway Administration estimating a 20-year investment of $131.7 billion is needed for bridges and highways.

Today, America’s bridges are utilizing a new bridge steel plate technology that will help save taxpayer dollars as we rebuild our infrastructure over the next two decades. In addition, designers and engineers can specify new high-performance steels, developed by member companies of AISI in partnership with the Office of Naval Research and the Federal Highway Administration. These steels have superior toughness and can be welded with little or no preheat.

Bridge engineers choose weathering steel for its performance, economical and environmental benefits.
Steel offers cost-competitive solutions. Roadways that use continuously reinforced concrete pavement (CRCP—reinforced with steel) have been shown to improve fuel efficiency in heavy vehicles by as much as 20 percent. CRCP means increased environmental benefits because it is made of 100 percent recycled material and reduces thermal heat in cities. CRCP also means less time in traffic delays for motorists because of fewer road repairs and reconstruction.

Other areas of infrastructure are steel-intensive, such as pipe for waterways, oil and natural gas exploration and distribution, culverts and water tanks, to name a few examples. The energy sector is expected to be a strong source of steel demand over the next 10 years, particularly as the nation’s energy infrastructure is further developed.

**Electric Utility Distribution Poles**

Steel’s profile as a green material has led to growing interest in replacing aging wood electric utility distribution poles with poles made of steel. Steel utility distribution poles have a number of clear advantages over competing materials (treated wood and concrete). These include ease of installation, reliability, durability, life cycle cost and environmental considerations. The primary obstacle to growth is product familiarity. There are approximately 185 million utility distribution poles in North America. An estimated two to four million poles are replaced annually.

Today, more than 900,000 steel distribution poles have been installed, and are now being used by over 600 of 3,100 U.S. and Canadian electric utilities.

Transportation/Infrastructure

In a globalized economy, America’s infrastructure is important to our competitive edge. Building and fixing America’s transportation infrastructure is a priority when you consider that the U.S. Department of Transportation has estimated the overall cost of congestion at $200 billion a year. It’s also important to employment. The Department of Transportation reports that every $1 billion federally invested in highway capital supports nearly 35,000 American jobs.
Container

Steel cans are the most recycled food and beverage package in the world giving steel an important role in providing America with sustainable packaging for foods essential to a healthy diet.

The Canned Food Alliance (CFA), a strategic partner of AISI of which its Steel Market Development Institute is a member, works with Congressional offices and the U.S. Department of Agriculture (USDA) to ensure that canned foods, which are convenient and affordable, play a role in federal food and nutrition programs. Research shows that canned, fresh and frozen fruits and vegetables are nutritionally comparable by the time they are eaten and that all forms contribute to a healthy diet.

The USDA includes canned foods in the Dietary Guidelines for Americans and as part of their Special Supplemental Nutrition program for women, infants and children (WIC). With the rising priority of increasing Americans’ consumption of fruits and vegetables, canned foods are playing an important role in access to nutritious, affordable and convenient sources of these food groups. The CFA offers a web site, www.mealtime.org, with a tremendous resource of easy and nutritious recipes that utilize canned foods.

The CFA is also a member of the Produce For Better Health Foundation (PBH) and the National Fruit and Vegetable Alliance (NFVA), which includes the Center for Disease Control, U.S. Department of Agriculture, PBH, National Cancer Institute, American Cancer Society, state health departments and other respected organizations. As part of the NFVA, SMDI has met with representatives of the First Lady’s Let’s Move Initiative at the White House and is now working with several partners to place salad bars in thousands of schools over the next five years. Once again, canned foods are playing a role in providing easy, affordable access to nutritious fruits and vegetables essential to a healthy and balanced diet.
National Security

It is vital to U.S. national economic security and to our homeland security that America does not become dangerously dependent on offshore sources of supply. Here are some examples of applications for domestic steel vital to America’s infrastructure:

✦ **Energy infrastructure** such as petroleum refineries, oil and gas pipelines, storage tanks, electricity power generating plants, electric power transmission towers and utility distribution poles;

✦ **Transportation security infrastructure** such as highways, bridges, railroads, mass transit systems, airports, seaports and navigation systems;

✦ **Health and public safety infrastructure** such as dams and reservoirs, waste and sewage treatment facilities, the public water supply system and, increasingly, residential construction;

✦ **Commercial, industrial and institutional complexes** such as manufacturing plants, schools, commercial buildings, chemical processing plants, hospitals, retail stores, hotels, houses of worship and government buildings.
Military uses for steel are extensive. Thousands of skilled men and women of the American steel industry work to produce high-quality, cost-competitive products that are used by the military in various applications ranging from aircraft carriers and nuclear submarines to Patriot and Stinger missiles, armor plate for tanks and field artillery pieces, as well as every major military aircraft in production today. Some examples of steel use in defense applications are:

✦ The USS New York was built with 24 tons of scrap steel reclaimed and recycled from the World Trade Center.
✦ The USS George H.W. Bush, an aircraft carrier named after the 41st President, contains 47,000 tons of structural steel and serves as home to 6,000 Navy personnel.
✦ Steel is a strategic material needed to strengthen existing U.S. infrastructure and installations.

All segments of the domestic steel industry contribute directly or indirectly to the defense industrial base. Whether it is missiles, jet aircraft, submarines, helicopters, Humvees® or munitions, American-made steels and specialty metals are crucial components of U.S. military strength. Steel plate is used in the bodies and propulsion systems of the naval fleet. The control cables on virtually all military aircraft, including fighter jets and military transport planes, are produced from steel wire rope. In addition, land-based vehicles such as the Bradley Fighting Vehicle, Abrams Tank and mine-resistant ambush-protected (MRAP) vehicles use significant amounts of steel.
AISI has long identified commitment to sustainability as part of our industry’s strategic plan. In line with that vision, the American steel industry is currently conducting research on the next generation of iron and steelmaking technologies that will dramatically reduce or eliminate CO₂ emissions.

**Breakthrough Technologies**

*Because of advances and energy management over the last two decades, U.S. steelmaking processes are highly optimized.* Further efforts will be made to continue to achieve incremental improvements, but in order to continue to make major reductions in future energy use, entirely new processes are required.

The American steel industry is conducting research on the next generation of iron and steelmaking technologies that will dramatically reduce or eliminate CO₂ emissions. These new “breakthrough technologies” are being developed over the next 10 to 15 years. Accordingly, any proposed CO₂ reduction regulations must recognize the time required for these technologies to first be fully developed and tested in order for them to become commercially available. Widespread adoption of new technology historically has proven to take from two to three decades in the steel industry.

*A project at Massachusetts Institute of Technology (MIT)* is developing a process to produce iron by Molten Oxide Electrolysis (MOE), an environmentally friendly technology for the production of metals. MOE is a derivative of molten salt electrolysis, a technology that has been producing tonnage metal for over 100 years — aluminum is produced in this manner.

