



SUSTAINABILITY  
REPORT  
2021







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A modern building with a grid of large glass windows. In the foreground, a dark blue signpost stands on a lawn with lavender plants. The signpost has a horizontal bar at the top with the ALFA ACCIAI logo and name, and a vertical bar below with the website address and a chevron symbol. The building's windows reflect the sky and surrounding landscape.

 **ALFA ACCIAI**



[www.alfaacciai.it](http://www.alfaacciai.it)

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## Letter to stakeholders

GRI 102-14

In 2021 the Alfa Acciai Group decided to make its commitment to environmental and social matters public by producing its first Sustainability Report. It is our heartfelt desire to engage with our stakeholders transparently in relation to the strategies and actions implemented to pursue and achieve recognised levels of quality, reliability, competitiveness, respect for the environment and high standards of employee health and safety.

We have illustrated how sustainability is at the core of our corporate vision and culture, including and especially because **a circular economy approach is part of electric steelmaking's DNA**, where the production cycle is based on recovering used steel (scrap) and transforming it into new products with the same qualities. This characteristic enables us to significantly contribute to **goal 12 of the UN's 2030 Agenda**, targeting sustainable management and the efficient use of natural resources. Not only are our products made of **at least 99% recycled material**, we are continually working to recover and capitalise on all waste produced by passing it on to other circular economies.

Therefore, by including the interpretation of the UN's 2030 Sustainable Development Goals in the second Sustainability Report, we find that our day-to-day action in preventing pollution and safeguarding the environment contributes to **Goal 6** on the efficient use of water, of considerable importance given the level of drought around the world, and to **Goal 13** on tackling climate change by mitigating emissions. Furthermore, as part of an energy-intensive business we are obviously involved in achieving **Goal 7** to improve energy efficiency. Indeed, for some time the Group has been implementing a vast decarbonisation and green transition process, which must include the creation of new infrastructure (**Goal 9**) and cooperation with the wider community to achieve more sustainable towns and cities (**Goal 11**).

Alongside a focus on environmental issues, the fundamental **pillars underpinning company strategy** include satisfaction of customers in favour of which an intensive Stakeholder Engagement initiative was established throughout the year, and the health and safety of all collaborators and contractors. The decisive element in our action plan to pursue this strategy is the tireless, focused research, evaluation and implementation of the **best sustainable techniques available**, in terms of technological and procedural options designed to continually improve the numerous production unit KPIs which, as illustrated, contribute to achieving the aforementioned UN 2030 goals.

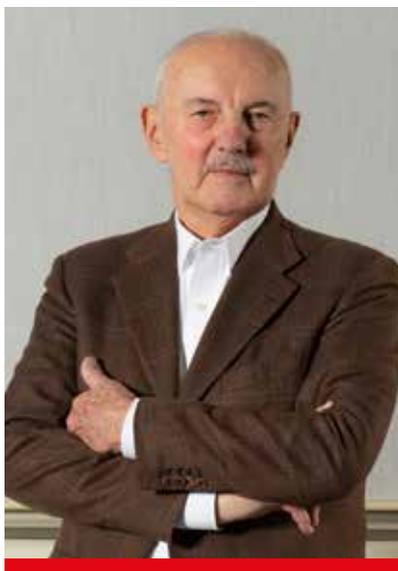
We mustn't forget that steel manufacture is a capital-intensive and hard-to-abate industry, but we realise that this historic phase requires major engineering decisions that are the result of research and innovation, to achieve significant reductions in the use of energy from fossil fuels. For this very reason, some time ago the Alfa Acciai group initiated an in-depth examination of the impact of such innovation in relation to various aspects, not least safety. Realising how important we are to the area in terms of its economy, employment opportunities and value chain, we are committed to addressing environmental issues in the coming years, by continuing to invest in the green transition to significantly reduce energy consumption and to increase the amount of electricity produced from renewable sources.

While these important research and development activities with key strategic partners will be fruitful in the coming years, the 2021 results illustrated below **show excellent economic performance and considerable stability in the various environmental and social indicators relating to the GRI standards**, compared with pre-pandemic figures. Even though the Covid-19 pandemic has not been completely eradicated, the situation has been one of significant production recovery, with it being higher than in 2019. Complicating the picture are the incredible peaks reached by energy prices in the last quarter, the action of various foreign operators who have plundered national scrap stocks, despite it being a raw material that is notoriously scarce in Italy and ultimately defined as strategic, and last but not least, the delay in the National Recovery & Resilience Plan having any effect in the construction industry, our main target market.

In these times of ongoing uncertainty, further compounded by the war in Ukraine in 2022, the search for maximum efficiency and competitiveness continues to be our guiding principle. Our unstinting commitment to sustainability, targeting coexistence between the company, the environment and the community, is demonstrated first and foremost through our figures showing financial stability, reassuring IT governance, emission levels covered through the ETS allowances assigned, continuous monitoring and the work of the Alfa Acciai Observatory, not to mention an increasing number of new hires and limited staff turnover, low number of accidents in the workplace, and the quality of our products which ensures that we have a major presence on the markets.

Buoyed by having laid solid foundations for tackling the demanding challenges in our industry, we hope you find that the report makes interesting reading.

Ettore Lonati  
*Chairman*



Amato Stabiumi  
*Chief Executive Officer*



# Explanatory Notes

GRI 102-1; 102-45; 102-46; 102-49; 102-50; 102-51; 102-52; 102-53; 102-54

This document is the Alfa Acciai Group's second sustainability report, and it has been produced to inform all internal and external stakeholders of the Group's achievements over the last few years in relation to sustainability and to outline future targets to be pursued.

**For the communication purposes of this document, the Alfa Acciai Group includes the parent company Alfa Acciai S.p.A. and its operating subsidiaries Alfa Derivati S.r.l., Acciaierie di Sicilia S.p.A., Tecnofil S.p.A. and Ferro Berica S.r.l. (hereinafter Ferroberica), with the exclusion of non-operating companies as they work in the real estate business.**

The information and figures provided in this report relate to financial years 2019, 2020 and 2021 (01 January - 31 December).

The Sustainability Report was prepared in line with the GRI Standards published in 2016 by the Global Reporting Initiative (GRI) as per the Core option. With regard to Occupational Health and Safety (GRI 403), Tax (GRI 207) and Waste (GRI 306), the 2018, 2019 and 2020 versions were adopted. When preparing the document, the principles of materiality, inclusiveness, sustainability context, completeness, accuracy, balance, clarity, comparability, reliability and timeliness were applied.

For a list of the reported GRI indicators, with relevant sections and reference pages, please refer to the **GRI Content Index** at the end of this document.

