About AISI

-Serves as the voice of the North American steel industry in the areas of public policy, trade, market development and technology innovation.

-19 member companies, both integrated and electric furnace steelmakers, who represent 75% of steel in North America.

- U.S. steel industry operates more than 100 steelmaking and production facilities, producing 87 million tons in steel shipments valued at $75 billion in 2014.

- U.S. steel industry directly employs about 142,000 people.

- U.S. steel industry, directly or indirectly, supports almost 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 an average of 1.9 man-hours per finished ton of steel in 2015.
Meet SMDI

Investor Companies

- AKSteel
- ArcelorMittal
- NUCOR
- SSAB

Partner Alliances

- Auto/Steel Partnership
- Metal Building Manufacturers Association
- Cool Metal Roofing
- Steel Framing Alliance™
- Short Span Steel Bridge Alliance™
- CFSEI Cold-Formed Steel Engineers Institute
- METAL Initiative
- Canned Food Alliance

www.Recycle-Steel.org
Meet SMDI Sustainability Group

Mark A. Thimons
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Manager, Life Cycle Assessment

David Keeling
Director, Recycling
Steel Recycling Institute
The Steel Recycling Institute is an industry association with the mission of promoting and sustaining steel recycling. It is the primary information and technical resource for entities interested in steel recycling and the use of steel in sustainable construction.

The SRI also serves as the clearinghouse for life cycle assessment data for the North American Steel Industry. The SRI documents the environmental performance of steel products through life cycle assessment (LCA) studies and environmental product declarations (EPDs).

Since 1990, the industry has reduced energy intensity by 31 percent and CO2 emissions by 36 percent per ton of steel shipped. Through recycling, the steel industry saves the energy needed to power 20 million homes for one year.
GARY, Ind. (AP) — Steel production in Indiana rose by 5 percent last year as the state continued to lead the nation in steel making.

The American Iron and Steel Institute says Indiana was the top steel-producing state for the 42nd straight year during 2016. The group says Indiana accounted for 27 percent of the U.S.-made steel last year.

The (Northwest Indiana) Times reports (http://bit.ly/2qKcXiR) the state has more than 20,000 steelworkers, with most of the production coming from the large mills that ring the south shore of Lake Michigan. Those facilities include U.S. Steel's Gary Works and ArcelorMittal's mills in East Chicago and Burns Harbor.
Why recycle Steel?

Economics - saves money - substitution cost
Environment - conserves resources

Energy: 5450 BTU saved per lb. Of steel

Saves per ton of steel
Coal - 1,400 lbs
Iron ore - 2,500 lbs
Limestone - 120 lbs

Saves landfill space
1 cubic yard whole steel cans = 150 lbs
1 cubic yard flattened steel cans = 850 lbs
A Partnership in Steel Making

Two Production Methods:

**BOF or Integrated Mill**
- About 40% of overall U.S. production
- Uses coke to convert Iron ore to Pig iron
- Typically 65-75% molten iron
  and 25-35% scrap

**EAF or Mini Mill**
- About 60% of U.S. production
- Uses primarily scrap and direct-reduced iron (DRI)
- Typically 0-25% iron and 75-100% scrap
Millions of tons recycled per year

- **Plastics** (EPA Characterization MSW 2010)
- **Glass** (EPA Characterization MSW 2010)
- **Aluminum** (Earth911 Article 2011)
- **Paper** (AF&PA website 2010)
- **Steel** (SRI 2013)
WEEKLY TONNAGE OF RAW STEEL PRODUCTION

(Thousands of net tons)

WEEK ENDED: JUNE 3, 2017

2015  2016  2017

1,975
1,920
1,865
1,810
1,755
1,700
1,645
1,590
1,535
1,480
1,425


1,749

SOURCE: COMPILED BY AMM USING DATA FROM AMERICAN IRON AND STEEL INSTITUTE.
World Steel Market

- World Production = 1,621,000,000 metric tons
- Chinese Production = 825,000,000 metric tons
- US Production = 79,000,000 metric tons

Arcelor Mittal #1 in world
Nucor #14 in world
US Steel #24 in world

China- 825 million metric tonnes
Japan- 105 million metric tonnes
India- 89 million metric tonnes
USA- 79 million metric tonnes
2015 Steel Recycling Rates

**Overall** Steel Recycling Rate: 76%
(64.5 million tons recycled)

**Automobile** Steel Recycling Rate: 87%
(14.3 million tons recycled)

**Appliance** Steel Recycling Rate: 88%
(2.7 million tons recycled)

**Container** Steel Recycling Rate: 71%
(1.3 million tons recycled)

**Construction Structural** Steel Rate: 98%
**Construction Reinforcement Bar** Steel Rate: 71%
(Both from C&D Industry Survey)
Steel cans in the marketplace

Steel food cans make up 90% of the steel can marketplace.

