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Photo courtesy of TimkenSteel Corporation
A Message from AISI President and CEO Thomas J. Gibson

The North American steel industry is essential to the quality of life that Americans enjoy. In this Profile of the American Iron and Steel Institute 2018, you will learn why the steel industry is vital to America’s future. And you will also better understand our industry’s commitment to safety, sustainability and advocacy which is evident in our proven performance.

In the pages that follow, you will find a profile of the 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. 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. As an industry, we cannot permit the progress we have made and the innovations we have achieved to be undermined by unfair trade practices and global steel overcapacity. The American Iron and Steel Institute continues to advocate for policies that ensure steel’s contributions remain the backbone of our manufacturing sector.

Learn more about our industry and rich history at our newly updated web page at www.steel.org and join our outreach activities listed in the “Make Your Voice Heard” tab. You can also follow us on Facebook or on Twitter (@AISISteel).

Sincerely,

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

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

The North American steel industry is cutting-edge, robust and remains one of the most iconic symbols of manufacturing in America. Steel is in the foundation of our skyscrapers and bridges and it is a vital part of our economy. Many of today’s greatest landmarks—the Golden Gate Bridge, One World Trade Center and the St. Louis Gateway Arch—were built using steel. Steel evokes the sense of history, strength and determination that built—and continues to build—a strong America.

Not only is steel an essential material in these American treasures, it is fundamental to American society and our modern way of life. Our nation’s energy supply, transportation systems, 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.
Steel: Building a Sustainable Future

**Steel is vital to a modern, sustainable society.** The same steel enabling manufacturers to make lighter, more fuel-efficient vehicles and taller, safer structures is also the most continuously recycled material in the world.

While competing materials focus their sustainability claims on specific phases of product application, steel’s superior sustainability performance minimizes environmental impact when measured through the entire life cycle. Steel’s contributions to helping achieve the triple bottom line of environmental, economic and societal sustainability make it vital to achieving the needs of today without impacting society’s ability to meet the needs of the future.

For example:

- The steel industry is fundamental to the manufacturing sector and to the overall North American economy, supporting millions of U.S. jobs.

- The steel industry is critical to daily life, domestic infrastructure and national security, providing fuel-efficient vehicles, innovating infrastructure with lighter utility poles and bridges, lowering energy consumption and costs with steel roofing, and giving access to nutrition in times of emergency and financial need.

- Steel advances the quality of life North Americans enjoy through innovation and proven performance through five-star safety rated automobiles, durable framing for buildings holding up in high winds, earthquakes and fire, and eliminating food waste with pre-measured packaging with a long, stable shelf-life.

- Codes and standards for steel construction enable designers and builders to utilize more cost-effective and efficient practices, which ultimately improves stakeholders’ bottom line.

- The steel industry is actively dedicated to meeting society’s needs and advancing environmental stewardship. Since 1990, the industry has reduced energy intensity by 31 percent and CO₂ emissions by 36 percent per ton of steel shipped.

- When looking at the energy-intensive production processes of competing materials in the auto sector, vehicles made with advanced high-strength steels provide significant reduction in greenhouse gas emissions.
Recycling

According to the Steel Recycling Institute (SRI), more than 70 million tons of steel are recycled each year. All steel is recyclable, and through the work of the SRI, the industry is active in growing industry recycling and advancing our environmental performance.

The demand for steel scrap to make new steel drives recycling of products made from steel. In fact, each year, nearly every car taken off the road is recycled, while more than 90 percent of out-of-service appliances are recycled and two-thirds of steel packaging is recycled. While steel in construction and infrastructure may be in service for as many as 50 years, recycling the steel from the structure is nearly always a requirement of demolition projects—collecting nearly all of the steel for recycling or reuse.

While steel’s environmental advancements are rooted in recycling, steel also has life cycle advantages over competing materials because of its relatively low energy use, high recyclability, conservation of natural resources and the extensive re-use of by-products. Steel’s contributions to environmental, economic and societal sustainability make it vital to achieving the needs of today without impacting our ability to meet the needs of the future. While competing materials focus their sustainability claims on specific phases of product application, steel’s superior sustainability performance minimizes environmental impact when measured through the entire life cycle. The North American steel industry is implementing life cycle thinking in all major market sectors.
National Security and Critical Infrastructure

Virtually every military platform is dependent on U.S.-produced steels and specialty metals, in 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. National security also includes our nation’s critical infrastructure, specifically, transportation, public health and safety, and energy — including the power grid. A few key areas are:

- **Energy infrastructure** such as petroleum refineries, oil and gas pipelines, storage tanks, electricity generating power plants, electrical power and distribution transformers, electricity transmission towers, and utility distribution poles.

- **Transportation 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 residential construction.

- **Commercial and institutional complexes** such as manufacturing plants, schools, commercial buildings, chemical processing plants, hospitals, retail stores, hotels, houses of worship and government buildings.

The U.S. steel industry’s ability to supply our defense establishment and nation’s critical infrastructure needs depends on the continued ability to compete in commercial markets and maintain a domestic manufacturing presence. Repeated surges in imports of dumped and subsidized steel products from numerous countries in recent years have injured the U.S. industry, putting our national security at risk.
The mine-resistant ambush-protected vehicles (MRAPs) play an essential role in properly equipping and protecting U.S. troops in parts of the world and utilize special armored steels that are produced and developed in America.

Some specific examples of steel use in defense applications are:

- **The USS George H.W. Bush**, an aircraft carrier, contains 47,000 tons of structural steel and serves as home to 6,000 Navy personnel.
- **The USS New York** was built with 24 tons of steel reclaimed and recycled from the World Trade Center.
- **Land based vehicles** such as the Bradley Fighting Vehicle, Abrams Tank and the family of Light Armored Vehicles use significant tonnage of steel plate per vehicle.
- **Fighter aircraft** engines, gears, bearings and the body itself, use high performance specialty steels and superalloys.
- **The control cables on military aircraft**, including fighter jets and military transport planes, are produced from steel wire rope.

In the spring of 2018, as a result of the Department of Commerce’s Section 232 investigation into the impact of foreign steel imports on national security, President Trump signed a proclamation imposing a 25 percent tariff on steel imports. It is vital that the Section 232 remedy achieve the administration’s stated goal of “increasing domestic steel production to approximately an 80 percent operating rate, the minimum rate needed for long term viability of the industry.” Only a strong domestic steel industry can be relied on during a time of crisis to provide immediate steel deliveries when and where required. Its economic significance to the nation is beyond measure.
Global Leader in Labor Productivity

The steel industry directly employs more than 140,000 people in the United States, and directly or indirectly supports nearly one million U.S. jobs. 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 under 1.9 man-hours per finished ton of steel in 2017. 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. AISI companies are committed to continuous improvement in safety and health and to achieving an injury-free workplace.

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 American trade laws and international trade rules set by the World Trade Organization (WTO). Many of these steel industries are owned and/or subsidized by foreign governments. Nations that habitually circumvent and evade U.S. antidumping and countervailing duty laws to send unfairly traded imports into our market must face consequences. To counter such foreign unfair trade practices, the United States must establish and enforce trade policies that will truly level the international playing field for all manufacturers.