In order to ensure data reliability and an accurate representation of performance, the use of estimates was limited as much as possible, and where this was necessary, they were calculated on the basis of the best available methods and reported in detail.

## **Alfa Acciai and the 2030 Sustainable Development Goals**

During this second year of reporting, the Alfa Acciai Group engaged in identifying the Sustainable Development Goals of the United Nations 2030 Agenda to the achievement of which it can help.

The agenda is an action programme consisting of 17 Sustainable Development Goals, SDGs, signed on 25 September 2015 by the governments of the 193 Member Countries of the United Nations and approved by the United Nations General Assembly. These 17 Sustainable Development Goals are part of a broader programme of action consisting of 169 goals and related targets to be achieved in the environmental, economic, social and institutional spheres by 2030. Therefore, in the course of writing this document, the Alfa Acciai Group has identified specific initiatives related to certain Targets and Objectives, to the achievement of which it makes a contribution.

For further clarification or information on the contents of this document, you can send an e-mail to the following address: [infobds@alfaacciai.it](mailto:infobds@alfaacciai.it).

# Highlights

GRI 102-7

	U.M.	2021	2020	2019
Total number of employees	No.	<b>1,207</b>	1,168	1,140
Total hires	No.	<b>158</b>	108	226
Total operating sites	No.	<b>12</b>	12	10
Net revenues from sales and services	€	<b>1,256,394,782</b>	698,617,504	829,075,025
Economic value distributed	€	<b>1,234,959,241</b>	694,798,421	816,152,463
Total capitalisation	€	<b>502,817,362</b>	431,843,889	415,963,987
<i>of which financial liabilities</i>	€	<b>155,985,186</b>	129,494,038	90,705,414
<i>of which shareholders' equity</i>	€	<b>346,832,176</b>	302,349,851	325,258,573
Net financial position	€	<b>(54,132,590)</b>	(5,419,755)	23,803,309
Total investments in intangible and tangible assets	€	<b>24,423,871</b>	26,322,286	27,392,290
Products sold	t	<b>1,661,149</b>	1,479,780	1,626,028
Scrap used	t	<b>2,062,479</b>	1,687,225	1,964,338
Recycled raw materials used	%	<b>95%</b>	95%	95%
Recovered waste	%	<b>63%</b>	59%	39%
Total energy consumed	GJ	<b>6,316,445</b>	5,373,915	6,103,151
Energy intensity	GJ/t	<b>2.67</b>	2.63	2.62





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# The Alfa Acciai Group's identity and profile

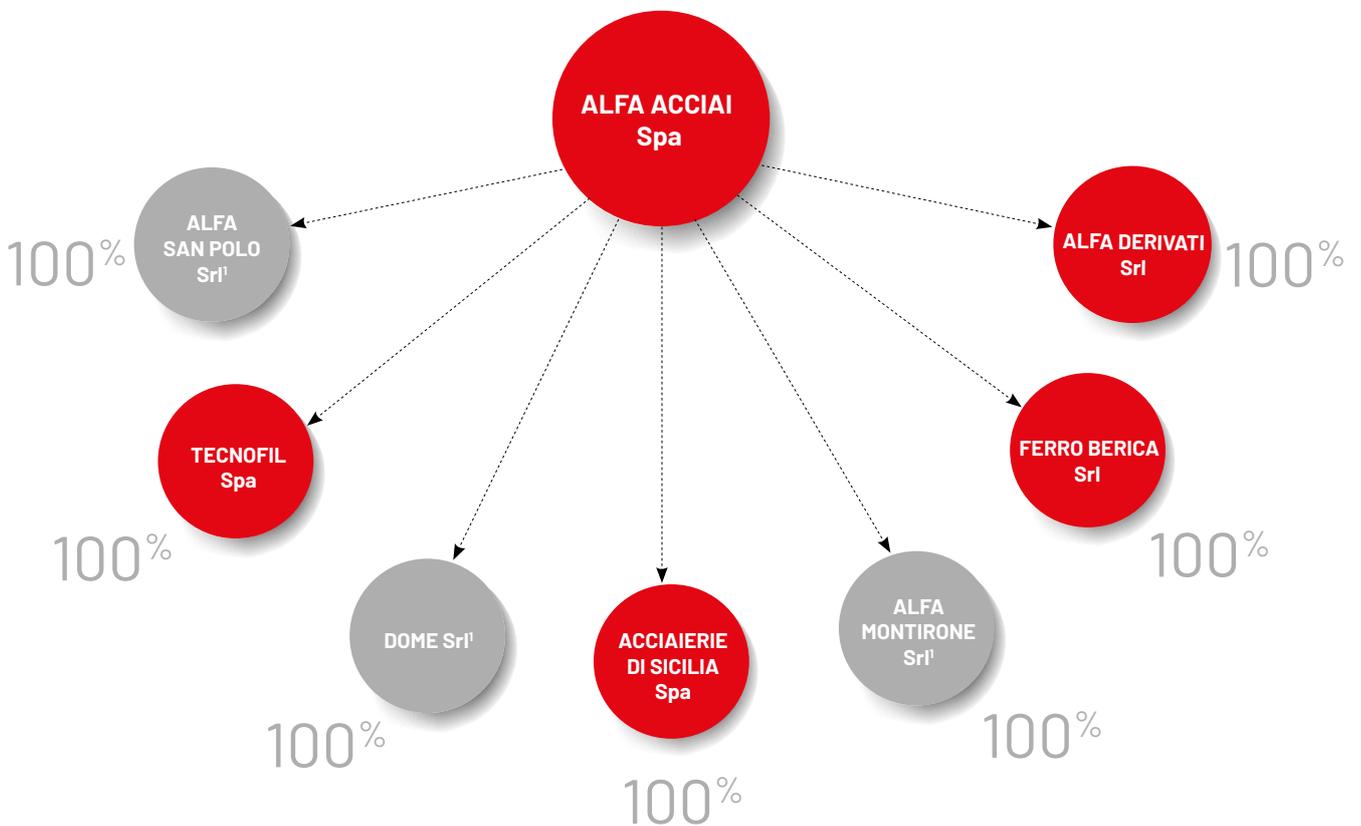
# 1 | The Alfa Acciai Group's identity and profile

GRI 102-5

The Alfa Acciai Group has been one of Europe's leading manufacturers of reinforcing steel and wire rod for almost 70 years, with an overall annual production capacity of 2.5 million tonnes, and has now become a benchmark in terms of cutting-edge technology and environmental awareness throughout the entire steel supply chain.