To produce iron by MOE, molten iron oxide is decomposed by the action of electric current into liquid iron and oxygen gas. What sets MOE apart from all other metal-producing technologies is that it is carbon-free and, except for GHG emissions in the production of electricity, generates no significant greenhouse gases.

The team at MIT has succeeded in demonstrating the technical viability of MOE by producing liquid metal and oxygen gas in a laboratory-scale cell. Promising results for a new proprietary low-cost, oxygen-evolving anode have been obtained. Next steps on the project involve testing/validation for scale-up.
ELECTRODE SYNTHESIS

The challenge for MOE is the development of an electrode material that sustains oxygen production while operating at elevated temperatures (in the vicinity of 1600°C) immersed in a highly aggressive melt. Recent work at MIT has discovered a suite of new candidate electrode materials. Research continues to determine the composition for optimum performance.

At the University of Utah, researchers are developing the process known as Ironmaking by Hydrogen Flash Smelting. “Flash Smelting” technology is adapted from mining processes and includes advances in furnace technology utilizing hydrogen. As is the case with MOE, when carbon is not used as a fuel in the process, no CO₂ is produced.

A benefit of the process is the productive use of large quantities of very fine iron oxide concentrates produced in the U.S. that are well suited to the suspension reduction process. In addition, natural gas and coal are potential alternative fuels. This technology has the potential of significantly reducing environmental emissions even with a combination of these fuels.

AISI members are also developing the Paired Straight Hearth Furnace, a high-productivity, low-energy ironmaking unit that can process steel plant wastes, as well as virgin iron materials. Using coal instead of coke, this process will be available for commercial demonstration in less than five years.

These near-term and longer-term research and development projects could fundamentally change the way steel is produced and make clear steel’s commitment to a sustainable future.
THE AMERICAN IRON AND STEEL INSTITUTE (AISI)

Founded in 1855 as the American Iron Association, today’s American Iron and Steel Institute history spans more than 150 years. The Institute speaks out on behalf of the domestic steel industry on a wide array of issues. Never has it been more critical than it is today for the American steel industry to speak out loud and clear and with a unified voice on major policy issues that are impacting American manufacturers.

The American Iron and Steel Institute’s mission is to influence public policy, educate and shape public opinion in support of a strong, sustainable U.S. and North American steel industry committed to manufacturing products that meet society’s needs.

To achieve its mission, AISI:

✦ Focuses on the advocacy of public policy issues central to the steel industry, issues where AISI can make an impact and issues where there is strong member alignment.

✦ Informs and educates opinion leaders about the North American steel industry’s strategic importance to national and economic security.

✦ Communicates the benefits that the industry’s technological advances are making to the health and safety of its workforce and to the environment.

✦ Collects and provides industry data to policymakers, company personnel and the public regarding steel operations, production, energy efficiency, shipments, import/export levels and consumption.

✦ Pursues technology advancements through Collaborative Research and Development.

✦ Assists member companies in attracting and retaining talent.

✦ Advances the competitive use of steel in traditional and growth markets.
THE STEEL MARKET DEVELOPMENT INSTITUTE (SMDI)

The Steel Market Development Institute (SMDI), a business unit of AISI, grows and maintains the use of steel through strategies that promote cost-effective solutions in the automotive, construction and container markets, as well as for new-growth opportunities in emerging steel markets. The Steel Market Development Institute investor companies are: AK Steel Corporation, ArcelorMittal Dofasco, ArcelorMittal USA, Nucor Corporation, SSAB Americas, United States Steel Corporation and USS-POSCO Industries.

In partnership with these investor steel companies, the Steel Market Development Institute:

✦ Works with automotive engineers to develop and promote lightweight future vehicle designs and the next generation of steel technologies,

✦ Conducts research, technology transfer and marketing, and provides sustainable steel-based solutions to challenges faced in the commercial and residential construction sectors, transportation and infrastructure sectors, and energy sectors through its Construction Market program. This includes the development and maintenance of building codes and standards,

✦ Interfaces with legislators at the federal and state levels to inform them about the importance of including nutritional canned food in national programs for schoolchildren, and

✦ Strategizes with all stakeholders—from customers to political leaders—in all markets to determine how to provide steel-based solutions to their critical marketplace challenges.

THE STEEL RECYCLING INSTITUTE (SRI)

The Steel Recycling Institute, a business unit of AISI, promotes the sustainable benefits of steel—the material and sustains the recycling of all steel products. The SRI develops educational materials about the sustainable benefits of steel and the importance of taking care of the planet to schoolchildren and their instructors. The SRI also educates the solid waste industry, government, business and ultimately the consumer about the benefits of steel’s infinite recycling cycle.
AISI PRODUCER MEMBERS AND THEIR LOCATIONS

A.FINKL & SONS CO.
North American Locations
Headquarters: Chicago, IL
U.S.
California
Southgate
Michigan
Warren
Minnesota
Minneapolis
Ohio
Tallmadge
CANADA
Quebec
St.Joseph-de-Sorel
MEXICO
Morelos
San Nicolás Tlalnepantla
North American Production: Processes over 100,000 tons

AK STEEL CORPORATION
North American Locations
Headquarters: West Chester, Ohio
U.S.
INDIANA
Columbus: Tubular steel
Rockport: Continuous carbon/stainless pickling line, continuous carbon/stainless cold mill, stainless continuous annealing/pickling line, hydrogen annealing, temper mill, off-line coil inspection and continuous hot-dip galvanizing/galvannealing line
KENTUCKY
Ashland: Galvanized strip, galvannealed strip
OHIO
Coshocton: Stainless steels in cold rolled strip, sheet coils
Mansfield: Flat rolled carbon, silicon, ferritic stainless
Middletown: Enameling iron, electro galvanized, hot dip galvanized, hot-dip aluminized, hot-dip aluminized stainless
Walbridge: Tubular steel
Zanesville: Oriented and non-oriented, electrical steel, stainless flat rolled

PENNSYLVANIA
Butler: Hot rolled, cold rolled, stainless, oriented and non-oriented electrical flat-rolled
North American Production: 6.0 million tons

