

NORTH AMERICAN STEEL INDUSTRY LEADING INNOVATION AND ENVIRONMENTAL SUSTAINABILITY

Steel is an essential, irreplaceable material for modern society and the transition to a more sustainable future. The steel industry continues to lead in revolutionary developments of new steel grades for our customers in the automotive, construction, machinery, packaging, and energy sectors. Our industry is facilitating advances in sustainable building construction and energy transmission and development, among other successes. With more than 3,500 steel grades available, approximately 75% of modern steels have been developed in the past 20 years. These products can help reduce energy consumption and greenhouse gas (GHG) emissions throughout the economy.

In North America, the steel industry leads the world in reducing energy use and GHG emissions in our steelmaking processes. AISI member companies have reduced their energy intensity per ton of production by 35 percent since 1990 and our GHG emissions intensity by 37 percent over the same time period. In addition to this world leading environmental performance, the steel products we create demonstrate superior sustainability performance that minimizes environmental impact.

Steel's superior sustainability performance minimizes environmental impact when measured throughout its life cycle of material production, useful life, and end-of-life. A key example is in the automotive market, where innovation is essential to meet higher government fuel efficiency and GHG requirements. To help our automaker customers meet these standards, the steel industry has developed advanced materials and manufacturing technologies that have led to the introduction of new advanced high-strength steel (AHSS) grades – the fastest growing material in automotive manufacturing. Today's steel grades are as much as six times stronger than those a decade ago, and three to four times stronger than the latest aluminum alloys on the market.

The added strength of AHSS allows automakers to continue to deliver vital performance and safety benefits with lightweight products, while lessening their overall environmental and climate impact. An AISI peer-reviewed study demonstrates that the use of advanced high-strength steel (AHSS) for automotive lightweighting results in an immediate and sustained decrease in greenhouse gas (GHG) emissions, whereas the use of aluminum instead of AHSS for lightweighting the same vehicle fleet results in a comparative dramatic increase in GHG emissions lasting for several decades.

Steel products are 100 percent recyclable and each year, more steel is recycled than paper, plastic, aluminum and glass combined. The American steel industry recycles three-quarters of the steel coming from the packaging market, nearly 100 percent of the



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automobiles at end of life, and more than 90 percent of steel from infrastructure, appliances and construction products. In doing so, the industry conserves energy, reduces emissions, and more efficiently uses raw materials and natural resources.

The U.S. is recognized as the most energy efficient of any major steel producing country, according to the U.S. Department of Energy. At the same time, AISI members are committed to a suite of research projects designed to develop new technologies to decarbonize steelmaking while conserving energy. We are also partnering with national labs and universities to achieve continued innovations that enable the steel industry to realize the next-generation steel plant of the future.