The Group, which is controlled by Siderurgica Investimenti, a holding belonging to Stabiumi and Lonati families, features high industrial flexibility and maximum operational efficiency upstream and downstream the melting process, alongside a sound financial position and assets. These characteristics

enable the Group to successfully respond to ongoing changes in the domestic and foreign steel markets and the increasing awareness of citizens regarding environmental issues, by keeping the same constant focus as Alfa Acciai has reserved to its employees and customers since the outset.



1) The companies on a red background are included in the scope of this report; those on a grey background are non-operating companies, which are not included in the reporting scope. For more details, please refer to the Explanatory Notes.

## Background

GRI 102-3

"**Acciaierie Laminatoi Fonderie Affini S.r.l.**", the original name from which the current acronym "ALFA" derives, started its activity in the mid-1950s, focusing entirely on steel production and rolling.

**Mitigation of the environmental impact of the plant**, through both the installation of state-of-the-art EAF emission filtering plant systems and also sound-proofing of the main production processes.

Alfa Acciai takes over Vicenza-based **Ferrobérica**, thus enabling the company to upgrade all its cold processes, including the pre-shaping and assembling of reinforcing steel, sectors in which it is now the largest player in Italy and second in Europe.

In agreement with the Brescia Town Council, Alfa Acciai develops the "Alfa 2000" plan **to mitigate the environmental impact of the plant on the surroundings**.

Alfa Acciai takes over in Brescia the industrial site of **Montirone** and **Tecnofil**, one of the major drawing mills with galvanising plant in Europe, and soon rationalized the wire types (galvanized, alu-zinc and bright wire).

Publication of the first **Sustainability Report**.

1955

1970

1984

1986

1991

1998

2000

2004

2016

2020

2021

Plant changeover to **continuous casting** and heavy investment in new technology upgrading allow the company to step up production capacity in both departments: steel mill and rolling mill.

The **Downstream Production Unit** comes into being for the production of welded mesh and drawn wire.

Alfa Acciai takes over Catania-based **Acciaierie di Sicilia**, the only steel mill on the island, for the production of rebar and spooled coils.

Inauguration of the **third rolling mill** to add reinforcing steel in spooled coils, and celebration of the 50th year of activity.

Increasingly focusing on key **sustainability** topics, Alfa Acciai has recently worked in partnership with A2A, Italy's major multiutility, an innovative and efficient system for **recovering thermal energy from the steel mill**.

## Business activity and production sites

GRI 102-2; GRI 102-4

The Alfa Acciai Group comprises several well-established companies specialised in various steel-making areas in Northern and Southern Italy, a guarantee of products and services qualifying the Group as an excellent business partner in terms of quality and reliability.

The Group is currently made up as follows:



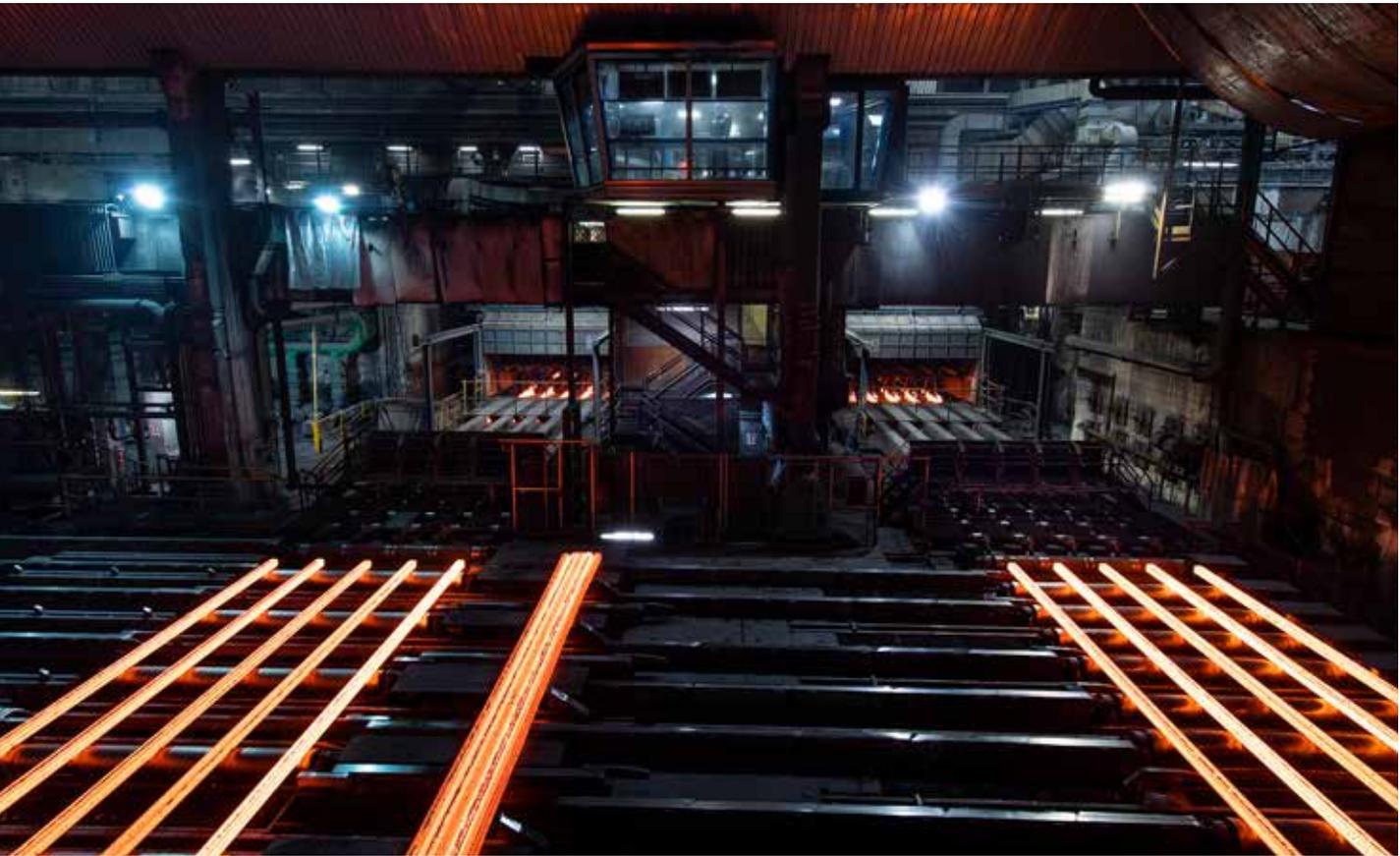
Driven by the need for connection to the high-voltage electricity grid, in the 1950s, the company identified the area of over 353,000 square metres, where to build the production premises to the south-east of the municipality of Brescia, which lies between the subsequently developed residential areas and major road infrastructures.