ALTOS HORNOS DE MÉXICO, S.A.B. DE C.V.
North American Locations
Headquarters: Av. Juarez S/No., Col. La Loma, Monclova, Coahuila, México
MEXICO
Coahuila
Monclova facility: Plate; hot rolled coil, cold rolled coil, tin, tin free steel, structural shapes, service center
Distrito Federal
Mexico City: Sales office
Estado de Mexico
Atizapán de Zaragoza: Service center
Jalisco
Zapopan: Service center and sales office
Nuevo Leon
Monterrey: Nacional de Aceros, S.A. de C.V. (NASA): Light weight wall tubes, sales office
San Luis Potosí
San Luis Potosí: Sales office
U.S.
TEXAS
San Antonio: Sales office
North American Production: 4.1 million tons
<table>
<thead>
<tr>
<th>ARCELORMITTAL DOFASCO</th>
<th>ARCELORMITTAL MEXICO</th>
<th>ARCELORMITTAL USA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Headquarters:</strong> Hamilton, Ontario, Canada</td>
<td><strong>Headquarters:</strong> Las Palmas, Mexico, DF</td>
<td><strong>Headquarters:</strong> Chicago, Illinois</td>
</tr>
<tr>
<td><strong>ONTARIO</strong></td>
<td><strong>Guadalajara</strong></td>
<td><strong>U.S.</strong></td>
</tr>
<tr>
<td>Hamilton: Flat</td>
<td>Guanajuato: Long</td>
<td>Illinois</td>
</tr>
<tr>
<td>Windsor: Flat</td>
<td>Celaya Rolling Mill: Long</td>
<td>Riverdale: Flat</td>
</tr>
<tr>
<td></td>
<td>Michoacan: Lazaro Cardenas: Flat and long</td>
<td>Indiana</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Burns Harbor: Flat and plate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>East Chicago: Flat, long, and global research and development center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Carlisle: I/N Tek and I/N Kote (joint venture with Nippon Steel): Flat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ghent (Gallatin): Flat (joint venture with Gerdau Ameristeel)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Louisiana</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LaPlace: Long</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minnesota</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Virginia: Minorca Mine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hibbing Taconite: Mine (joint venture with U.S. Steel and Cliffs Natural Resources)</td>
</tr>
</tbody>
</table>

**North Carolina**
- Piedmont (Newton): Plate

**Ohio**
- Cleveland: Flat
- Columbus: Flat
- Marion: Tube
- Shelby: Tube
- Warren: Coke

**Pennsylvania**
- Coatesville: Plate
- Conshohocken: Plate
- Monessen: Coke (idled)
- Steelton: Long

**South Carolina**
- Georgetown: Long

**Texas**
- Vinton: Long

**West Virginia**
- Princeton: Mine
- Weirton: Flat

**North American Shipments:** 19.5 million tons

### BERG STEEL PIPE CORP

**North American Locations**

**Headquarters:** Panama City, FL

**Product:**
- Steel pipe 24 through 64-in. OD; wall thickness 0.250 through 1.5 in.

**U.S.**
- Alabama
- Mobile: Spiral pipe
- Texas
- Houston: Sales office

**North American Production:** 550,000 tons
CALIFORNIA STEEL INDUSTRIES

North American Locations
Headquarters: Fontana, CA

U.S.
California
Fontana: Converts purchased steel slab into hot rolled, pickled and oiled, galvanized, and cold rolled sheet; electrical resistance welded pipe

North American Production: 1.5 million tons

CLIFFS NATURAL RESOURCES

North American Locations
Headquarters: Cleveland, Ohio

U.S.
North American Iron Ore
Michigan
Ishpeming: Tilden Mine
Palmer: Empire Mine

Minnesota
Babbitt: Northshore Mining Company (mine)
Eveleth: United Taconite (mine)
Forbes: United Taconite (processing facility)
Hibbing: Hibbing Taconite
Silver Bay: Northshore Mining Company (processing facility)

North American Coal
Alabama
Adger: Oak Grove Mine

West Virginia
Man: Cliffs Logan County Coal
Pineville: Pinnacle Complex

CANADA
Newfoundland and Labrador
Wabush: Wabush Mines (mine)

Quebec
Point Noire: Wabush Mines (processing facility)

Other Cliffs Ventures
Cliffs Ferroalloys: Cliffs owns three chromite deposits within the James Bay Lowlands area of northern Ontario where several major mineral discoveries have been made in recent years. Chromite ore is converted to ferrochrome, a critical ingredient in the production of stainless steel, as well as other steels and nonferrous alloys.

renewaFUEL, LLC: renewaFUEL is a provider of renewable energy for industrial and institutional applications located in Marquette County, MI. The company aggregates, engineers, and distributes coal-sized renewable energy cubes.

North American Iron Ore: 27 million tons
North American Coal: 3.6 million tons

COMPANIA SIDERURGICA HUACHIPATO

Headquarters: Chile

CHILE
Concepcion (Bio-Bio Region)
Talcahuano: Coke production, steelmaking, reinforcing round, wire rod, grinding bars, hot rolled, cold rolled and galvalume

DEACERO, S.A. DE C.V.

North American Locations
Headquarters: San Pedro Garza Garcia, Nuevo Leon–Mexico

MEXICO
Baja California
Mexicali: Wire products
Tijuana: Distribution Center

Coahuila
Ramos Arizpe/Saltillo: Steelmaking, billet, wire rod, rebar, wire products

Distrito Federal
Delegacion Gustavo A. Madero: Scrap recollection center
Estado de Mexico
Tlalneplanta: Wire products, scrap recollection center, sales office
Tultitlan: Scrap recollection center, distribution center

Guanajuato
Leon: Wire products
Irapuato: Distribution center
Villagran/Celaya: Steelmaking, billet, wire rod, rebar, wire products

Jalisco
El Salto: Sales office
Guadalajara: Scrap recollection center, distribution center

Michoacan
Morelia: Wire products

Nuevo Leon
Apodaca: Distribution center
Guadalupe: Wire products, scrap recollection center
Santa Catarina: Wire products
San Nicolas de los Garza: Scrap recollection center
San Pedro Garza Garcia: Sales office

Puebla
Puebla: Wire products, scrap recollection center, sales office, distribution center

Queretaro
Queretaro: Wire products

San Luis Potosi
San Luis Potosi: Distribution center

Sinaloa
Culiacan: Distribution center

Sonora
Hermosillo: Scrap recollection center

Tabasco
Villa Hermosa: Distribution center

Tamaulipas
Matamoros: Scrap recollection center

Veracruz
Veracruz: Distribution center

U.S.
Indiana
Indianapolis: Distribution center

Texas
Houston: Deacero USA, Inc. (wire products and sales office)
Laredo: Distribution center
New Braunfels: Stay Tuff Fence Manufacturing, Inc. (wire products)

North American Production: 2.7 million tons

DTE ENERGY SERVICES
North American Locations
Headquarters: Ann Arbor, Michigan

U.S.
Maryland
Baltimore
Indiana
Burns Harbor
Michigan
River Rouge
Pennsylvania
Pittsburgh

North American Production: Among the many energy operations of DTE are metallurgical coke and coal operations for integrated steel mills.
EVRAZ INC. NA
North American Locations
Headquarters: Portland, Oregon
U.S.
Colorado
Pueblo: Rails, billets and special sections, wire rods, coiled rebar, bar, seamless pipe
Delaware
Claymont: Cast slabs, plate, custom burned plate
Oregon
Portland: Plate and coil, heat treating, large diameter line pipe, structural tubing
CANADA
Saskatchewan
Regina: Plate and coil, cut-to-length sheet and plate, large diameter line pipe, medium diameter ERW pipe, small diameter OCTG & line pipe, research and development
Alberta
Calgary: Small diameter OCTG, heat treating
Camrose: Large diameter line pipe, medium and small diameter ERW pipe
Red Deer: Small diameter OCTG & line pipe, HSS
British Columbia
Surrey: Cut-to-length sheet & plate, coils
North American Production: 2.5 million tons

