STEEL & SUSTAINABILITY 2021

LIFE
IS MADE
OF STEEL

BRAZIL
STEEL INSTITUTE

Brazil Steel Institute

Formed in 1963, the objectives of the Brazil Steel Institute are to increase the competitiveness of the Brazilian steel market and carry out a variety of activities, such as studies, research, and representation in both the public and private sphere. The Institute has since maintained a commitment to sustainable development and the demands of society, which is reflected in sustainable actions based on economic, social, and environmental pillars.

Associated Companies

AÇO VERDE DO BRASIL - AVB

APERAM SOUTH AMERICA

ARCELORMITTAL AÇOS LONGOS

ARCELORMITTAL TUBARÃO

COMPANHIA SIDERÚRGICA DO PECÉM - CSP

GERDAU AÇOMINAS S.A.

GERDAU S.A.

GERDAU AÇOS LONGOS S.A.

SIDERÚRGICA NORTE BRASIL S.A. - SINOBRAS

TERNIUM BRASIL

USIMINAS

VALLOUREC SOLUÇÕES TUBULARES DO BRASIL S.A.

VILLARES METALS S.A.

The Brazilian Steel Industry | 2020

31 STEEL MILLS

Steel Producer Sites:
15 integrated parks and 16 semi-integrated parks administered by 12 groups.

104.4 billions

Net Revenue:
R$ 104.4 billions

19.7 billions

Taxes Paid:
R$ 19.7 billions

51.0 millions

Installed Capacity:
51.0 millions t/year of crude steel at the end of 2020

9th RANKED PRODUCER

9th Ranked producer in Global Ranking
Production (t of crude steel):
Brazil = 31.4 million tonnes
World = 1,877.3 million tonnes
1.7% (Brazil/World)
Latin America = 56.0 million tonnes
56.1% (Brazil/Latin America)

103 thousand

Collaborators:
Current company workforce: 64,569 Collaborators
Subcontractors: 38,739

64.6 billions

Investment:
R$ 64.6 billions in investments between 2008 and 2020

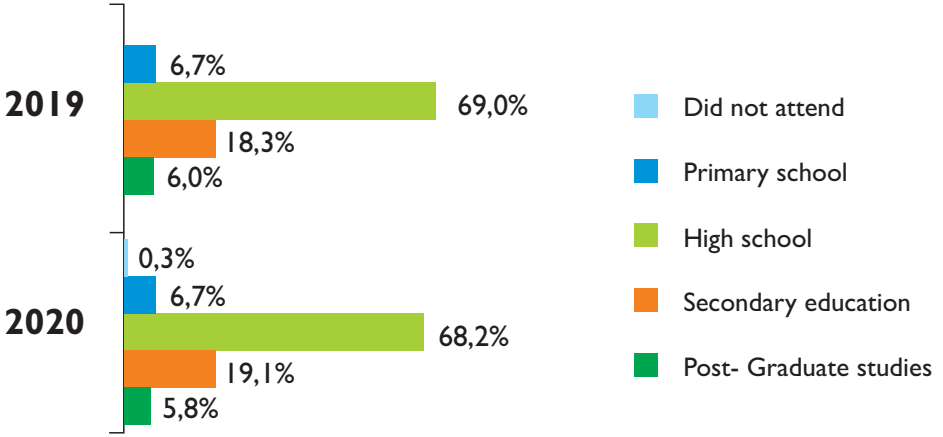
COLLABORATORS

In line with best practices for sustainability in business management, the sector also maintains development programs focused on keeping competencies up-to-date and retaining talent.

Number of Collaborators / Specification	2020
Total company collaborators	64,569
Subcontractors	38,739
Total collaborators	**103,308**

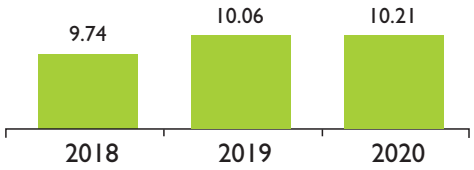
Note: Market data.
Source: Brazil Steel Institute

CURRENT COMPANY COLLABORATORS BY EDUCATION LEVEL



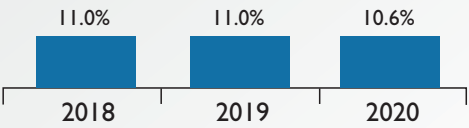
Note: Total numbers for companies associated with Brazil Steel Institute for the years shown.
Source: Brazil Steel Institute

AVERAGE TIME SPENT AT COMPANY (YEARS)*



* Estimate calculated using weighted average for the central point of each range, taking the lowest point of the highest range into consideration.