In 2017, imports increased by 15 percent, despite successful litigation of trade cases. The impact continues as imports capture near-record levels of market share and domestic producers remain well below historic levels of capacity utilization.
Through robust advocacy, AISI consistently urges our government leaders to enact policies that promote and restore manufacturing in our country and create millions of new jobs by strongly enforcing our trade laws, investing in infrastructure, promoting a tax structure that encourages investment, addressing excessive regulatory burdens and achieving domestic energy self-sufficiency.

A major cause of the steel import surge was global steel industry overcapacity, especially in China. The Organization for Economic Cooperation and Development (OECD) estimates that there is nearly 600 million metric tons of excess steel capacity globally today, with more than half coming from China alone. But this is not only an issue in China. We have seen significant increases in steel imports in recent years from a number of countries, many of which are also major importers of steel from China.

China also had claimed that based on its protocol of accession, WTO members must now treat it as a market economy in antidumping investigations. The U.S. Department of Commerce recently reaffirmed China’s status as a non-market economy (NME) for trade cases. U.S. law sets forth six statutory factors for determining whether China or any other country operates as a market economy. Given the significant role of the Chinese government in many key aspects of its economy, and especially in its state-owned and controlled steel sector, there can be no question that China today remains a non-market economy. If China were granted market economy status before it is truly a market economy, the antidumping law will no longer provide effective relief against unfairly traded Chinese imports.

If the American steel industry continues to be challenged by market distorting foreign competition it could become impossible to procure the steel needed domestically and we as a nation would become dangerously dependent upon unreliable foreign sources of supply. This goes to the heart of the president’s proclamation on the impact of foreign steel imports on America’s national security, known as Section 232. The president’s action is key in stemming the tide of unfair foreign imports and putting steel workers back to work.
Steel Industry Impacts

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

The steel industry’s world-class companies continue to confront issues ranging from challenging market conditions to unfairly traded imports. In 2017, U.S. industry shipments increased for the first time in three years, as did apparent steel use. While employment in America’s steel mills has recovered, by the end of the year industry payrolls were still nearly 10,000 workers below where they stood at the end of 2014.

The following is a summary of select 2017 statistics for the American steel sector:

<table>
<thead>
<tr>
<th>2017 U.S. Steel Industry</th>
<th>Statistical Highlights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel shipments</td>
<td>90.9 million tons</td>
</tr>
<tr>
<td>Imports (finished)</td>
<td>29.6 million tons</td>
</tr>
<tr>
<td>Exports</td>
<td>10.5 million tons</td>
</tr>
<tr>
<td>Apparent steel demand</td>
<td>109.9 million tons</td>
</tr>
<tr>
<td>Steel mill employment</td>
<td>143,700*</td>
</tr>
</tbody>
</table>

Source: American Iron and Steel Institute
*Based on U.S. Department of Labor 2017 December monthly employment data

2017 Steel Shipments* by Market Classification

Source: American Iron and Steel Institute
*Estimated percentages
Energy

Energy is of critical importance to the North American steel industry, as the production of steel is inherently energy-intensive. The industry consumes substantial amounts of electricity, natural gas, coal and coke to make our products, and energy is generally 20 percent or more of the cost of producing a ton of steel.

The American steel industry continues to increase energy efficiency, and is leading the way by effectively setting the bar for steel industry efficiency worldwide. Our industry has made tremendous gains in reducing energy usage, as well as our environmental footprint, in recent decades. The domestic steel industry has voluntarily reduced its energy intensity by 31 percent since 1990, and the U.S. Department of Energy indicated that the American industry has the lowest energy intensity of any major steel-producing nation. The availability and reliability of supplies of these types of energy are essential to our industry’s international competitiveness, especially as steelmakers in competing nations often receive subsidized energy.

The products made by the steel industry are essential to the energy sector. Whether it is oil country tubular goods (OCTG) and line pipe for oil and gas production and transportation, key materials for electricity generation and transmission or critical components for wind and solar electricity, steel makes all forms of energy possible.

Of particular importance in recent years is the increased production of oil and natural gas from domestic shale formations. Affordable natural gas is presenting all steelmakers with new options for making their products more efficiently and is providing expanded markets for steel pipe and tube products that are essential to the production and increased producer transmission of domestic energy. The production of shale-based oil and natural gas is leading to significant investments and job creation across the United States.
Automotive

North American automotive manufacturers produced nearly 17 million vehicles in 2017, with similar forecasts for the next two years. Currently there are aggressive regulations in place requiring fuel economy to double by 2025, creating intense materials competition as automakers look to make vehicles lighter to help meet those requirements. However, the Trump administration is working to revise those standards, and this effort will likely lessen the need for intensive lightweighting in models designed after 2021.

Advanced high-strength steels (AHSS) have provided properties automakers need to achieve fuel economy, safety and performance targets for the past several years, and continue to be adopted in new vehicles. Innovation remains robust with the introduction of commercially available Third-Generation (3rd Gen) AHSS grades to give automakers improved formability at the same strength levels of traditional AHSS grades to further enhance lightweighting while maintaining great performance. The Steel Market Development Institute (SMDI), a business unit of AISI, leads collaborative projects with customers on optimal use of these grades to maximize the steel content in new vehicles as quickly as possible to help automakers address challenges of the future.

The goal of the SMDI automotive program is to keep steel the material of choice in body, closure and chassis applications through its advantages in performance, mass reduction, value and sustainability.

AHSS and 3rd Gen AHSS, combined with innovative auto manufacturing methods like tailor rolling and tailor welding, enable steel to achieve weight reduction levels nearly equivalent to those of alternate materials and at a higher value. A peer-reviewed study of the environmental impact of lightweighting with AHSS as compared with aluminum was completed at the end of 2017. This study demonstrates vehicles lightweighted with AHSS instead of aluminum have equal or better life cycle emissions making steel a better choice for the environment. Steel offers the best solution for the environment, the best performance and cost-effective solution for automakers, and the best value for customers.
Automotive Communications Program

The truck and SUV segment of the automotive market is where materials competition is most intense as higher levels of weight reduction are needed to meet new fuel economy targets by 2025. Early in 2014, SMDI launched an enhanced automotive communications program highlighting the strength, durability, sustainability and mass reduction possible with AHSS. The program is aimed at materials decision makers and influencers, as well as national and trade media, and includes regional advertising, customer marketing activities and social media outreach.

Since the program’s launch, the strategies have helped maintain steel’s position as the automotive material of choice while strengthening SMDI’s relationship with the automotive industry, media and consumers nationally, and within SMDI’s target markets. Steel Matters: Demand Nothing Less reminds audiences of the role AHSS plays in the automotive industry’s efforts to meet federally mandated fuel economy emissions and safety standards in the coming years. The program’s main objective continues to be positioning AHSS as the highest-value material and the benchmark customers and consumers should use to measure other lightweighting choices.

SMDI has established a robust presence at key events, drawing in customer and consumer audiences through advertising, media relations, speaking opportunities and social media. SMDI will continue to expand its outreach to targeted auto shows and media-focused events across these regions with a strong focus on life cycle assessment and sustainability.
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, reliability, versatility in design, consistency as a product and sustainability profile.