GERDAU AMERISTEEL
North American Locations
Headquarters: Tampa, FL
U.S.
Alabama
Birmingham: Rebar fabrication
Trussville: Rebar fabrication
Arkansas
Gerdau MACSTEEL Fort Smith Steel Mill: Engineered special quality carbon, alloy and bearing steel bars (hot and cold finish)
Little Rock: Rebar fabrication
Paragould: Rail spikes, rebar fabrication
California
Rancho Cucamonga Steel Mill: Rebar
Florida
Fort Lauderdale: Rebar fabrication
Baldwin, Jacksonville Steel Mill: Billets, rebar, rebar coil, wire rod
Jacksonville: Rebar fabrication
Orlando: Rebar fabrication
Tampa: Rebar fabrication
Georgia
Albany: Rebar fabrication
Atlanta: Rebar fabrication
Cartersville Steel Mill: Billets, angles, unequal angles, flats, channels, MC channels, WF beams, S beams
Cartersville: Rebar fabrication
Savannah: Rebar fabrication
Illinois
Belvidere: Rebar fabrication
Decatur: Rebar fabrication
Joliet Rolling Mill: Flats, squares
Sterling: Rebar fabrication
Urbana: Rebar fabrication
Indiana
Huntington: MACSTEEL heat treating
Muncie: Rebar fabrication
North Vernon: MACSTEEL Atmosphere Annealing Inc.
Iowa
Eldridge: Rebar fabrication
Wilton Steel Mill: Billets, squares, angles, unequal angles, flats, rebar
Kentucky
Calvert City Rolling Mill: Angles, unequal angles, flats, channels, MC channels
Louisville: Rebar fabrication

Louisiana
New Orleans Express Shop: Rebar fabrication

Michigan
Gerdau MACSTEEL Jackson Steel Mill: Rebar fabrication, engineered special quality carbon, alloy and bearing steel bars (hot and cold finish)
Gerdau MACSTEEL Monroe Steel Mill: Engineered special quality carbon, alloy and bearing steel bars (hot and cold finish)
Lansing: MACSTEEL Atmosphere Annealing Inc.

Minnesota
Duluth: Grinding balls
St. Paul Steel Mill: Billets, carbon and alloy rounds, rebar

Missouri
Independence: Rebar fabrication
Kansas City: Rebar fabrication
St. Louis: Rebar fabrication

New Jersey
Perth Amboy: Rebar fabrication
Sayreville Steel Mill: Rebar, rebar fabrication

North Carolina
Charlotte Steel Mill: Billets, rounds, angles, unequal angles, flats, channels, rebar, rebar fabrication
Raleigh: Rebar fabrication

Ohio
Canton: MACSTEEL Atmosphere Annealing Inc.
Cincinnati: Rebar fabrication
Orrville: Bright bar, cold drawn steel

Oklahoma
Muskegee: Rebar fabrication
Oklahoma City: Rebar fabrication
Sand Springs: Rail Spikes, rebar, rounds, flats, studded “T” fence post

Pennsylvania
York: Rebar fabrication

South Carolina
Lancaster: Rail spikes

Tennessee
Jackson Steel Mill: Billets, squares, angles, unequal angles, flats, channels, rebar
Johnson City: Rebar fabrication
Knoxville Steel Mill: Billets, rebar, rebar fabrication, plain round
Memphis: Rebar fabrication
Nashville: Rebar fabrication

Texas
Beaumont Steel Mill: Billets, rebar coil, wire rod
Carrollton: Wire rod
Dallas: Rebar fabrication
Houston: Rebar fabrication
Midlothian Steel Mill: Billets, Bantam® beams, S beams, WF beams, rebar, rounds, squares, channels, H piling, sheet piling

Virginia
Fredericksburg: Rebar fabrication
Petersburg Steel Mill: WF beams, H piling, sheet piling

Wisconsin
Appleton: Rebar fabrication
Madison: Rebar fabrication
Pleasant Prairie: MACSTEEL Nitro Steel

CANADA
Ontario
Cambridge: Rebar, rounds, flats, angles, channels, squares, billets
Oshawa: Raw materials recycling
Whitby: Angles, Rebar, flats, channels beams, billets

Manitoba
Selkirk: Special sections, SBQ, merchant, rebar, light and medium structural angles, channels

North American Production: 12.1 million tons
HARSCO METALS & MINERALS

Headquarters: Harsco Metals and Minerals, Camp Hill, PA
Harsco Metals America, Seven Hills, PA
Harsco Minerals International, Mechanicsburg, PA

U.S.
Alabama
   Natrona Heights
   Sarver
   Steelton
   West Mifflin
Arkansas
   Blytheville
   Hickman
Colorado
   Pueblo
Indiana
   Gary
   East Chicago
   Pittsboro
   Whiting
Iowa
   Muscatine
Kentucky
   Ashland
   Ghent
Michigan
   Detroit
   Ecorse
North Carolina
   Cofield
Ohio
   Warren
Pennsylvania
   Braddock
   Butler
   Latrobe
   Koppel
   Midland

Puebla
   Puebla

North American Production: Harsco provides $1 billion in on-site, outsourced services to steel mills and other metal producers. This includes slag processing, semi-finished inventory management, material handling, scrap management and in-plant transportation.

IVACO ROLLING MILLS 2004 L.P.