Steel Aerosol cans are 7% of the steel can marketplace.

Steel paint cans are 3% of steel cans in the marketplace.
Evolution or Devolution

StarKist Chunk Light Tuna in Water

StarKist Pouch Tuna in pouch

Del Monte: Green Beans, Whole Kernel Corn, Sweet Corn Cream Style

Canned Vegetables
Steel Food Can Facts

Did You Know?

Food that is canned is food that isn’t wasted, helping to offset the 34 million tons of food wasted in the United States.

Recycling 1 ton of steel cans conserves 2,500 lbs of iron ore, 1,400 lbs of coal, and 120 lbs of limestone.

Canned food is picked at the peak of ripeness & immediately canned, locking in its flavor & nutrition.

1810 - Year the steel can was invented to feed Napoleon’s army.

Steel cans are 100% recyclable over & over again, forever.

1810 - Year the steel can was invented to feed Napoleon’s army.

80% - 90% of all steel ever produced is still in use today.

Looking trim cans today weigh 33% less than 25 years ago.

The recycling rate of steel cans is 71%.

Annual cost to Americans from foodborne illness: $7.77 billion.

Cans make food safer with 100% contamination protection.

For more information visit: cancentral.com
Over 5900 programs collect empty aerosols in their steel can mix

72 OF TOP 100 CURBSIDE PROGRAMS INCLUDE EMPTY STEEL AEROSOL CANS

According to a recent SPC study, over 70% of Americans have access to programs which include empty aerosol cans.

Please recycle when empty
Paint Cans: Empty with Dry Skin!

Approximately 4800 programs include empty steel paint cans

Steel paint cans still have 55% of paint container market
2010 Light Vehicle Content Material Content

- Flat Rolled Steel: 1628, 42%
- Other Steel: 330, 8.6%
- Aluminum: 838, 21.9%
- Iron: 604, 15.6%
- Copper: 305, 7.9%
- Other Metals: 103, 3%
- All other Materials: 55, 1%

Total of 3,863 pounds, 58% steel
A typical appliance is produced using about 65 percent steel which is the primary reason nearly 90 percent of discarded appliances are recycled each year.

The steel content drives the recycling of appliances!
American Metal Market

AMM WEEKLY SHREDDED SCRAP PRICE COMPOSITE
(price per gross ton)

UPDATE: JUNE 9, 2017

2017  2016  2015

$292.20

BASIS ON MARKETS IN ALABAMA, PITTSBURGH, CHICAGO, AND PHILADELPHIA. EFFECTIVE MARCH 1, 2014, AMM'S WEEKLY COMPOSITE PRICE FOR SHREDDED SCRAP NO LONGER INCLUDES BIRMINGHAM AND HOUSTON. THE NEW COMPOSITE PRICE INCLUDES CONSUMER BUYING PRICES FOR THESE CITIES: ALABAMA, CHICAGO, PITTSBURGH AND PHILADELPHIA. SOURCE: AMM.
Structural recycling rate steady for last 10 years!
AMM WEEKLY NO. 1 HEAVY MELT PRICE COMPOSITE

(price per gross ton)

UPDATED: JUNE 9, 2017

2017 • 2016 • 2015

$264.67

Jan. • Feb. • Mar. • Apr. • May • Jun. • Jul. • Aug. • Sep. • Oct. • Nov. • Dec.

BASIS ON NO. 1 HEAVY MELTING STEEL AT PITTSBURGH, CHICAGO AND PHILADELPHIA.

SOURCE: AMM.
• Ultra light Steel Auto Body

• Steel Bridges

• Steel Utility Poles

• Residential Steel Framing
Willis Tower, Chicago, IL

Then (1972)
- Sears Tower
- 76,000 tons of steel
- 20% recycled content (est)

Now (2013)
- Willis Tower (second tallest in hemisphere)
- 60,000 tons of steel (strength)
- 90% recycled content (for structural steel)
- 43,000 automobiles
- 7,000 tons of steel cans from curbside-drop off
- 10,000 tons of industrial scrap
- 876,000 fewer man-hours
- 58% smaller carbon footprint
- 74% less embodied energy
Aluminum and Copper have seen recent uptick
Aluminum production moving elsewhere

World Primary Aluminum Production

- ROW Estimated Unreported
- China Estimated Unreported
- China
- Gulf Cooperation Council
- Oceania
- East & Central Europe
- West Europe
- Asia (ex China)
- South America
- North America
- Africa
Ferrous Scrap Dealers

Years of steel recycling experience

Convenient locations

Container and transportation capabilities

Complete processing equipment

Strong relationships with end markets

Look for additional consolidation/vertical integration
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Twitter: @EnviroMetal  
Facebook: www.facebook.com/EnviroMetal  
YouTube: www.youtube.com/EnviroMetal