Within the industrial complex, the steel mill occupies the largest part of the plant, as steel production "starts" in the

scrap yard area, where part of the scrap can be fed into the shredder, and extends through the entire production unit to the delivery platform for billets to be conveyed to the rolling mills.

More specifically, the plant comprises two electric-arc furnaces (EAFs) and two ladle furnaces (LFs), representing the steel mill's true core process, from which two billet production lines depart to feed two five-strand





continuous casting machines, the operating parameters of which are controlled by a complex fully automated system.

The steel mill turns out a range of square billets, which are the semi-finished products used in the three hot-rolling departments for the production of rebar and spooled coils for reinforced concrete under the ALFA ACCIAI brand, and wire rod.

The Hot Rolling Division is equipped with three independent mills with a total production capacity of up to 2 million tonnes, and the products obtained meet the requirements of the numerous certifications that the target markets demand.



## Acciaierie di Sicilia

Located in the industrial district of Catania, Acciaieria di Sicilia is the only steel mill on the island. For the Group, it is a natural reference point for the southern Italian market and for exports to Mediterranean countries and beyond. Acciaierie di Sicilia has a production capacity of 500,000 tonnes of reinforcing steel in bar and spools under the ACCIAIERIE DI SICILIA brand, which is certified for various markets.

These products are the result of the electro-fusion of Sicilian ferrous scrap and subsequent hot rolling, which uses bar packaging devices arranged parallel to the spooling line.

Thanks to its size, the latest technology used and premium quality products, Acciaierie di Sicilia has created a supply chain employing hundreds of people and has established reliable relationships with customers who have contributed to establish today's Sicily.



Vincenzo Guadagnuolo  
General Manager



## Alfa Derivati

Alfa Derivati has two production sites, one within the parent's San Polo-based industrial site and the other more recently established in Montirone, to the south of Brescia. They produce, for and under Alfa Acciai's brand name, high-ductility welded mesh for reinforced concrete in a standard format and recoiled wire for the domestic and international markets.

The recoiling/stretching process uses latest generation high-output production lines, which optimise the mechanical characteristics of the wire being processed, while maintaining high ductility to obtain HD-products, a characteristic common to all Alfa Acciai Group's products for the construction industry.

In recent years, major investments at the Montirone site have also led to the restoration of the railway link, which contributes to increase Alfa Acciai and Alfa Derivati exports to Central Europe, thus bringing significant environmental benefits.



Filippo Piccioni Cavagnini  
General Manager



## FERROBERICA

Founded nearly 50 years ago, Ferroberica is the leader in Italy and second in Europe for the supply of cut and bent and assembled steel products to the main European construction enterprises. In view of increasing its market presence and offer a widespread service throughout Southern Europe, Ferroberica has its headquarters in Vicenza, where it has its registered office and a production plant and, over the years, it has opened other production units: in **Catania**, using rebar and coils produced by the subsidiary Acciaierie di Sicilia, in **Sedegliano** (Udine) and more recently in **Montirone** (Brescia), which boasts Europe's most technological and automated cutting and bending plant.

Having been an integral part of the Alfa Acciai Group for over 30 years, Ferroberica specializes in the processing of reinforcing steel and operates both at a national and international level, thanks to the know-how acquired and reliable supply chain and market competitiveness, making it a state-of-the-art production facility equipped with latest-generation machinery and with an annual output capacity of more than **300,000 tonnes**.

All Ferroberica's production centres and loyal subcontractors are located in strategic areas, close to industrial-production sites, either existing or in the process of rapid expansion,



Giorgio Binelle  
Chief Executive Officer

Andrea Biasi  
Technical-Sales Manager

adjacent to motorways which provide rapid coverage of all routes both by land and sea.

Constant focus on the quality of service and customer care, which is a distinctive feature of the company and the entire Alfa Acciai Group, has led Ferroberica, with its highly specialised technical staff, to create and offer enterprises a comprehensive advisory service for feasibility analysis during the design process and the definition of production plans and work schedules, as well as prompt response to urgent requirements or unexpected requests for changes.





Tecnofil was established in 1994 in Gottolengo (Brescia). Since its very beginning it has developed and strengthened its core business in the production of low and medium carbon wire and in the drawing and galvanising process, and is currently the drawing mill with the largest plant in Italy.

In 2016, Tecnofil joined the Alfa Acciai Group and has now become one of the major drawing mills in Europe for the production of steel wire, galvanized wire, alu-zinc wire, bright wire, annealed wire, redrawn wire and skin-passed wire for endless applications.

The close cooperation with the Alfa Acciai steel mill and rolling mill has significantly increased its overall production capacity and product range. The installation of a new 40-wire galvanising line, allows it to turn out more than **100,000 tonnes** of wire a year. The area dedicated to the production and processing of metal wire covers a surface area of 30,000 square metres and consists of dry drawing facilities, which have been designed and developed by Tecnofil itself, plus two immersion galvanising plants.



Gianluca Periccioli  
Chief Executive Officer



## Markets served

GRI 102-6

**As a result of the coordination and synergies created, the Alfa Acciai Group has strengthened its presence abroad and enlarged its product range: in addition to the construction industry, where it plays a leading role, it has made decisive moves into the world of bright wire for aesthetic applications, the automotive and household appliance industries, mechanical engineering and wire rod for a variety of applications.**

Our well-established and highly qualified sales network enables us to serve the whole of Europe, North Africa, North, Central and South America..

The main products marketed by Alfa Acciai and Acciaierie di Sicilia are: **wire rod, rebar, recoiled wire, spooled coils, welded mesh and billets.**



The sale of steel products is strictly regulated, so our products are subject to well-defined statistical process controls to ensure compliance with the required specifications. More specifically, the sale of reinforcing steel requires qualification from national bodies that carry out regular quarterly, six-monthly or annual audits (depending on the country). During the audits, checks are made on both the product and the quality management system. In terms of product target markets, the typical customers for wire rod are the wire drawing mills that use it to produce wire or strip for a variety of typical applications in the automotive and white goods industries, mechanical engineering, construction, welded mesh for civilian and military use, the manufacturing industry in general, agriculture and off-shore energy transmission cable reinforcement. Instead, customers for reinforcing steel are typically cutting and bending centres, distributors of building products and international dealers, as well as construction companies and precasters.

As far as Tecnofil is concerned, the company serves a variety of sectors as it produces low-to-medium carbon galvanised, zinc-aluminium and bright wire for applications such as building construction, domestic and household appliances, automotive, enclosure security and fencing systems and many more everyday applications.

Last but not least comes Ferroberica, a leading company in Italy and second in Europe for pre-shaping and assembling reinforcing steel for leading construction companies in Italy and neighbouring countries, for use in all structural road, railway and maritime works and in public, industrial and private buildings.