North American Locations
Headquarters: Champlain Township, Ontario, Canada

U.S.
New York
   Tonawanda: Steel strip, iron strip, coated steel products

Canada
   Ontario
   Champlain Township: Hot rolled steel wire rod, billet

North American Production: 300,000 tons

NUCOR CORPORATION

North American Locations
Headquarters: Charlotte, NC

U.S.
Alabama
   American Buildings Company Alabama, Eufaula: Metal Buildings Systems
   Nucor Steel Birmingham, Birmingham: Carbon steel reinforcing bar, rounds, squares
   Nucor Steel Decatur, Trinity: Carbon steel sheet in hot rolled, pickled, cold rolled, galvanized, galvannealed
   Nucor Steel Tuscaloosa, Tuscaloosa: Carbon and high strength alloy, hot rolled coil and cut-to-length plate for structural and pressure vessel applications
   Vulcraft Alabama, Fort Payne: Carbon steel in joists, joist girders, composite floor joist, and floor and roof deck
<table>
<thead>
<tr>
<th>Arkansas</th>
<th>Idaho</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nucor Steel Arkansas, Blytheville: Carbon steel sheet in hot rolled, cold rolled, pickled, floor plate, galvanized coils</td>
<td>Harris Steel—Nufab Rebar, Meridian: Rebar</td>
</tr>
<tr>
<td>Nucor-Yamato Steel Company, Armorel: Carbon steel wide-flange beams, sheet and H-piling, miscellaneous and standard channels, angles, CZ and CSC car building sections, rail ties</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Illinois</td>
</tr>
<tr>
<td></td>
<td>Florida</td>
</tr>
<tr>
<td>Arizona</td>
<td>Iowa</td>
</tr>
<tr>
<td>Harris Steel—Harris Rebar, Phoenix: Rebar</td>
<td>Harris Steel—Ambassador Steel Fabrication, Auburn: Corporate Offices</td>
</tr>
<tr>
<td>Harris Steel—Harris Rebar, Phoenix: Rebar</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Harris Rebar, Tuscon: Rebar</td>
<td></td>
</tr>
<tr>
<td>Nucor Steel Kingman, Kingman: Carbon steel reinforcing bar, wire rod</td>
<td></td>
</tr>
<tr>
<td>Verco Decking, Phoenix: Steel floor, roof deck</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connecticut</td>
</tr>
<tr>
<td>California</td>
<td></td>
</tr>
<tr>
<td>CBC Steel Buildings, Lathrop: Metal building systems</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Harris Rebar, Diamond Bar: Rebar</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Harris Rebar, Fresno: Rebar</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Harris Rebar, Livermore: Rebar</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Harris Rebar, Pamona: Rebar</td>
<td></td>
</tr>
<tr>
<td>Nucor Trading USA, Los Angeles: Steel trading services</td>
<td></td>
</tr>
<tr>
<td>Verco Decking, Antioch: Steel floor, roof deck</td>
<td></td>
</tr>
<tr>
<td>Verco Decking, Fontana: Steel floor, roof deck</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indiana</td>
</tr>
<tr>
<td>Colorado</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Harris Rebar, Commerce City: Rebar</td>
<td></td>
</tr>
<tr>
<td>Connecticuit</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Barker Street, South Windsor: Fabricating shop, decorative concrete, building products, rebar sales</td>
<td></td>
</tr>
<tr>
<td>Nucor Steel Connecticuit, Wallingford: Carbon steel reinforcing bar, wire rod, wire mesh fabrication, structural mesh fabrication, rolled wire, deformed wire</td>
<td></td>
</tr>
<tr>
<td>Florida</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Nufab Rebar, Milton: Rebar</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Nufab Rebar, Zellwood: Rebar</td>
<td></td>
</tr>
<tr>
<td>Hawaii</td>
<td></td>
</tr>
<tr>
<td>Harris Steel—Nufab Rebar, Kapolei: Rebar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Louisiana</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maine</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Massachusetts
Harris Steel–Barker Steel, Canton: Fabricating shop; building products, forming sales
Harris Steel–Barker Steel, South Deerfield: Fabricating shop, rebar sales
Harris Steel–Barker Steel, Milford: Rebar, forming sales
Harris Steel–Barker Steel, Rochester: Fabricating shop, rebar sales
Harris Steel–Barker Steel, Westfield: Fabricating shop

Michigan
Harris Steel–Ambassador Steel Fabrication, Comstock Park: Rebar
Harris Steel–Ambassador Steel Fabrication, Lansing: Rebar
Harris Steel–Ambassador Construction Prod., Southfield: Rebar
Harris Steel–Ambassador Construction Prod., Traverse City: Rebar
Harris Steel–Ambassador Construction Prod., Wyoming: Rebar

Minnesota
Harris Steel–Ambassador Steel Fabrication, Minneapolis: Rebar

Mississippi
Gulf States Manufacturing, Starkville: Metal Buildings Systems
Nucor Steel Jackson, Jackson: Carbon steel angles, flats, reinforcing rounds, squares

Missouri
Harris Steel–Ambassador Steel Fabrication, Kansas City: Rebar
Harris Steel–Nufab; Ambassador Steel Fab., St. Louis: Rebar

Nebraska
Nucor Cold Finish Nebraska, Norfolk: Carbon, leaded and alloy cold drawn steel bar

Nucor Steel Nebraska, Norfolk: Carbon and alloy steel in special bar quality, cold heating quality and bearing quality, merchant bar quality in angles, channels, flats, hexagons, rounds and squares, rod, bar, squares, hex in coil
Vulcraft Nebraska, Norfolk: Carbon steel in joists, joist girders, composite floor joists, and floor and roof deck

Nevada
American Buildings Company Nevada, Carson City: Metal Building Systems
Harris Steel–Harris Rebar, Moundhouse: Rebar

New Hampshire
Harris Steel–Barker Street, Canaan: Fabricating shop, structural steel, rebar and building product sales

New Jersey
Harris Steel–Barker Street, Avenel: Fabricating shop; rebar, building product sales

New Mexico
Harris Steel–Harris Rebar, Albuquerque: Rebar

New York
Harris Steel–Barker Steel, Albany: Fabricating shop, rebar, product sales
Harris Steel–Barker Steel, Long Island City: Building product sales
Nucor Steel Auburn, Auburn: Carbon steel angles, channels, flats, reinforcing bars, rounds, squares
Vulcraft New York, Chemung: Carbon steel in joists, joist girders, composite floor joists, special profile steel trusses, and floor and roof deck

North Carolina
Nucor Corporation, Charlotte: Corporate Office
Nucor Steel Hertford County, Cofield: Carbon steel plate

Ohio
Harris Steel–Ambassador Steel Fabrication, Marlon: Rebar
Nucor Steel Marion, Marion: Carbon steel angles, flats, rebar, rounds, signposts
Oregon
Harris Steel–Harris Rebar, Portland: Rebar

Pennsylvania
Harris Steel–Harris Rebar, Bethlehem: Rebar
Harris Steel–Fisher and Ludlow, Wexford: Bar, safety grating; expanded metals products
Nucor Wire Products Pennsylvania, New Salem: Standard and custom wire products including wire rack decking, light weight galvanized mesh, mine mesh, engineering mesh

Rhode Island
Harris Steel–Barker Steel, Pawtucket: Fabricating shop; rebar, building products and forming sales

South Carolina
Nucor Building Systems South Carolina, Swansea: Metal Building Systems
Nucor South Carolina, Darlington: Carbon leaded and alloy cold drawn steel bars, carbon steel in special bar quality; merchant bar quality; and reinforcing products in the following shapes: angles, channels, flats, hexagons, reinforcing bars, rounds
Nucor Steel Berkeley, Huger: Carbon steel sheet in hot rolled, cold rolled, pickled, galvanized, and galvannealed coils, carbon steel wide range beams, manufacturing housing beams, standard I beams, miscellaneous and standard channels
Vulcraft South Carolina, Florence: Carbon steel in joists, joist girders, composite floor joists, and floor and roof deck

Tennessee
Harris Steel–Nufab Rebar, Collierville: Rebar
Nucor Steel Memphis, Memphis: Carbon steel in special bar quality rounds, round cornered squares
Kirby Building Systems, Portland: Metal Building Systems