Residential and Commercial Construction

AISI-generated building standards have been incorporated into the most recent editions of the International Building Code (IBC) and the International Residential Code (IRC) and are used throughout the world. Steel continues to provide a proven environmentally responsible solution for meeting green building requirements in standards such as the International Green Construction Code (IgCC), ASHRAE 189.1, the National Green Building Standard (ICC-700) and green building rating systems like the U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED). Steel products can earn points toward LEED v4 certification in the Materials and Resources, Energy and Atmosphere, and Sustainable Sites categories.
Bridges

Bridges connect us as a nation. America needs bridges to transport billions of tons of freight each year from coast-to-coast.

Yet the Federal Highway Administration (FHWA) estimates that nine percent of America’s more than 600,000 bridges were structurally deficient in 2016. The American Society of Civil Engineers (ASCE) 2017 Infrastructure Report Card graded the nation’s bridges with a “C+” and noted the most recent estimate puts the nation’s backlog of bridge rehabilitation needs at $123 billion.

Repairing and/or replacing these bridges with modern steel bridge designs must be a national priority. Steel bridges offer owners practical design and accelerated bridge construction solutions which are durable, cost-effective, and offer ease of maintenance and construction. A free, web-based design tool developed by SMDI and other partners of the Short Span Steel Bridge Alliance—eSPAN140—allows users to download customized steel bridge designs in three easy steps in less than five minutes, saving them significant time and costs. More than 3,000 eSPAN140 preliminary designs have been generated since 2012.

America’s bridges are utilizing bridge technologies that help save taxpayer dollars as we rebuild infrastructure over the next two decades. Designers and engineers can specify new high-performance steels (HPS) developed by member companies with the Office of Naval Research and FHWA. These steels have superior toughness and can be welded with little or no preheat. Today, there are more than 500 HPS bridges in service in the United States.

The Cannelville Road Bridge in Muskingum County, Ohio, which also featured an innovative sandwich plate system (SPS) deck, was fabricated offsite, saving 3-4 months of construction time. The project was completed in just 26 days.
Transportation/Infrastructure

In a globalized economy, America’s infrastructure is important to our competitive edge. A globally competitive economy depends on an effective and efficient transportation infrastructure. The American Road and Transportation Builders Association reports that the U.S. transportation construction industry generates more than $500 billion in total annual economic activity for the nation and sustains nearly four million jobs—the equivalent of 1.6 percent of the nation’s gross domestic product (GDP). AISI supports strong public policy initiatives that equip the manufacturing sector to remain competitive and provide sustainable, long-term financing mechanisms for federal transportation infrastructure investments.
Packaging

Steel cans are the most recycled food package in the world, giving steel an important role in providing sustainable packaging for foods that carry nutrients essential to a healthy diet. According to a study published in the *Journal of the Academy of Nutrition and Dietetics*, children and adults who eat canned fruits and vegetables have greater overall fruit and vegetable consumption, better diet quality and increased nutrient intake compared to children and adults who do not eat canned fruits and vegetables.¹

Additional research shows that canned foods provide needed nutrients often at a lower cost than fresh, frozen and dried forms, particularly when price, waste and time to prepare are considered.² The Canned Food Alliance (CFA), comprised of steel and can manufacturers, food processors and affiliate members, informs nutrition and health professionals, government officials and consumers about the benefits of canned food, including its nutritional value, convenience, affordability, versatility, year-round availability, economic impact and sustainability.

As a National Strategic Partner of the U.S. Department of Agriculture (USDA) Center for Nutrition Policy and Promotion, the CFA conveys how canned foods can help fill *MyPlate*, the USDA nutrition guide. CFA’s strategic partnerships with the Produce for Better Health Foundation, the National Fruit and Vegetable Alliance and the American Fruit and Vegetable Processors and Growers Coalition promote the consumption of all forms of fruits and vegetables, whether they are canned, fresh, frozen or dried. CFA was named a Fruits and Veggies More Matters Role Model for the fifth consecutive year. CFA has worked in collaboration with these groups to ensure the Dietary Guidelines for Americans (DGA) included “all forms” language, and works closely with organizations that share similar food and nutrition interests to address misconceptions regarding canned food, including, communicating the attributes of canned food with influencers and advocating for fair legislative and regulatory language for canned foods. For more information and a full list of CFA’s partners, visit www.mealtime.org.


Transformational Technologies

The steel industry has been conducting research aimed at developing both incrementally improved and revolutionary iron and steelmaking technologies that will significantly reduce energy and greenhouse gas emissions.

**Novel Flash Ironmaking**

An $11 million project, under the direction of AISI with collaboration from the U. S. Department of Energy’s Advanced Manufacturing Office, is in the final phase – pilot plant design. This innovative ironmaking technology based on the direct gaseous reduction of fine iron oxide concentrates in a flash reduction process is under development by Berry Metal Company and the University of Utah under the AISI award. The Novel Flash Ironmaking Process takes advantage of shale gas discoveries in the United States and the productive use of the available large quantities of fine iron oxide concentrates.

Once fully implemented, the projected benefits of this novel technology include a reduction in energy consumption by using concentrates that do not require pelletization or sintering—potentially eliminating the use of coke. Significant environmental emission reductions—especially CO₂ emissions in comparison to the conventional blast furnace ironmaking route—come from using natural gas or hydrogen instead of coke as the reducing agent.

The Novel Flash Ironmaking Process technology is to be applied to the production of iron as a feed to the steelmaking process initially, but could also be a part of a continuous direct steelmaking process eventually replacing the blast furnace and other alternative ironmaking processes.
The reactor shown in Figure 1 was commissioned in late 2015. A comprehensive testing program was conducted to identify technical and scale-up hurdles. The project team is in the process of designing the next phase — an industrial pilot-plant.

**This research project shows the American steel industry’s commitment to developing technical solutions today** that will help realize the next-generation steel plant of the future.

**Committee on Manufacturing Technology/Technology Roadmap**

AISI’s Committee on Manufacturing Technology (COMT) evaluated proposals on the topic of Advanced Measurement Technology. These projects will result in sensors and systems that will provide for more accurate modeling, real-time sensing and overall quality improvements. The Committee is finalizing the decision on which projects will be included in the Advanced Measurement Technology Program.

Some proposal topics under consideration include slag composition monitoring; high temperature measurements; and, data-driven modeling, control and optimization. It is anticipated that some of these research proposals will result in solutions that can be implemented in the near term, 3–5 years.
AISI Advocacy

Advocacy is at the core of what we do. AISI works closely with opinion leaders, policymakers and the public to advance the industry’s key messages on Capitol Hill.

THIS PAGE, FROM L TO R: 1) ROGER NEWPORT, CEO and Member of the Board of Directors, AK Steel Corp., JOHN FERRIOOLA, Chairman, CEO and President, Nucor Corp., President DONALD TRUMP, DAVE BURRITT, President and CEO, United States Steel Corp., TIM TIMKEN, Chairman, CEO and President, TimkenSteel Corp.; 2) DAVE BURRITT, Rep. PETE VISCLOSKY (D-IN); 3) U.S. Secretary of Commerce WILBUR ROSS, THOMAS J. GIBSON, President and CEO, American Iron and Steel Institute; 4) ANDREW HUMPHREY, WDIV-TV, SEAN DONELLY, President and CEO, ArcelorMittal Dofasco; 5) Rep. BETTY MCCOLLUM (D-MN), JEFF MOSKALUK, Senior Vice President and Chief Commercial Officer, SSAB Americas; 6) LUIS LANDOIS GARZA, Sales and Marketing Director, Altos Hornos de Mexico, S.A., Rep. JACK BERGMAN (R-MI).