## Associations we are members of

GRI 102-12; GRI 102-13

In an effort to establish an integrated system with the community as a whole and in the pursuit of long-term strategies for decarbonisation, Alfa Acciai will be signing the **Patto Per Brescia 2050**, which represents a vision of the future promoted by Brescian entrepreneurs, of a low-carbon society, a green and circular economy and resilient ecosystems as the basis for citizens' well-being. Alfa Acciai, Acciaierie di Sicilia and Ferroberica are members of the local branches of **Confindustria**, the General Confederation of Italian Industry, while Alfa Acciai and Acciaierie di Sicilia are also members of **Federacciai**, the national association representing the main Italian steel manufacturers, through which they are also members of **Eurofer** – the European steel association. In addition, Alfa Acciai subscribes to the following organisations operating at a local, national and international level.

### RAMET

Ramet is a consortium that brings together 22 Brescia-based metalworking companies in a joint project to study and monitor the impact of their production activities on the workplace and the surrounding environment, by involving them in roadmaps aimed at safeguarding the environment.

### ALFA ACCIAI OBSERVATORY

In operation since 2007, the Observatory is a forum set up under the auspices of the Brescia Town Council and comprises the Councillor for the Environment, supra-communal Green areas and Parks, who acts as Chairman; the Head of the Environmental Sustainability Sector; the Chairman of the Council Commission for Ecology, Environment and Public Protection; the Minority Town Councillor; the representative of the Council for the Environment of the Municipality, Alfa Acciai's Representative; Alfa Acciai Employee's Union Representative; a Representative of San Polo Case Administrative District Council and a Representative of San Polo Parco Administrative District.

The Observatory periodically assesses the impact of the steel mill on the environment, with particular reference to:

- state of progress of works underway;
- assessment of the main problems perceived by local residents and possible solutions;

- assessment of the environmental monitoring data.

### CO.DI.S.A.

Since 2011 Alfa Acciai has collaborated with a group of local residents, called CO.DI.SA, a health and environmental committee. Periodic meetings are held to inform the local residents and share with them improvement projects for the environment and production that the company has put in place or intends to develop.

### UNISIDER

The Italian steel standards unification body, at the technical committees of which Alfa Acciai participates in the preparation and modification of standards for the steelmaking industry. UNISIDER represents Italy at standards organisations in Europe (CEN) and worldwide (ISO) in the areas of expertise, including the steel industry (steel and cast iron).

### AIM – Italian Association for Metallurgy.

In 2021, Alfa Acciai lectured at the travelling course entitled “Safe Metallurgy, how to turn a priority into a corporate value” and the webinar on “Circular Economy for the New Life of Materials”.

### ADETS – L'Association pour le Développement et l'Etude du Treillis Soudé.

### ESTEP – European Steel Technology Platform.

### ANPAR – A trade association of inert waste recyclers in Italy and Europe.

### REACH FERROUS SLAG CONSORTIUM

### FINCO – the Italian Federation of Industries for Products, Systems, Services for Construction and Maintenance.

With specific reference to Ferroberica, this Group company is a member of **ANCE**, the National Association of Building Constructors, and regularly attends workshops held by the “Major Infrastructure Committee” to discuss regulatory developments and the ongoing rapid changes of the construction industry. Since January 2022 it has joined **ANSAG**, the National Association of Shapers for Reinforced Concrete, and is a member of the steering committee.

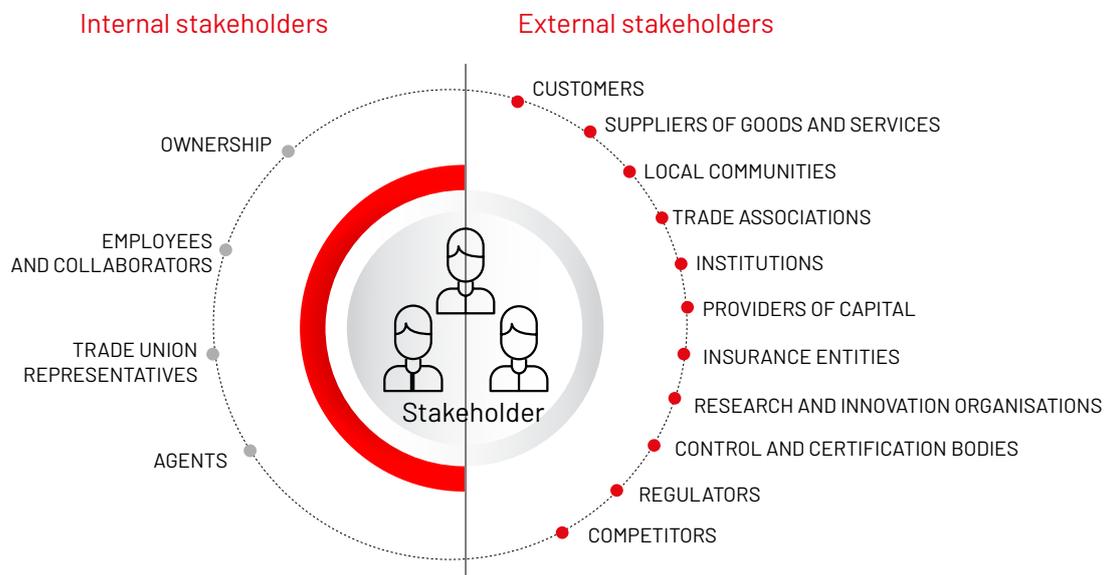
## Our stakeholders

GRI 102-40; GRI 102-42; GRI 102-43; GRI 102-44

In carrying out its business activities, the Alfa Acciai Group enters into relations with a number of stakeholders. According to GRI Standards<sup>2</sup>, a **stakeholder** is an “entity or individual that can reasonably be expected to be significantly affected by the organisation's activities, products and services, or whose actions can reasonably be expected to affect the organisation's ability to successfully implement its strategies and achieve its objectives.”

In order to prepare a sustainability report in line with GRI principles, especially including the principle of inclusiveness, the Alfa Acciai Group has mapped its internal and external stakeholders in order to identify the most relevant ones.

The categories identified are listed below:



In preparing this second Sustainability Report, the Group directly involved its customer stakeholders in the materiality analysis process, in parallel with a business survey that on this occasion was standardised among the four group companies.