Texas
Harris Steel–Nufab Rebar, Dayton: Rebar
Harris Steel–Nufab Rebar, Longview: Rebar
Nucor Building Systems, Terrell: Metal Building Systems

Nucor Steel, Denton: Light gauge steel panels, trusses
Nucor Steel Texas, Jewett: Carbon steel angles, channels, flats, reinforcing bars, rounds, special sections, squares, U.M. plates
Vulcraft Texas, Grapeland: Carbon steel in joists, joist girders, composite floor joists, special profile steel trusses, and floor and roof deck

Utah
Harris Steel–Harris Rebar, Salt Lake City: Rebar
Nucor Building Systems, Brigham City: Metal Building Systems
Nucor Cold Finish Utah, Brigham City: Cold finished SBQ bar products, cold rolled wire, welded wire mesh
Nucor Steel Utah, Plymouth: Carbon steel angles, channels, flats, reinforcing bars, rounds, squares
Nucor Wire Products Utah, Brigham City: Carbon steel standard mesh, mine mesh, rolled wire
Vulcraft Utah, Brigham City: Carbon steel in joists, joist girders, composite floor joists, special profile steel trusses

Virginia
American Buildings Company Virginia, LaCrosse: Metals Building System

Washington
Harris Steel–Harris Rebar, Auburn: Rebar
Harris Steel–Harris Rebar, Lake Stevens: Rebar
Harris Steel–Harris Rebar, Port of Tacoma: Rebar
Nucor Steel Seattle, Seattle: Carbon steel angles, channels, flats, reinforcing bar, rounds, squares

Wisconsin
Harris Steel–Ambassador Steel Fabrication, Menomomie: Rebar
Harris Steel–Ambassador Steel Fabrication, Waukesha: Rebar
Nucor Cold Finish Wisconsin, Oak Creek: Carbon, leaded, alloy cold drawn steel bars

North American Production: 20.0 million tons
**David J. Joseph, Co.** *(a Nucor Subsidiary)*

David J. Joseph, Co. is a scrap subsidiary of Nucor Corporation and has numerous locations in the following states: Alabama, Colorado, Florida, Illinois, Indiana, Kansas, Kentucky, Missouri, Nebraska, Nevada, New Mexico, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Utah

**Harris Steel Group** *(a Nucor Subsidiary)*

**CANADA**

*Alberta*
- Harris Rebar, Calgary: Rebar
- Fisher and Ludlow, Edmonton: Bar and safety grating, expanded metals products
- Harris Rebar, Fort McMurray: Rebar
- Harris Rebar, Fort Saskatchewan: Rebar
- Harris Rebar, Leduc: Rebar

*British Columbia*
- Harris Rebar, Abbotsford: Rebar
- Harris Rebar, Kelowna: Rebar
- Harris Rebar, Nanaimo: Rebar
- Fisher and Ludlow, Surrey: Bar and safety grating; expanded metals products
- Harris Rebar, Delta Vancouver: Rebar

*New Brunswick*
- Harris Rebar, St. John: Rebar

*New Foundland*
- Harris Rebar, Mount Pearl: Rebar

*Nova Scotia*
- Harris Rebar, Dartmouth: Rebar

*Ontario*
- Harris Steel Group, Stoney Creek: Corporate Headquarters
- Harris Rebar, Ontario, Brampton: Rebar
- Fisher and Ludlow, Burlington: Bar and safety grating; expanded metal products
- Harris Rebar, Hamilton: Rebar
- Harris Rebar, London: Rebar
- Harris Rebar, Mississauga: Rebar

**Harris Rebar**, Ottawa: Rebar
- Harris Rebar, Sarnia: Rebar
- Harris Rebar, Scarborough: Rebar
- Harris Rebar, Sudbury: Rebar
- Harris Rebar, Thunder Bay: Rebar
- Harris Rebar, Maidstone, Windsor: Rebar

**Quebec**
- Harris Rebar, Longueuil, Montreal: Rebar
- Fisher and Ludlow, Point Aux Trembles: Bar and safety grating; expanded metals products
- Harris Rebar, Regina: Rebar
- Harris Rebar, Saskatoon: Rebar

**SEVERSTAL NORTH AMERICA, INC.**

**North American Locations**
- **Headquarters**: Dearborn, MI
- **U.S.**
  - **Maryland**
    - Sparrows Point: Hot and cold rolled, hot dipped sheet, slabs, galvalume, tin mill products
  - **Michigan**
    - Dearborn: Slabs, hot and cold rolled sheet, electrogalvanized sheet, hot-dip galvanized sheet
  - **Mississippi**
    - Columbus: Hot rolled, cold rolled and galvanize/galvanneal coated products, including high-quality surface steels for exposed automotive applications
  - **Ohio**
    - Warren: Hot and cold rolled sheet, slabs and hot-dip galvanized sheet
    - Yorkville: Cold rolled sheet
  - **West Virginia**
    - Wheeling: Hot rolled, hot-dip galvanized, electrogalvanized, black plate

**North American Production**: 7.5 million tons
**SSAB**

**North American Locations**

**Headquarters:** Lisle, IL

**U.S.**

**Alabama**

Mobile: Plate, coil

**Iowa**

Montpelier: Plate, slit coil, coil

**Minnesota**

Roseville: Cut-to-length sheet, plate

**Texas**

Houston: Cut-to-length sheet, plate

**CANADA**

**Ontario**

Scarborough: Temper leveled cut-to-length sheet, plate

**North American Production:** 2.0 million tons

---

**TENARIS TAMSA**

**Headquarters:** Mexico City, Mexico

**U.S.**

**Arkansas**

Blytheville: Maverick Tube Corporation (welded steel tubes)

**California**

Bakersfield: Hydril Company (threading facility)

**Louisiana**

Westwego: Hydril Company (threading facility)

**Texas**

Conroe: Maverick Tube Corporation (welded steel tubes)

McCarty/Houston: Hydril Company (threading facility)

Downhole Center/Houston: Tenaris Coiled Tubes, LLC (coiled tubes facility)

Subsea Center/Houston: Tenaris Coiled Tubes, LLC (coiled tubes facility)

Houston: Texas Arai (couplings facility)

**CANADA**

**Ontario**

Saulte Ste.: Algomatubes Inc. (seamless steel tubes)

**Alberta**

Calgary: Prudential Steel Ltd. (welded steel tubes)

Nisku: Hydril Canadian Company Ltd (threading facility)

**MEXICO**

**Tenaris Tamsa**

Veracruz: Seamless steel tubes, R&D Center, threading facility

**Tabasco**

Comalcalco: Threading facilities

**North American Production:** 1.7 million tons

---

**TERNIUM**

**North American Locations**

**Headquarters:** Monterrey, Mexico

**MEXICO**

**Coahuila**

Monclova: Galvanized and color coated sheets

**Nuevo Leon**

Monterrey: HRC, CRC

Apodaca: Billets, rebars

San Nicolas: HRC, CRC, profiles and tubes, panels, galvanized and color coated coils

**Puebla**

Puebla: Rebar, wire rod

**U.S.**

**Louisiana**

Shreveport: Galvanized, color coated sheets

**North American Production:** 5.6 million tons
THE TIMKEN COMPANY

North American Locations

Headquarters: Canton, OH

U.S.