OPPOSITE PAGE: FROM L TO R: 7) DAVID RUUD, President, Power & Industrial, DTE Energy Resources, JOHN FERRIOOLA, MARK HERECHUK, Regional President – North and South America, Harsco Metals & Minerals; 8) REGULO SALINAS, Vice President, Ternium Mexico, MAXIMO VEDOYA, CEO, Ternium; 9) JOHN BRETT, President and CEO, ArcelorMittal USA, Rep. ROBIN KELLY (D-IL), MARCIA MILLER, Vice President, Government Relations, ArcelorMittal USA; 10) CHUCK SCHMITT, President, SSAB Americas, JEFF MOSKALUK, Rep. BOB LATTA (R-OH); 11) Rep. JACK BERGMAN (R-MI), LAURA DEVONI, Manager, Trade and Economics, Algoma; 12) CONRAD WINKLER, President and CEO, EVRAZ North America, Rep. SCOTT TIPTON (R-CO), JOHN STINSON, Counselor, EVRAZ North America; 13) GUILLERMO VOGEL, Vice Chairman of the Board, Tenaris, Rep. RICK CRAWFORD (R-AR); 14) KEVIN DEMPSEY, Senior Vice President, Public Policy and General Counsel, American Iron and Steel Institute, Rep. KEITH ROTHFUS (R-PA), ROGER NEWPORT; 15) Rep. JOHN GARAMENDI (D-CA), JOHN FERRIOOLA; 16) Rep. TIM WALBERG (R-MI), PATRICK BLOOM, Director, Government Relations, Cleveland-Cliffs Inc., BRETT GUGE, Executive Vice President, Finance and Administration, California Steel Industries, Inc., Rep. RICK NOLAN (D-MN); 17) Rep. RICK NOLAN (D-MN), LOURENCO GONCALVES, Chairman, President and CEO, Cleveland-Cliffs Inc., ALAN KESTENBAUM, Executive Chairman and CEO, Stelco Inc.; 18) JOHN FERRIOOLA, ROGER NEWPORT, JOHN BRETT; 19) JOHN BRETT, TOM DOWER, Senior Director, Government Relations, ArcelorMittal USA, Rep. MARCY KAPTUR (D-OH); 20) DAVE BURRITT, Rep. DAVID JOYCE (R-OH), Rep. MIKE BOST (R-IL), Rep. JIM RENACCI (R-OH).
The American Iron and Steel Institute

Founded in 1855 as the American Iron Association, the American Iron and Steel Institute (AISI) has represented the steel industry for more than 150 years. Headquartered in Washington, D.C., AISI advocates on behalf of its member companies for public policies that support a globally competitive North American steel industry. Never has it been more critical than it is today for the industry to speak out with a unified voice on major policy issues that are impacting American manufacturers.

AISI’s mission is to influence public policy, educate and shape public opinion in support of a strong, sustainable 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 priorities central to the steel industry where AISI can make an impact on 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

The Steel Market Development Institute (SMDI), a business unit of AISI, increases and defends the use of steel by developing and communicating innovative materials and designs. SMDI works to differentiate steel based on its environmental performance and demonstrate steel as the highest-value material in the automotive, construction and packaging markets.

In partnership with its investor steel companies, SMDI:

∪ **WORKS WITH OUR AUTOMOTIVE CUSTOMERS** to advance and demonstrate steel’s superior performance providing better value than competing materials.

∪ **PROVIDES STEEL-BASED SOLUTIONS** in the commercial and residential construction sectors, and transportation and infrastructure sectors, through applied research and technology transfer with its many partners in the construction markets, including leveraging codes and standards processes to defend and advance steel industry interests.

∪ **INTERFACES WITH LEGISLATORS** and health professionals to ensure a level playing field for canned food in federal programs, and to inform these influential groups about canned food’s high nutritional value to both children and adults.

AISI Producer Members and Their Locations in North America

**ALGOMA (ESSAR STEEL ALGOMA INC.)**

**North American Locations**
**Headquarters:** Sault Ste. Marie, ON  
**CANADA**
**Alberta**
Calgary: Algoma (sales office)

**Ontario**
Sault Ste. Marie: Algoma – carbon and HSLA steel sheet in hot rolled, cold rolled, pickled, and floor plate; carbon and HSLA plate and heat-treated plate products
Burlington: Algoma (sales office)

**North American Production:** Algoma is an integrated producer of 2.8 million tons per annum serving the automotive, construction, energy, defense, and manufacturing sectors.

**AK STEEL CORPORATION**

**North American Locations**
**Headquarters:** West Chester, OH  
**UNITED STATES**
**Alabama**
Cold stamping

**Indiana**
Columbus: Carbon and stainless tubular steel
Rockport: Cold rolled carbon and stainless steels line

**Kentucky**
Tool & die, hot stamping, cold stamping
Ashland: Galvanized and galvannealed strip

**Michigan**
Dearborn: Hot rolled, cold rolled, and hot dipped galvanized and annealed sheet
Monroe: JV Spartan Steel Coating LLC (hot dipped galvanized and galvannealed sheet)

**Ohio**
Coshocton: Stainless steels in cold rolled strip, sheet coils
Mansfield: Flat-rolled carbon, ferritic stainless

**Middletown:** Hot rolled, cold rolled, enameling steel, electrogalvanized hot-dip galvanized, hot-dip aluminized, hot-dip aluminized carbon and stainless, research and innovation center
Walbridge: Tubular steel
Zanesville: Oriented and non-oriented, electrical steel, stainless flat-rolled

**Pennsylvania**
Butler: Flat-rolled and electrical and stainless steels, stainless semi-finished slabs

**Somerset County:** AK Coal Resources, Inc. (a wholly-owned subsidiary of AK Steel)—metallurgical coal reserves

**West Virginia**
Follansbee: Mountain State Carbon, LLC (cokemaking)

**CANADA**
**Ontario**
Engineering, tool & die, hot stamping, cold stamping

**MEXICO**
**Querétaro**
Carbon and stainless tubing

**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 León
Monterrey: Nacional de Aceros, S.A. de C.V. (NASA): Light weight wall tubes, sales office

San Luis Potosí
San Luis Potosí: Sales office

UNITED STATES
Texas
San Antonio: Sales office

North American Production: 5.5 million tons

ARCELMITTAL NORTH AMERICA

North American Locations
Headquarters: Chicago, IL

UNITED STATES
Alabama
Calvert: AM/NS Calvert: Flat (JV with Nippon Steel & Sumitomo Metal Corp.)