Over the years the Alfa Acciai Group has developed relations with its stakeholders through different channels of dialogue. The communication channels used are diversified and appropriate for each category of stakeholders: ranging from the more traditional ones, such as telephone calls and questionnaires, business meetings, formal briefings, technical conferences, external visits, notice boards, press releases and the well-established Alfa Acciai Observatory right through virtual ones, such as video conferences and the Group's websites,

where you can find product data sheets, certificates, press releases and the areas reserved for customers, agents, suppliers and employees, containing the most varied documentation. Since 2020, Telegram Messenger has been used for employees, as in the Covid and smart-working period proved to be an extremely immediate means of communication for disseminating continuous instructions and releases, while since December 2021, i.e. since the presentation of the 1st Sustainability Report, the Group has launched a structure digital narrative on LinkedIn, which enhances the specificities of the individual companies, though using a common matrix, thereby addressing an audience of stakeholders that is greater than in the past.

2) The Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) are the reporting standard chosen by the Alfa Acciai Group for the preparation of its sustainability report. These standards were defined in 2016 and updated in 2020 by the GRI - Global Reporting Initiative.

3) “The organisation is required to identify its stakeholders and explain how it has responded to their reasonable interests and expectations.” - GRI 101.

## Materiality analysis

GRI 102-47

The Group adopted the approach of the selected reporting standards, i.e., the GRI Standards, and conducted a materiality analysis to identify the issues to be reported in the Sustainability Report.

More specifically, the Alfa Acciai Group has implemented a process to identify “**material topics**”, which are defined by the GRI Standards as “*a topic that reflects the significant economic, environmental and social impact of the organisation or substantially influences the assessment and decisions of stakeholders*”.

Identifying these material topics has required the Group to carry out various activities, such as:

- mapping the relevant stakeholders;
- analysing the internal context and internal documentation (e.g., the Code of Ethics and the Quality, Environment and Safety Policy);
- analysing the external context in which companies in the Alfa Acciai Group operate;
- analysing national, European and global sustainability trends;
- analysing benchmarks with national/international peers and competitors;
- involving some collaborators directly.

As a result of the above activities, in 2021 the Alfa Acciai Group identified an initial set of sustainability topics that are relevant to both its businesses and stakeholders, which have been used to identify material topics for the release of the Group’s first 2020 corporate social report.

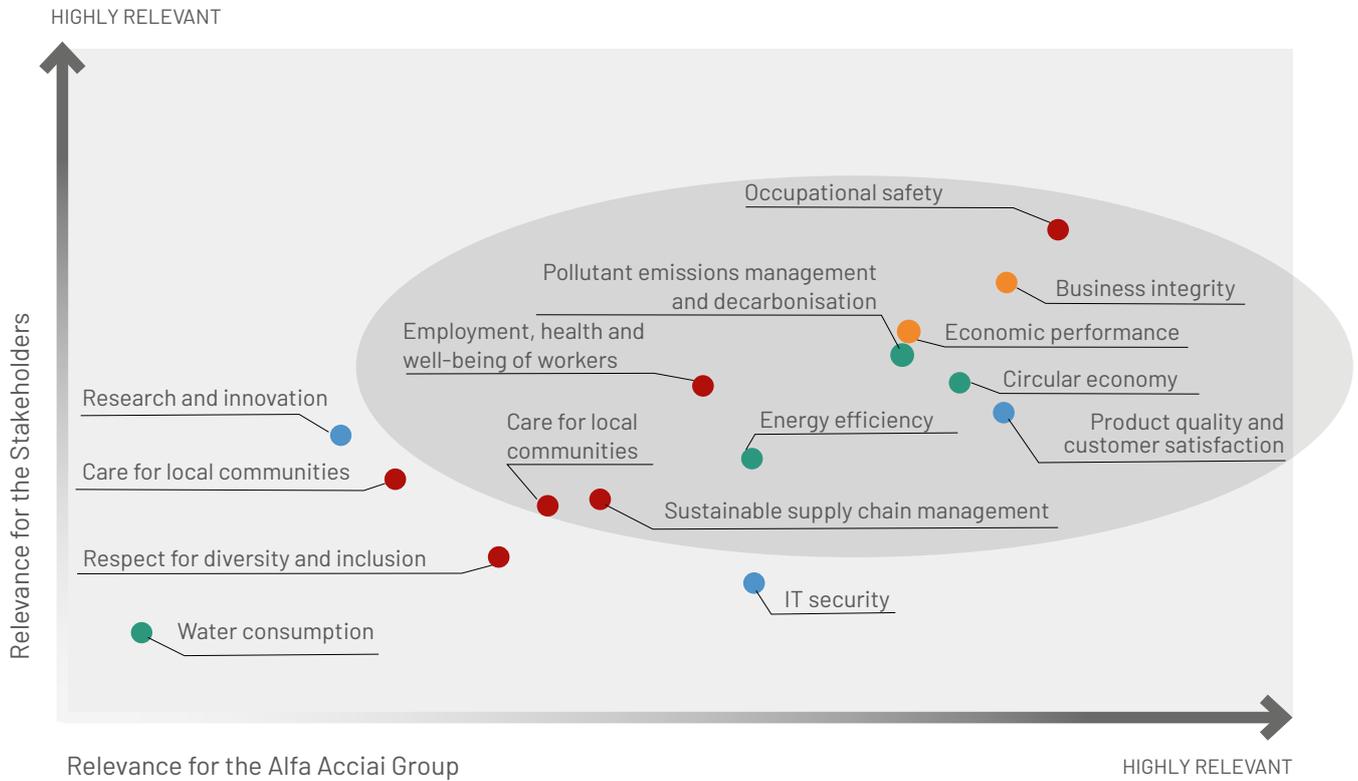
As part of a progressive engagement process for the updating of the materiality matrix, in which the various stakeholders can be called upon to personally express their point of view on the issues covered by the materiality analysis, the Alfa Acciai Group started a **stakeholder engagement process focused on its customers** at the end of 2021, thus close to the release of the 1st Sustainability Report, which continued throughout the first half of 2022. The engagement, which took place through an online survey, enabled the Group to achieve a twofold objective: receiving customers’ requests on sustainability issues relevant to the context in which Alfa Acciai operates, and defining the **degree of customer satisfaction** regarding the various aspects that characterise the commercial relationship with the various companies in the Alfa Acciai Group, including the quality of the product/service offered, order management and after-sales services, the competence and availability of personnel, and transparency in communication.

Following this involvement, the Alfa Acciai Group’s materiality matrix was then updated, which remains more or less in line with that in the Sustainability Report 2020.

Last but not least, although not considered a material issue, the Alfa Acciai Group decided to report the metrics related to the ‘Water Consumption’ of its companies, as it is aware that this is a limited perfectly monitored resource, that emerged with greater relevance from the stakeholder engagement activity carried out in 2022, a year characterised by particularly high temperatures.