Arizona
Mesa: Timken Aerospace Aftermarket Solutions (products and services)
Mesa: Technology Engineering Center
Mesa: Sales office

California
Los Alamitos: Timken Bearing Inspection Inc. (aerospace)
Los Alamitos: Sales office

Connecticut
Manchester: Timken Aerospace Transmissions, LLC (gearboxes & transmissions for military & commercial aircraft)
Manchester: Technology Engineering Center (aerospace)
Manchester: Sales office

Georgia
Ball Ground (Canton): Green Ring Plant (small facility)

Indiana
South Bend: South Bend Plant (reconditioning & remanufacturing of antifriction roller bearings)

New Hampshire
Keene: Technology center
Keene: Timken Super Precision (health & positioning control bearing products)
Lebanon: Timken Aerospace (precision bearings for aerospace)
Lebanon: Technology center

North Carolina
Columbus (Tyron Peak): Timken STEEL Value added processing
Iron Station (Lincolnton): Bearing Plant (mobile & industrial)
Randleman (Asheboro): Bearing Plant (industrial & aerospace)
Rutherfordton (Shiloh): Bearing Plant (aerospace)

Ohio
Bucyrus: Bearing Plant (mobile & industrial)
Canton: Harrison STEEL (Alloy steel bars)
Canton: Faircrest STEEL (Alloy steel bars, billets)
Canton: Gambrinus Roller Plant (Rollers for roller bearings)
Canton: Gambrinus STEEL (Seamless tubing)
(Note: Timken does not produce sheet metal)
Canton: Sales and administrative offices, Timken Bearings & Power Transmission and STEEL

Eaton (St. Clair): STEEL (Specialty steel components for vehicles)

New Philadelphia: Bearing Plant (precision aerospace & industrial)

Niles: Industrial Services Plant (life-extending surface technologies)

North Canton: Technology Engineering Center (global engineering headquarters)

South Carolina
Duncan: Distribution Center
Gaffney: Bearing Plant (mobile & aerospace)
Honea Path: Bearing Plant (mobile)

Union (Tyger River): Bearing Plant (Ultra-large-bore tapered roller bearings for wind turbines and large machinery)
Union (Tyger River): Industrial Service Center

Tennessee
Mascot (Knoxville): Sales office and Rail Bearing Services Facility

Pulaski: Bearing Plant (industrial bearings, housed units & components)

Texas
Houston: Timken Boring Specialties, LLC (STEEL) Value added processes

Virginia
Altavista: Bearing plant

Washington
Ferndale: Bearing plant

North American Production: 1.2 million tons
THYSSENKRUPP STEEL USA, LLC

North American Locations
Headquarters: Calvert, Alabama

U.S.
Alabama
Calvert: Hot rolled, Cold rolled, pickle and oiled, galvanized, galvannealed, aluminized, galvalume

Michigan
Detroit: Automotive Sales office

North American Production: 2.5 million tons (est’d for 2011), 4.5 million steady state full production (2013)

UNITED STATES STEEL CORPORATION

North American Locations
Headquarters: Pittsburgh, PA

U.S.
Alabama
Fairfield: Slabs, rounds, sheets; seamless tubular mill

Arkansas
Pine Bluff: Tubular couplings

California
Pittsburg: JV USS-POSCO Industries (sheets and tin mill) and JV United Spiral Pipe, LLC (spiral welded tubular)

Illinois
Granite City: Sheets, slab and coke

Indiana
East Chicago: Tin mill
Gary: Slabs, steel tin mill, sheets, strip mill plate, coke
Portage: Sheets and tin mill
Portage: JV Feralloy Processing Company (steel processing)

Michigan
Canton: JV Worthington Specialty Processing (steel processing)
Dearborn: Coated sheet, JV Double Eagle Steel Coating Company (Galvanized sheets)
Ecorse and River Rouge: slabs and sheets
Ishpeming: Tilden Mining Company (Iron ore pellets)
Jackson: JV Worthington Specialty Processing (steel processing)
Taylor: JV Worthington Specialty Processing (steel processing)

Minnesota Mining Operations
Hibbing: Hibbing Taconite Company (iron ore pellets)
Keewatin: Keetac Iron Ore Operations (iron ore pellets)
Mt. Iron: Minnitac Iron Ore Operations (iron ore pellets)

Mississippi
Jackson: JV Double G Coatings Company, L.P. (Galvanized and galvalume sheets)

Ohio
Leipsic: JV PRO-TEC Coating Company (Galvanized sheets)
Lorain: Seamless tubular

Pennsylvania
Braddock: Slabs
Fairless Hills: Galvanized Sheets
Clairton: Coke
McKeesport: Distribution center
West Mifflin: Sheets
Munhall: Research and Technology Center

Texas
Belville: Welded tubular
Hughes Springs: Tubular couplings
Houston: Tubular couplings, processing, threading, inspection and storage service and research & development center
Lone Star: Welded tubular

CANADA
Alberta
Calgary: U.S. Steel Tubular Products Canada Sales Office
Ontario
Baycoat (Hamilton): Finishing and joint venture
Beamsville: Chrome Deposit Corporation (Processing, administrative)
Hamilton: Hamilton Works (Steelmaking, finishing, coke production)
Nanticoke: Lake Erie Works (Steelmaking, finishing, coke production)
Stoney Creek: D.C. Chrome Limited (Processing and joint venture)

MEXICO
Coahuila
Ramos Arizpe: Acero Prime (Processing, warehousing and joint venture)

San Luis Potosi
San Luis Potosi: Acero Prime (Processing, warehousing and joint venture)