Illinois
Riverdale: Flat

Indiana
Burns Harbor: Flat and plate
East Chicago: Indiana Harbor (East and West): Flat, long (idled) and global research and development center
Gary: Plate
New Carlisle: I/N Tek and I/N Kote: Flat (JV with Nippon Steel & Sumitomo Metal Corporation)

Michigan
Detroit: Tailored blanks

Minnesota
Hibbing Taconite: Mine (JV with U. S. Steel and Cliffs Natural Resources)
Virginia: Minorca Mine

Mississippi
Jackson: Double G Coatings: Flat (JV with U. S. Steel)

North Carolina
Piedmont: Plate

Ohio
Cleveland: Flat
Columbus: Flat
Marion: Tube
Pioneer: Tailored blanks
Shelby: Tube
Warren: Coke

Pennsylvania
Coatesville: Plate
Conshohocken: Plate
Monessen: Coke
Steelton: Long

Tennessee
Murfreesboro: Tailored blanks

West Virginia
Princeton: Mine
Weirton: Flat

CANADA

Nunavut
Baffinland Iron Mines Corporation: JV Nunavut Iron Ore Holdings LP (Head office: Oakville, ON)

Ontario
Baycoat: JV U. S. Steel Canada (flat)
Brampton: Tube
Concord: Tailored blanks
Hamilton: Flat, long, tube and global research and development center
London: Tube
Windsor: Flat
Woodstock: Tube

Quebec
Contrecoeur East: Long
Contrecoeur West: Long
Coteau-du-Lac: Flat
Fire Lake: Mine
Longueuil: Long
Mount-Wright: Mine
Port-Cartier: Pellet plant and port
St. Patrick: Long

MEXICO
Guanajuato
Celaya: Long
Silao: JV Summit Plastics (tailored blanks)
Michoacan
Las Truchas: Mines
Lazaro Cardenas: Flat and long

Nuevo León
Monterrey: Tube

San Luis Potosí
San Luis Potosí–Villa de Reyes: Tailored blanks

Sonora
Sonora–Ciudad Obregón: Mine
Sonora–Ejido en Rosario Tesopaco: Mine
Sonora–Guaymas: Port operation

North American Production: 23.48 million metric tons
North American Iron Ore Production: 38.1 million metric tons

CALIFORNIA STEEL INDUSTRIES, INC.

North American Locations
Headquarters: Fontana, CA

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

North American Production: 2 million tons

CLEVELAND-CLIFFS INC.

North American Locations
Headquarters: Cleveland, OH

UNITED STATES
Michigan
Ishpeming: Tilden Mine

Palmer: Empire Mine (indefinite idle)

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

By 2020, Cliffs expects to be the sole producer of hot-briquetted iron (HBI) in the Great Lakes region with the start-up of its first production plant in Toledo, Ohio.

U.S. Iron Ore Production: 18.8 million long tons in 2017

DEACERO, S.A.P.I. DE C.V.

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

MEXICO
Baja California
Ensenada: Scrap recollection center
La Paz:
Mexicali: Wire products, scrap recollection center
Tijuana: Distribution center, scrap recollection center

Chiapas
Cuidad Hidalgo: Distribution center
Tapachula:

Chihuahua
Chihuahua: Distribution center

Ciudad de Mexico
Delegacion Gustavo A. Madero: Scrap recollection center

Coahuila
Ramos Arizpe/Saltillo: Steelmaking, billet, wire rod, rebar, merchant bars, shapes, beams, wire products, scrap recollection center

Estado de Mexico
Tlalnepantla: Wire products, scrap recollection center, sales office
Tultitlan: Scrap recollection center
**Guanajuato**
León: Wire products
Villagrán/Celaya: Steelmaking, billet, wire rod, rebar, merchant bars, wire products, scrap yard

**Jalisco**
Guadalajara: Scrap recollection center, distribution center, sales office

**Michoacán**
Morelia: Wire products

**Morelos**
Cuernavaca: Scrap recollection center

**Nuevo León**
Guadalupe: Wire products, scrap recollection center
Monterrey: Sales office
San Nicolás de los Garza: Scrap recollection center
San Pedro Garza García: Main office
Santa Catarina: Wire products, scrap yard

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

**Querétaro**
Querétaro: Wire products

**San Luis Potosí**
San Luis Potosí: Scrap recollection center

**Sinaloa**
Culiacán: Distribution center

**Sonora**
Hermosillo: Scrap recollection center

**Tabasco**
Huilamanguillo: Distribution center
Villa Hermosa: Distribution center

**Tamaulipas**
Altamira: Scrap yard
Tampico: Scrap yard
Matamoros: Scrap recollection center

**Veracruz**
Veracruz: Distribution center, scrap yard

**Yucatán**
Merida: Scrap recollection center, distribution center

**UNITED STATES**

**Alabama**
Birmingham: Distribution center

**Arizona**
Phoenix: Sales office

**Illinois**
Chicago: Warehouse

**Missouri**
Poplar Bluff: Wire products, sales office

**Pennsylvania**
Chambersburg: Distribution center

**Texas**
Corpus Christi: Scrap recollection center
Eagle Pass: Scrap yard
Houston: Deacero USA, Inc. (wire products and sales office)
Laredo: Distribution center, warehouses, sales office
New Braunfels: Sales office
San Antonio: Scrap yard

**North American Production:** 3.5 million tons

**DTE ENERGY RESOURCES**

**North American Locations**
Headquarters: Ann Arbor, MI

**UNITED STATES**

**Michigan**
River Rouge: EES coke battery

**North American Production:** Among the many energy operations of DTE are steel mill coke and coal operations and cogeneration projects.
### EVRAZ NORTH AMERICA

**North American Locations**

**Headquarters:** Chicago, IL

**UNITED STATES**

- **Colorado**
  - **Pueblo:** Steelmaking, premium head hardened and standard rail, seamless OCTG, wire rod, coiled reinforcing bar, product technology center, sales office

- **Oregon**
  - **Portland:** Plate, heat-treated plate, coil, large diameter spiral line pipe, technology lab, sales office

**CANADA**

- **Alberta**
  - **Calgary:** ERW, OCTG casing and tubing with upsetting, threading and heat-treating capabilities, semi-premium connections, sales office
  - **Camrose:** Small diameter line pipe (ERW) and large diameter line pipe (DSAW), ERW OCTG casing

- **Saskatchewan**
  - **Regina:** Steelmaking, plate and coil, ERW OCTG tubing, small and large diameter line pipe (ERW and spiral), research and development center, sales office

**North American Production:** 3 million tons

EVRAZ North America produces engineered steel products for rail, energy and industrial end markets, and operates numerous recycling businesses across the western U.S. and Canada.