### Alfa Acciai Group 2021 materiality matrix



The material topics that emerged downstream the process, which define the contents of this document, are listed below:

<b>Governance topics</b>	Business integrity
	Economic performance
<b>Environmental topics</b>	Circular economy
	Energy efficiency
<b>Social topics</b>	Pollutant emissions management and decarbonisation
	Employment, health and well-being of workers
	Occupational safety
	Care for local communities
	Sustainable supply chain management
	Product quality and customer satisfaction

## Support to the 2030 Agenda

Finally, as part of ongoing sustainability improvements, the Alfa Acciai Group has identified the UN 2030 Agenda Sustainable Development Goals and corresponding targets to which the Group can contribute through initiatives that will be reported in the material topics.

As part of the Global Compact, in 2015 the United Nations approved a global agenda for sustainable

development. This has a certain level of urgency given the gradual deterioration in the environmental conditions of our planet, and encourages not only companies, but all economic and social players, countries included, to commit to achieving the 17 Goals set out by 2030 (Sustainable Development Goals - SDGs).



In particular, Alfa Acciai is focusing on 7 out of the 17 SDGs and on 10 Targets in the 2030 Agenda, strictly related to the material topics identified, as shown in the table below.

Alfa Acciai Group material topics/SDG	 6. Clean water and sanitation	 7. Clean and accessible energy	 8. Decent work and economic growth	 9. Industry, innovation and infrastructure	 11. Sustainable cities and communities	 12. Responsible consumption and production	 13. Climate action
Business integrity							
Economic performance			●				
Circular economy	●					●	●
Energy efficiency		●		●	●		
Pollutant emissions management and decarbonization							●
Employment, health and well-being of workers							
Occupational safety			●				
Care for local communities					●		
Sustainable supply chain management			●				
Product quality and customer satisfaction							



# 2 | Responsible and transparent governance



## 2 | Responsible and transparent governance



### The governance framework

GRI 102-18

The **parent company Alfa Acciai S.p.A.** has adopted a so-called “traditional” governance framework, with the following corporate bodies as envisaged in the Articles of Association:

- **Shareholders' Meeting:** with exclusively deliberative functions, whose decisions are limited by law to the most important decisions of corporate life, with the exclusion of managerial powers;
- **Board of Directors:** comprising three to thirteen members, vested with the broadest powers for the ordinary and extraordinary management of the company, with the power to perform all actions deemed necessary or appropriate for the achievement of the corporate purposes;
- **Board of Auditors:** comprising three statutory members, with supervisory functions over the company's administration in accordance with the provisions of Article 2403 of the Civil Code.

The shareholders' meeting has appointed KPMG S.p.A., a company of recognized high standing, to perform the statutory audit pursuant to Legislative Decree 39/2010.

Alfa Acciai S.p.A.'s Board of Directors has delegated part of its powers to three Managing Directors, assigning each of them the following powers:

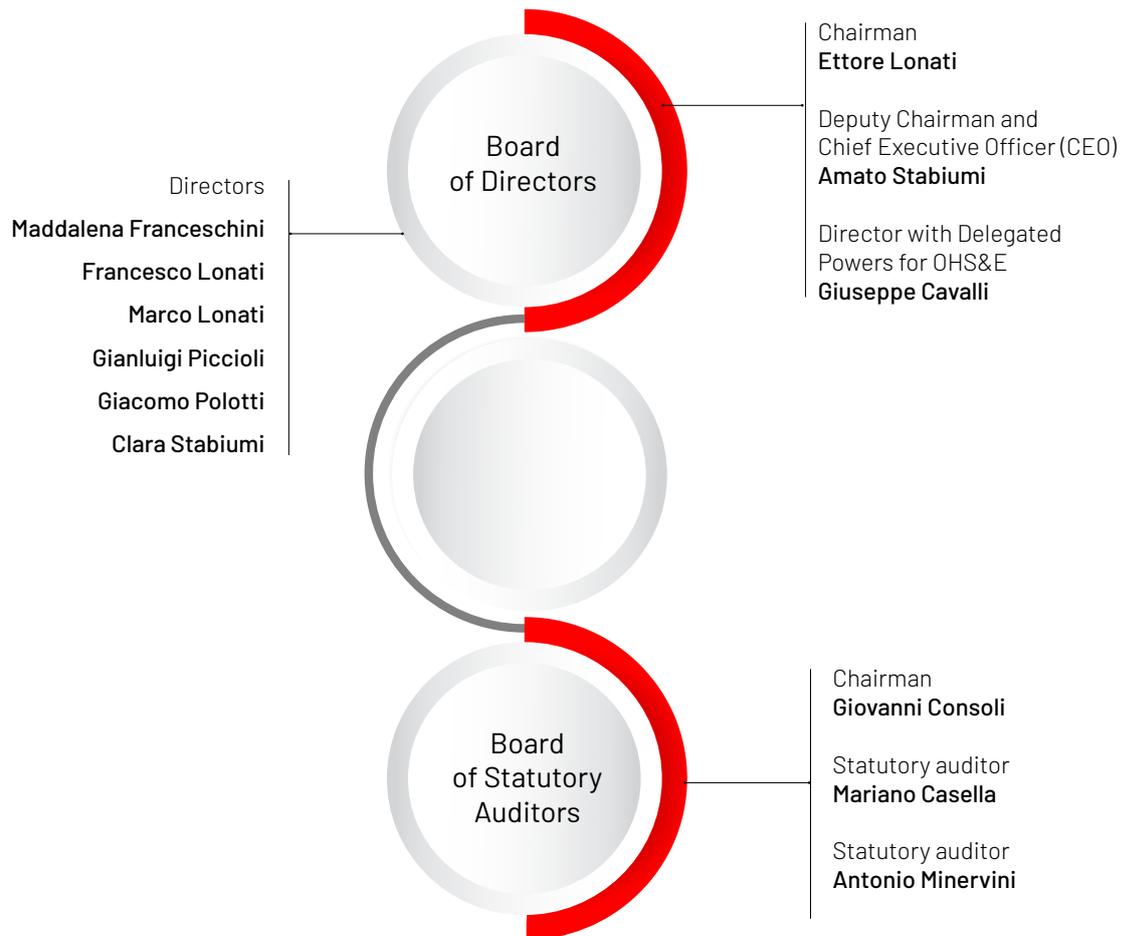
- **Chairman,** and
- **Deputy-Chairman** They both legally represent the company and are vested with the powers necessary for ordinary administration;
- **A Director with delegated powers,** who legally represents the company on occupational health and safety and environmental issues.

In order to monitor and safeguard sustainability issues, Alfa Acciai has therefore decided to assign specific powers and responsibilities to one of the directors, who is flanked by the Directors/Employers of Alfa Acciai's Production Units and other professionals with special skills in managing and monitoring specific aspects.