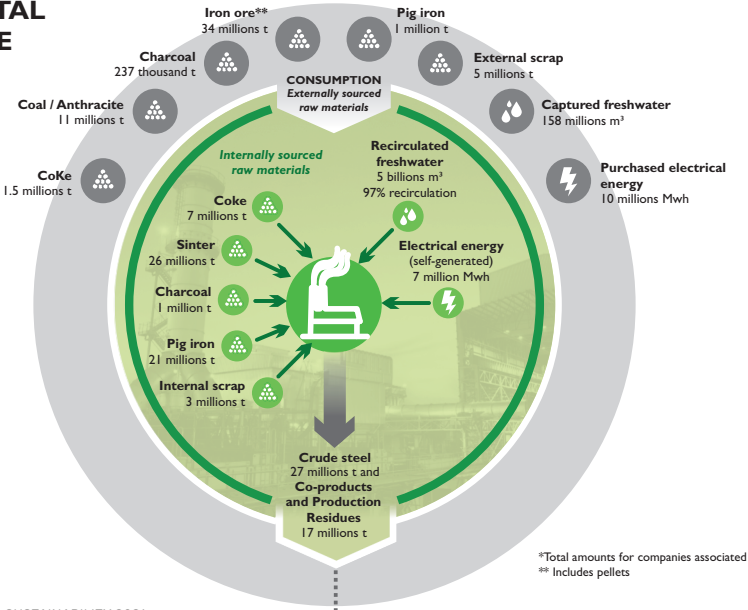
TURNOVER RATE



Note: Total amounts for companies associated with Brazil Steel Institute for the years shown.
Source: Brazil Steel Institute

ENVIRONMENTAL PERFORMANCE IN 2020

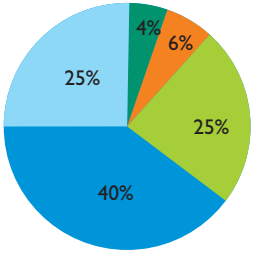
FLOW OF MATERIALS ENTRY AND EXIT*



*Total amounts for companies associated with Brazil Steel Institute in 2020.
** Includes pellets

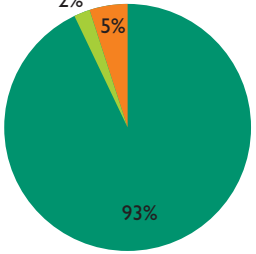
Source: Brazil Steel Institute

GENERATION OF CO-PRODUCTS AND WASTE BY TYPE (2020)



Sludge
Aggregated Steel Mill Production
Others
Dust and Fines
Aggregated Steel Production Using Blast Furnace

DISPOSAL OF COPRODUCTS AND WASTE (2020)



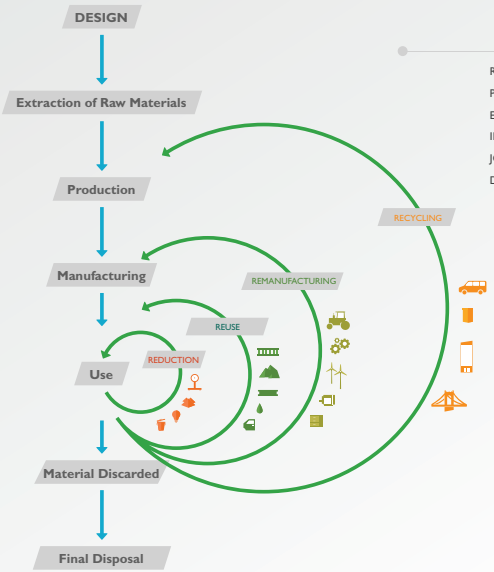
Reuse
Inventory
Final Disposal

*Total amounts for companies associated with Brazil Steel Institute in 2020.

Source: Brazil Steel Institute

STEEL AND THE CIRCULAR ECONOMY

Recently, a new concept has emerged with a significant impact on the steel industry's agenda: the circular economy. Inherently regenerative and restorative, the concept of a circular economy aims to eliminate waste by keeping materials in use for as long as possible, thereby providing society with economic, social, and environmental benefits.



LINEAR ECONOMY X CIRCULAR ECONOMY

REDUCTION

Reduction in amount of raw materials and electricity used in product and product weight reduction. In 2020, 51% of the consumption of electrical energy in steelworks was self-generated.

REUSE

Reuse of materials or products classified as durables and extension in use of product post-consumption while maintaining the same function that it previously performed.

RECYCLING

Steel is the world's most recyclable material. It can be continuously recycled without a reduction in quality. 8 million tons of steel scrap were recycled in 2020.

REMANUFACTURING

Remanufacturing transforms used and/or defective products into new products with a new life cycle.

Source: Brazil Steel Institute

CLIMATE CHANGE

The companies associated with the Brazil Steel Institute are working to reduce their carbon footprint in relation to steel production.

The table below presents specific averages for CO_2 emissions made by the Brazilian and global steel industries.The data shows that specific emissions for Brazilian steel plants is equivalent to 1.7 t CO_2/t of crude steel, which is below the global average. It is important to highlight that the global emissions average corresponds to 59% of the world's crude steel production, which tends to lead to underreporting of specific GHG emissions.The methodology used for the purposes of comparison was "CO_2 Data Collection" from Worldsteel (inspired by the GHG Protocol).

These results show significant advances in the sector with regards to energy efficiency, reducing the specific consumption of raw materials, reuse of gases, and process wastes.

GHG Emissions	2020
Absolute emissions – Brazil (10^3 t CO_2)*	47,013
Co_2 intensity – Brazil (t CO_2/t crude steel)*	1.7
Co_2 intensity – World (t CO_2/t crude steel)**	1.8

Notes:
(*) Data from 10 associated business groups responsible for 85% of total national steel production

(**) Data from 2019 corresponding to 59% of total global crude steel production.

Source: Brazil Steel Institute

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