### HARSCO METALS & MINERALS

**North American Locations**

**Headquarters:** Seven Fields, PA

**UNITED STATES**

- **Alabama**
  - **Satsuma**

- **Arkansas**
  - **Blytheville**
  - **Newport**

- **Colorado**
  - **Pueblo**

- **Florida**
  - **Tampa**

- **Illinois**
  - **Pawnee**
  - **Pekin**
  - **East Chicago**
  - **Gary**
  - **Pittsboro**
  - **Muscatine**

- **Indiana**
  - **Gary**
  - **Pittsboro**

- **Kansas**
  - **LaCygne**

- **Kentucky**
  - **Drakesboro**

- **Missouri**
  - **Clifton Hill**

- **North Carolina**
  - **Cofield**

- **Ohio**
  - **Warren**
  - **Waterford**

- **Pennsylvania**
  - **Braddock**
  - **Butler**
  - **Fairless Hills**
  - **Koppel**
  - **Latrobe**
  - **Natrona Heights**
  - **Sarver**
  - **Steelton**

- **Tennessee**
  - **Memphis**

- **Texas**
  - **Houston**
  - **Midlothian**

- **Utah**
  - **Provo**

- **West Virginia**
  - **Moundsville**

- **Ontario**
  - **Hamilton**
  - **Nanticoke**
  - **Whitby**

- **Quebec**
  - **Contrecoeur**
  - **Sorel-Tracy**

**CANADA**

- **Ontario**
  - **Hamilton**
  - **Nanticoke**
  - **Whitby**

- **Quebec**
  - **Contrecoeur**
  - **Sorel-Tracy**

**MEXICO**

- **Guanajuato**
  - **Celaya**

- **Michoacan**
  - **Lazaro Cardenas**

- **Nuevo Leon**
  - **Apodaca**
  - **Monterrey**
  - **San Nicolas**

**North American Production:** Harsco provides innovative resource recovery technologies, environmental solutions and logistics services to the metals and minerals industries.
IVACO ROLLING MILLS 2004 L.P.

North American Location
Headquarters: l’Orignal, Ontario, Canada

Ontario
l’Orignal: Hot rolled steel wire rod, billet

North American Production: 900,000 tons (wire rod)
625,000 tons (billets)

NUCOR CORPORATION

North American Locations
Headquarters: Charlotte, NC

UNITED STATES

Alabama
Birmingham: Nucor Steel Birmingham (carbon steel reinforcing bar, rounds, squares)
Birmingham: Southland Tube, Inc. (tube)
Birmingham: Skyline Steel (sales)

Decatur: Independence Tube Corporation Decatur (tube)

Eufaula: American Buildings Company South Region (metal building systems)

Fort Payne: Vulcraft Alabama (carbon steel in joists, joist girders, composite floor joist, and floor and roof deck)

Riverside: Harris Rebar (rebar)

Trinity: Nucor Steel Decatur (carbon steel sheet in hot rolled, pickled, cold rolled, galvanized, galvannealed)

Trinity: Independence Tube Corporation Trinity (tube)

Tuscaloosa: Nucor Steel Tuscaloosa (carbon and high-strength alloy, hot rolled coil and cut-to-length plate for structural and pressure vessel applications)

Arizona

Kingman: Nucor Steel Kingman (carbon steel reinforcing bar, wire rod)
Phoenix: Harris Rebar (rebar)
Phoenix: Verco Decking (steel floor, roof deck)
Tucson: Harris Rebar (rebar)

Arkansas

Armorel: Nucor–Yamato Steel (carbon steel wide-flange beams, sheet and H-piling, miscellaneous and standard channels, angles, CZ and CSC car building sections, rail ties)

Armorel: Skyline Steel (coating and fabrication)

Blytheville: Nucor Castrip Arkansas (advanced steel sheet products)

Blytheville: Nucor Steel Arkansas (carbon steel sheet in hot rolled, cold rolled, pickled, floor plate, galvanized coils)

California

Antioch: Verco Decking (steel floor, roof deck)

Fontana: Verco Decking (steel floor, roof deck)

Fresno: Harris Rebar (rebar)

Lakeside: Harris Rebar (rebar)

Lathrop: CBC Steel Buildings (metal building systems)

Livermore: Harris Rebar (rebar)

Los Angeles: Nucor Trading USA (steel trading)

Pomona: Harris Rebar (rebar)

Sacramento: Skyline Steel (sales)

Colorado

Commerce City: Harris Rebar (rebar)

Denver: Skyline Steel (sales)

Connecticut

South Windsor: Harris Rebar (rebar)

Wallingford: Nucor Steel Connecticut (carbon steel reinforcing bar, wire rod, wire mesh fabrication, structural mesh fabrication, rolled wire, deformed wire)

Florida

Milton: Harris Rebar (rebar)

Orlando: Skyline Steel (sales)

Zellwood: Harris Rebar (rebar)

Georgia

Cartersville: Skyline Steel (threaded bar)

Cedar Springs: Republic Conduit Cedar Springs (tube)

Duluth: Skyline Steel (sales)

Hawaii

Kapolei: Harris Rebar (rebar)

Idaho

Meridian: Harris Rebar (rebar)
**Illinois**  
**Belvidere:** Harris Rebar (rebar)  
**Bourbonnais:** Fisher & Ludlaw (bar and safety grating, expanded metals products)  
**Bourbonnais:** Harris Rebar (rebar)  
**Bourbonnais:** Nucor Steel Kankakee (carbon steel angles, rounds, flats, reinforcing bar)  
**Burr Ridge:** Harris Rebar (sales)  
**Chicago:** Independence Tube Corporation Chicago (tube)  
**El Paso:** American Buildings Company Midwest Region (metal building systems)  
**Marseilles:** Independence Tube Corporation Marseilles (tube)  
**Newton:** Skyline Steel (rolled and welded pipe)  
**Tinley Park:** Skyline Steel (sales)  

**Indiana**  
**Auburn:** Harris Rebar (administration)  
**Crawfordsville:** Nucor Castrip Indiana (advanced steel sheet products)  
**Crawfordsville:** Nucor Steel Indiana (carbon steel sheet in hot rolled, cold rolled, pickled, floor plate and galvanized coils; stainless steel in hot rolled, cold rolled, pickled coils)  
**Mooresville:** Harris Rebar (rebar)  
**St. Joe:** Nucor Fastener Indiana (carbon and alloy steel standard hex head cap screws, hex flange bolts, structural bolts and nuts, finished hex nuts)  
**St. Joe:** Vulcraft Indiana (carbon steel in joist, joist girders, composite floor joist, and floor and roof deck)  
**Waterloo:** Nucor Building Systems Indiana (metal building systems)  

**Iowa**  
**Newton:** Harris Rebar (rebar)  
**Sioux City:** Harris Rebar (sales)  

**Kentucky**  
**Ghent:** Nucor Steel Gallatin (hot rolled coils, hot rolled bands, hot rolled pickled and oiled, hot rolled slit coils)  
**Louisville:** Harris Rebar (sales)  
**Louisville:** Republic Conduit Louisville (tube)  

**Louisiana**  
**Convent:** Nucor Steel Louisiana (direct reduced iron)  
**Mandeville:** Skyline Steel (sales)  
**Sidell:** Harris Rebar (sales)  

**Maryland**  
**Baltimore:** Harris Rebar (rebar)  

**Massachusetts**  
**Deerfield:** Harris Rebar (rebar)  
**Milford:** Harris Rebar (administration)  
**Taunton:** Skyline Steel (sales)  

**Michigan**  
**Comstock Park:** Harris Rebar (rebar)  
**Detroit:** Nucor Automotive Detroit Office (sales)  
**Lansing:** Harris Rebar (rebar)  

**Minnesota**  
**Minneapolis:** Harris Rebar (rebar)  

**Mississippi**  
**Flowood:** Harris Rebar (rebar)  
**Flowood:** Nucor Steel Jackson (carbon steel angles, flats, reinforcing rounds, squares)  
**Iuka:** Skyline Steel (spiralweld pipe)  
**Madison:** Fisher & Ludlow (bar and safety grating, expanded metals products)  