North American Production: 15.0 million tons

USS-POSCO INDUSTRIES
North American Locations
Headquarters: Pittsburg, CA

California
Pittsburg: Sheet products and tin mill

North American Production: 1.2 million tons
## Associate and Affiliate Members

<table>
<thead>
<tr>
<th>Accenture</th>
<th>Heffernan International</th>
<th>Otto Wolf U.S. Sales Corp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aether DBS</td>
<td>Heraeus Electro-Nite Company, LLC</td>
<td>Pacesetter Steel Service, Inc.</td>
</tr>
<tr>
<td>Aker Construction, Inc.</td>
<td>Heritage Environmental</td>
<td>Pepper Hamilton LLP</td>
</tr>
<tr>
<td>AKJ Industries, Inc.</td>
<td>Hilti, Inc.</td>
<td>PGT Trucking, Inc.</td>
</tr>
<tr>
<td>Almatis, Inc.</td>
<td>HYDAC International</td>
<td>PLS Logistics Services</td>
</tr>
<tr>
<td>American Steamship Company</td>
<td>Hydrochem Industrial Services, Inc.</td>
<td>POSCO America Corp.</td>
</tr>
<tr>
<td>ASKO, Inc.</td>
<td>IAT International, Inc.</td>
<td>Praxair, Inc.</td>
</tr>
<tr>
<td>ATSI, Inc.</td>
<td>IHS Global Insight, Inc.</td>
<td>PricewaterhouseCoopers LLP</td>
</tr>
<tr>
<td>Bailey PVS Oxides</td>
<td>INTEG Process Group, Inc.</td>
<td>Process Metrix LLC</td>
</tr>
<tr>
<td>Baosteel America Inc.</td>
<td>The Interlake Steamship Company</td>
<td>PSC Metals, Inc.</td>
</tr>
<tr>
<td>Barnes &amp; Thornburg</td>
<td>Itipack Systems Inc.</td>
<td>Reference Metals Company</td>
</tr>
<tr>
<td>BASF Corporation</td>
<td>John Maneely Company</td>
<td>River Hill Coal Company</td>
</tr>
<tr>
<td>Beemsterboer Slag Corporation</td>
<td>K&amp;L Gates LLP</td>
<td>S &amp; S Intersource LLC</td>
</tr>
<tr>
<td>Berkeley Research Group, LLC</td>
<td>Kelley Drye &amp; Warren LLP</td>
<td>Schneider Electric</td>
</tr>
<tr>
<td>Berry Metal Company</td>
<td>Kenilworth Steel Company</td>
<td>Seaway Marine Transport</td>
</tr>
<tr>
<td>Bricmont, Inc.</td>
<td>Gates Ellis LLP</td>
<td>SES, LLC</td>
</tr>
<tr>
<td>Carmeuse Lime and Stone</td>
<td>Lapham-Hickey Steel Corporation</td>
<td>SGL Carbon Corporation, LLC</td>
</tr>
<tr>
<td>Castrip, LLC</td>
<td>Lhoist North America</td>
<td>The Shaw Group, Inc.</td>
</tr>
<tr>
<td>Castrol Industrial North America Inc.</td>
<td>The Lincoln Electric Company</td>
<td>Showa Denko Carbon, Inc.</td>
</tr>
<tr>
<td>Cattrom Group International</td>
<td>Longbow Research</td>
<td>Silgan Containers Corporation</td>
</tr>
<tr>
<td>Charles L. Trozzo</td>
<td>Magneco/Metrel, Inc.</td>
<td>SMS Mill Services, LLC</td>
</tr>
<tr>
<td>Chrome Deposit Corporation</td>
<td>Magnesita Refractories Company</td>
<td>SMS Siemag LLC</td>
</tr>
<tr>
<td>Consolidated Terminals and Logistics Co.</td>
<td>Magotteaux, Inc.</td>
<td>Squire, Sanders &amp; Dempsey LLP</td>
</tr>
<tr>
<td>Core Furnace Systems Corporation</td>
<td>Massey Metallurgical Coal, Inc.</td>
<td>Steel Market Intelligence</td>
</tr>
<tr>
<td>CSX Transportation</td>
<td>MAX Environmental Technologies Inc.</td>
<td>Steel Technologies</td>
</tr>
<tr>
<td>Danieli Corporation</td>
<td>Metal Strategies, Inc.</td>
<td>Steelfast Framing Systems, Inc.</td>
</tr>
<tr>
<td>The David J. Joseph Company</td>
<td>Morgan, A Siemens VAI Business</td>
<td>Steelscape, Inc.</td>
</tr>
<tr>
<td>Deublin Company</td>
<td>Nalco Company</td>
<td>SunCoke Energy, Inc.</td>
</tr>
<tr>
<td>Drives LLC</td>
<td>National Material, L.P.</td>
<td>Telling Industries</td>
</tr>
<tr>
<td>Eckert Seamans Cherin &amp; Mellott</td>
<td>Navigant Consulting, Inc.</td>
<td>Tenova Goodfellow Inc.</td>
</tr>
<tr>
<td>Edw. C. Levy Company</td>
<td>New Millenium Building Systems</td>
<td>TMEIC–GE</td>
</tr>
<tr>
<td>Environmental Quality Management, Inc.</td>
<td>Nippon Steel USA, Inc.</td>
<td>Tube City IMS</td>
</tr>
<tr>
<td>Feralloy Corporation</td>
<td>North American Refractories Company</td>
<td>Uhde Corporation of America</td>
</tr>
<tr>
<td>First River</td>
<td>Northrop Grumman Corporation</td>
<td>Veolia Water North America</td>
</tr>
<tr>
<td>Fritz Enterprises, Inc.</td>
<td>ODERCO Inc.</td>
<td>Vesuvius USA Corp.</td>
</tr>
<tr>
<td>Graflex International Ltd.</td>
<td>O’Neal Steel, Inc.</td>
<td>Xcoal Energy &amp; Resources</td>
</tr>
<tr>
<td>Hatch</td>
<td>Oracle</td>
<td>Xtek, Inc.</td>
</tr>
</tbody>
</table>
### AISI Directors

**Joseph A. Carrabba**  
Chairman, President &  
Chief Executive Officer  
Cliffs Natural Resources, Inc.

**Sergei A. Kuznetsov**  
President and Chief Executive Officer  
Severstal North America, Inc.  
and Severstal International

**Williams T. Chisholm**  
Chief Executive Officer  
ArcelorMittal México

**Christoph Lackinger**  
President and Chief Executive Officer  
ThyssenKrupp Steel USA, LLC

**Miguel Elizondo**  
Sales and Marketing Director  
Altos Hornos de México, S.A.

**Bruce C. Liimatainen**  
Chairman and Chief Executive Officer  
A. Finkl & Sons Co.

**Ivan Flores**  
President  
Compañía Siderúrgica Huachipato S.A.

**Mario Longhi**  
President and Chief Executive Officer  
Gerdau Ameristeel

**Giorgio Piliu**  
President  
Ivaco Rolling Mills 2004 L.P.

**Juergen G. Schachler**  
President and Chief Executive Officer  
ArcelorMittal Dofasco

**Louis L. Schorsch**  
President and Chief Executive Officer  
ArcelorMittal Americas

**Steve Harker**  
President  
Aker Construction, Inc.

**Michael T. Rehwinkel**  
Chief Executive Officer  
Evraz Inc. NA

**Robert R. Smith**  
President  
USS-POSCO Industries

**Gene A. Iannazzo**  
Chief Commercial Officer  
Harsco Metals & Minerals

**David Ruud**  
President  
DTE Energy Services

**Hans J. Sack**  
President and Chief Executive Officer  
Berg Steel Pipe Corporation

**Guillermo F. Vogel**  
Vice Chairman of the Board  
TenarisTamsa

**Vicente B. Wright**  
President and Chief Executive Officer  
California Steel Industries, Inc.