**Missouri**  
**Earth City:** Skyline Steel (sales)  
**Kansas City:** Harris Rebar (rebar)  
**Maryville:** Nucor LMP Steel (cold finished bar and wire)  
**St. Louis:** Harris Rebar (rebar)  
**St. Louis:** Nucor St. Louis Cold Drown (cold drawn rounds, hexagons, squares, special sections)  

**Nebraska**  
**Bellevue:** Harris Rebar (rebar)  
**Norfolk:** Nucor Cold Finish Nebraska (carbon, leaded and alloy cold drawn steel bar)  
**Norfolk:** Nucor Steel Nebraska (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)
Norfolk: Vulcraft Nebraska (carbon steel in joists, joist girders, composite floor joists, floor and roof deck)

Nevada
Carson City: Harris Rebar (rebar)
Las Vegas: Harris Rebar (rebar)

New Hampshire
Canaan: Harris Rebar (rebar)

New Jersey
Middletown: Skyline Steel (sales)
Parsippany: Skyline Steel (corporate headquarters)

New Mexico
Albuquerque: Harris Rebar (rebar)

New York
Albany: Harris Rebar (rebar)
Auburn: Nucor Steel Auburn (carbon steel angles, channels, flats, reinforcing bars, rounds, squares)
Chemung: Vulcraft of New York (carbon steel in joists, joist girders, composite floor joists, special profile steel trusses, floor and roof deck)

North Carolina
Benson: Harris Rebar (sales)
Cofield: Nucor Steel Hertford County (carbon steel plate)
Creedmoor: Harris Rebar (rebar)
Lumberton: Harris Rebar (rebar)

Ohio
Belpre: Skyline Steel (CF steel sheet pile)
Marion: Harris Rebar (rebar)
Marion: Nucor Steel Marion (carbon steel angles, flats, rebar, rounds, signposts)
Monroe: Harris Rebar (sales)
Orrville: Nucor Bright Bar Ohio (carbon, leaded and alloy cold drawn steel bars)
West Chester: Skyline Steel (sales)

Oregon
Portland: Harris Rebar (rebar)

Pennsylvania
Bethlehem: Harris Rebar (rebar)

Camp Hill: Skyline Steel (spirawlend pipe, threaded bar, micropile, accessories)
Pittsburgh: Skyline Steel (sales)
Wexford: Fisher & Ludlow (sales)

Rhode Island
Pawtucket: Harris Rebar (rebar)

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

Tennessee
Collierville: Harris Rebar (sales)
Memphis: Nucor Steel Memphis (carbon steel in special bar quality rounds, round cornered squares)
Portland: Kirby Building Systems Tennessee (metal building systems)

Texas
Dallas: Harris Rebar (rebar)
Dayton: Harris Rebar (rebar)
Grapeland: Vulcraft Texas (carbon steel in joists, joist girders, composite floor joists, special profile steel trusses, floor and roof deck)
Houston: Skyline Steel (sales)
Jewett: Nucor Steel Texas (carbon steel angles, channels, flats, reinforcing bars, rounds, special sections, squares, U.M. plates)
Longview: Harris Rebar (rebar)
<table>
<thead>
<tr>
<th>Location</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longview</td>
<td>Nucor Steel Longview (carbon steel plate)</td>
</tr>
<tr>
<td>New Braunfels</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td>Terrell</td>
<td>Nucor Building Systems Texas (metal building systems)</td>
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<tr>
<td><strong>Utah</strong></td>
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<tr>
<td>Brigham City</td>
<td>Nucor Building Systems Utah (metal building systems)</td>
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<tr>
<td>Brigham City</td>
<td>Nucor Cold Finish Utah (cold finished SBQ bar products, cold rolled wire, welded wire mesh)</td>
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<tr>
<td>Brigham City</td>
<td>Nucor Wire Products Utah (carbon steel standard mesh, mine mesh, rolled wire)</td>
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<tr>
<td>Brigham City</td>
<td>Vulcraft Utah (carbon steel in joists, joist girders, composite floor joists, special profile steel trusses)</td>
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<tr>
<td>Plymouth</td>
<td>Nucor Steel Utah (carbon steel angles, channels, flats, reinforcing bars, rounds, squares)</td>
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<tr>
<td>Salt Lake City</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td><strong>Virginia</strong></td>
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<tr>
<td>LaCrosse</td>
<td>American Buildings Company Atlantic Region (metal building systems)</td>
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<tr>
<td>Springfield</td>
<td>Skyline Steel (sales)</td>
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<td><strong>Washington</strong></td>
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<td>Auburn</td>
<td>Harris Rebar (rebar)</td>
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<td>Burbank</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td>Fife</td>
<td>Skyline Steel (sales)</td>
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<td>Lake Stevens</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td>Longview</td>
<td>Skyline Steel (rolled and welded pipe, spiralweld pipe)</td>
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<td>Seattle</td>
<td>Nucor Steel Seattle (carbon steel angles, channels, flats, reinforcing bar, rounds, squares)</td>
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<td>Tacoma</td>
<td>Harris Rebar (rebar)</td>
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<td><strong>Wisconsin</strong></td>
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<td>Appleton</td>
<td>Harris Rebar (sales)</td>
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<td>Menomonie</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td>Oak Creek</td>
<td>Nucor Cold Finish Wisconsin (carbon, leaded, alloy cold drawn steel bars)</td>
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<tr>
<td>Waukesha</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td><strong>CANADA</strong></td>
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<td>Alberta</td>
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<tr>
<td>Calgary</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td>Edmonton</td>
<td>Fisher &amp; Ludlow (bar and safety grating, expanded metals products)</td>
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<tr>
<td>Fort Saskatchewan</td>
<td>Harris Rebar (rebar)</td>
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<td>Leduc</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td>Nisieu</td>
<td>Vulcraft-Omega (open web steel joists, steel decking)</td>
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<tr>
<td>St. Albert</td>
<td>Skyline Steel (sales)</td>
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<tr>
<td>Wetaskiwin</td>
<td>Fisher &amp; Ludlow (bar and safety grating, expanded metals products)</td>
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<tr>
<td><strong>British Columbia</strong></td>
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<tr>
<td>Abbotsford</td>
<td>Harris Rebar (rebar)</td>
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<td>Delta</td>
<td>Harris Rebar (sales)</td>
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<td>Kelowna</td>
<td>Harris Rebar (rebar)</td>
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<td>Nanaimo</td>
<td>Harris Rebar (rebar)</td>
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<td>Prince George</td>
<td>Harris Rebar (rebar)</td>
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<td>Richmond</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td>Surrey</td>
<td>Fisher &amp; Ludlow (bar and safety grating, expanded metals products)</td>
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<td><strong>Manitoba</strong></td>
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<tr>
<td>Winnipeg</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td><strong>New Brunswick</strong></td>
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<tr>
<td>St. John</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td><strong>Newfoundland</strong></td>
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<tr>
<td>Conception Bay</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td><strong>Nova Scotia</strong></td>
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<tr>
<td>Dartmouth</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td><strong>Ontario</strong></td>
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<tr>
<td>Ancaster</td>
<td>Vulcraft Canada (steel joists, joist girders and decking)</td>
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<tr>
<td>Belleville</td>
<td>Skyline Steel (sales)</td>
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<tr>
<td>Brampton</td>
<td>Harris Rebar (rebar)</td>
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<tr>
<td>Burlington</td>
<td>Fisher &amp; Ludlow (bar and safety grating, expanded metals products)</td>
</tr>
<tr>
<td>Burlington</td>
<td>Laurel Steel (cold finish steel bar)</td>
</tr>
<tr>
<td>Burlington</td>
<td>Nucor Canada (sales)</td>
</tr>
<tr>
<td>Lively</td>
<td>Harris Rebar (rebar)</td>
</tr>
</tbody>
</table>
London: Harris Rebar (rebar)
Maidstone: Harris Rebar (rebar)
Ottawa: Harris Rebar (rebar)
Sarnia: Harris Rebar (rebar)
Stoney Creek: Harris Rebar (rebar)
Stoney Creek: Harris Steel Group (corporate headquarters)
Thunder Bay: Harris Rebar (rebar)

Quebec
Point Aux Trembles: Fisher & Ludlow (bar and safety grating, expanded metals products)
St. Bruno: Skyline Steel (sales)

Saskatchewan
Regina: Harris Rebar (rebar)
Saskatoon: Harris Rebar (rebar)

MEXICO
Nuevo Leon
Apodaca: Nucor ATP Mexico-Monterrey (cold drawn rounds, hexagons, squares, special sections)
Garcia Garza: Nucor Mexico (sales)

The David J. Joseph Co. (A Nucor Subsidiary)
The David J. Joseph Co. is a scrap subsidiary of Nucor Corporation with numerous locations in the following states: Alabama, Arizona, Colorado, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Missouri, Nebraska, Nevada, New Mexico, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Washington and Wisconsin.

North American Production: 27 million tons

SSAB AMERICAS
North American Locations
Headquarters: Lisle, IL

UNITED STATES
Alabama
Mobile: Plate, quench and temper plate, normalized plate and coil

Iowa
Montpelier: Plate, slit coil and coil

Minnesota
Roseville: Cut-to-length sheet and plate

Texas
Houston: Cut-to-length sheet and plate

CANADA
Ontario
Scarborough: Temper leveled cut-to-length sheet and plate

North American Production: 2.5 million tons

STELCO INC.
North American Locations
Headquarters: Hamilton, Ontario, Canada

CANADA
Ontario
Hamilton: Coke making, cold rolled sheet, galvanized and galvannealed sheet
Nanticoke: Coke making, steelmaking, hot rolled sheet

North American Production: 2.8 million tons

TENARIS
North American Locations
Headquarters: Houston, TX

MEXICO
Tabasco
Comalcalco: Threading facilities

Tenaris Tamsa
Veracruz: Seamless steel tubes, research and development center, threading facility

UNITED STATES
Arkansas
Blytheville: Maverick Tube Corporation (welded steel tubes)

California
Bakersfield: Hydril Company (threading facility)
**Louisiana**
Westwego: Hydril Company (threading facility)

**Texas**
Bay City: Tenaris Bay City (seamless steel tubes)
Conroe: Maverick Tube Corporation (welded steel tubes)
Downhole Center/Houston: Tenaris Coiled Tubes, LLC (coiled tubes facility)
McCarty/Houston: Hydril Company (threading facility)
Subsea Center/Houston: Tenaris Coiled Tubes, LLC (coiled tubes facility)

**CANADA**
Ontario
Sault Ste. Marie: Algomatubes Inc. (seamless steel tubes)
Alberta
Calgary: Prudential Steel Ltd. (welded steel tubes)
Nisku: Hydril Canadian Company Ltd. (threading facility)

**North American Production:** 1.2 million tons

**TERNIUM**

**North American Locations**
**Headquarters:** Monterrey, Mexico

**MEXICO**
Coahuila
Monclova: Galvanized and color coated steel sheets
Nuevo León
Apodaca: Rebars, roll-formed, billets
Monterrey: HRC, CRC
Pescueña: CRC and galvanized coils, high-end steel products
San Nicolás de los Garza: HRC, CRC, profiles and tubes, panels, galvanized and color coated coils, roll-formed

**Puebla**
Colima Alzada: Iron ore pellets
Puebla: Rebar, wire rod, round bar

**Product Distribution Centers**

**Baja California**
Tijuana

**Chiapas**
Tuxtla Gutierrez

**Chihuahua**
Chihuahua

**Estado de México**
Tultitlán

**Jalisco**
Guadalajara

**Product Service Centers**

**Nuevo León**
Apoacha
Ciénega de Flores
San Nicolás de los Garza

**San Luis Potosi**
San Luis Potosi

**UNITED STATES**

**Louisiana**
Shreveport: Galvanized, color coated sheets
Houston: Distribution, administrative

**North American Production:** 7.3 million tons

**TIMKENSTEEL CORPORATION**

**North American Locations**
**Headquarters:** Canton, OH

**UNITED STATES**

**North Carolina**
Columbus: Tryon Peak (value-added processes)

**Ohio**
Akron: City Scrap and Salvage (scrap metal for steelmaking operations)
Canton: Faircrest Steel Plant (specialty alloy steel bars, billets)
Canton: Gambrinus Steel Plant (seamless mechanical tubing, thermal treatment)
Canton: Harrison Steel Plant (specialty alloy steel bars)
Eaton: St. Clair Plant (specialty steel components)

Texas
Houston: TimkenSteel Material Services (value-added processes)

North American Production: 1.2 million tons

UNITED STATES STEEL CORPORATION

North American Locations
Headquarters: Pittsburgh, PA

UNITED STATES
Alabama
Fairfield: Rounds, slabs, seamless tubular mill, sheet finishing

Arkansas
Pine Bluff: Tubular couplings

California
Pittsburg: JV USS-POSCO Industries (sheets and tin mill)

Illinois
Granite City: Sheets, slab

Indiana
East Chicago: Tin mill
Gary: Slabs, tin mill, sheets, strip mill plate
Portage: JV Chrome Deposit Corporation (processing, administrative)
Portage: Sheets and tin mill

Michigan
Canton: JV Worthington Specialty Processing (steel processing)
Dearborn: Electro-galvanized sheets
Ecorse and River Rouge: Slabs and sheets
Jackson: JV Worthington Specialty Processing (steel processing)
Taylor: JV Worthington Specialty Processing (steel processing)
Troy: Research, development and sales center

Minnesota
Hibbing: Hibbing Taconite Company (iron ore pellets, ownership interest)
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 (coated sheet and value-add sheet)
Lorain: Seamless tubular

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

Texas
Houston: Tubular couplings, processing, threading, inspection and storage service and research, development and sales center
Hughes Springs: Tubular couplings
Lone Star: Welded tubular
Midland: JV Patriot Premium Threading Services (tubular finishing)

CANADA
Alberta
Calgary: U. S. Steel Tubular Products, Canada Sales Office

MEXICO
Coahuila
Ramos Arizpe: JV Acero Prime (processing, warehousing)

Mexico State
Toluca: JV Acero Prime (processing, warehousing)

San Luis Potosi
San Luis Potosi: JV Acero Prime (processing, warehousing)

North American Production: 22.0 million tons
AISI Producer Members