Giuseppe Cavalli  
COO and Director with delegated powers

## ALFA ACCIAI CORPORATE POSITIONS



The **Subsidiaries** are independent entities in terms of assets, organisation and management. Each of them has a Board of Directors with one or more Directors vested with specific delegated powers.

It is worth noting that Alfa Acciai S.p.A. provides its subsidiaries with service activities under the terms of specific contracts.

Throughout the years, Alfa Acciai has successfully redesigned its business model by anticipating the national and international macro-trends that have characterised

the world of steel production. After the 2008 financial and construction crisis, the company had to reinvent itself through the definition of a new vision that involved all company processes, as it involved the transition to a new **organisational model** based on Production Units that helped focusing on the set objectives, both in quantitative and especially qualitative terms. Staff functions have also been affected by this new organisational structure, having to adapt to a new model.

Alfa Acciai's current governance structure is as follows:

- ▶ **Steel Mill Production Unit**, dealing with the manufacture of steel;
- ▶ **Rolling Mill Production Unit**, dealing with the manufacture of wire rod, hot-rolled rebars and coils;
- ▶ **Central Services Production Unit**, comprising the following company functions: Quality, Production Planning and Logistics; Information Technologies; Scrap Purchasing; Environmental Service; Process Energy Dynamics; Construction; Integrated Management System;
- ▶ **Sales Department**;
- ▶ **Purchasing Department**;
- ▶ **Administration, Finance and Control Department**;
- ▶ **Human Resources Department**.

Each production unit has a manager, who also covers the role of Employer.

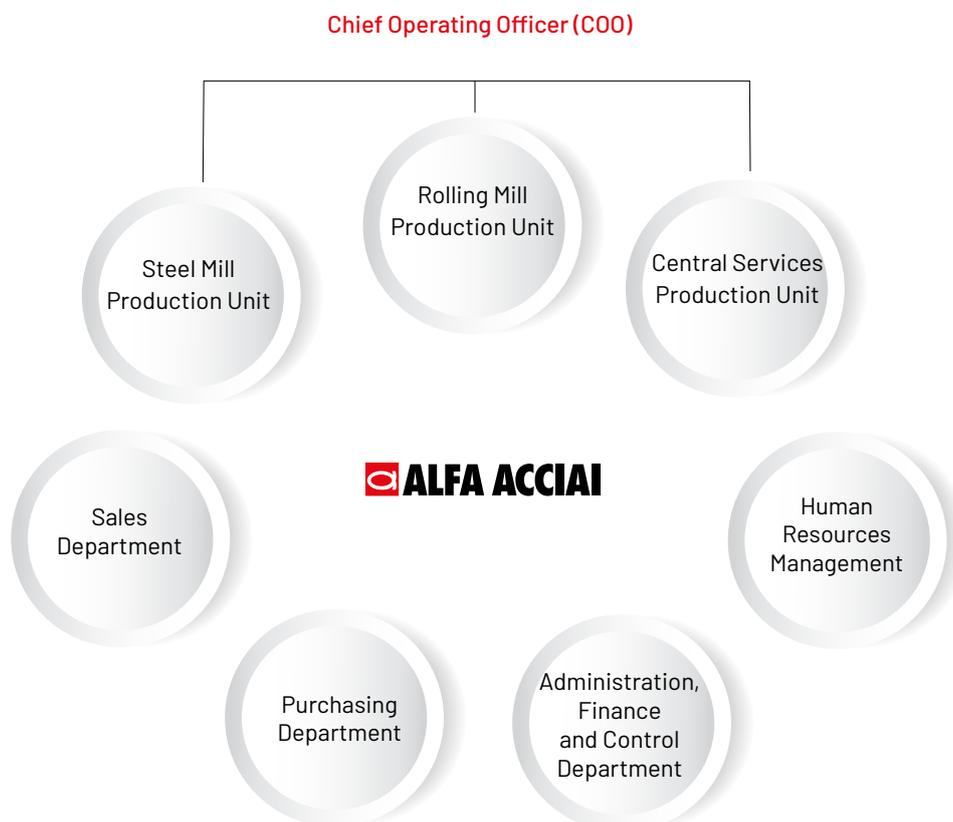
The Production Units are coordinated by a Chief Operating Officer (COO) who interfaces with the various departments and is responsible for directing and

supervising industrial operations as well as organising the sustainable development of production activity.

In February 2020, the Parent Company started setting up a Safety Commission for each production unit, to maintain a constructive and conflict-free approach for identifying the best possible solutions regarding safety, that can be implemented with the involvement, and in the interest, of everyone.

Each commission has a Production Unit Manager (or representative), a Health and Safety Manager, the HR Manager, the Workers' Safety Representative, and a trade union representative.

The task of the Commissions is to carry out a detailed analysis of situations in terms of safety that are worthy of attention, gathering observations and suggestions on the subject, and preparing action plans with implementation timescales and progress checks. Commissions must also regularly update action plans, defining timescales and the people responsible for each action.





## Our guiding values

GRI 102-16

### Business integrity

#### Description of topic and its relevance

*The ability to pursue business objectives using ethical, responsible conduct that always complies with standards, regulations and legislation.*

Business integrity is a strategic choice for the Alfa Acciai Group, which is easily summarised by the company's mission: "To facilitate the growth of a sustainable business, by producing and developing steel products in line with optimal work conditions and minimising the environmental impact of our operations."

#### Scope of the topic

Responsible, transparent conduct impacts the Group across the Group, generating benefits in internal relationships and in relationships with external stakeholders. It is essential for creating a climate based on trust and mutual respect.

**The Alfa Acciai Group is fully aware that a responsible and sustainable economic strategy is essential for achieving long-term business success. As a result, the Group has established and nurtures excellent relationships with people and the communities in which its premises are situated, and is committed to always conducting business operations in line with the following values:**

#### ■ COOPERATIVE APPROACH:

The Group aims to maintain and develop a relationship of trust with its stakeholders whose input is necessary for achieving company objectives, or who have an interest in their achievement.

#### ■ PROPRIETY

Situations in which parties involved in business transactions have or appear to have a conflict of interests must always be avoided when undertaking any activity.

#### ■ FAIRNESS:

The Group does not discriminate on the basis of age, gender, sexual orientation, health, race, nationality, personal opinion or faith in decisions that affect stakeholders.

#### ■ INTEGRITY

The Group uses organisational tools designed to prevent employees and collaborators from breaching principles of integrity, transparency and lawfulness and monitors compliance thereof.

In order to pursue the aforementioned values, the Group's companies have expressed a desire to combine sound economic management with respect for people and the environment, by each adopting a Code of Ethics. This document is available on various Group websites ([www.alfaacciai.it](http://www.alfaacciai.it), [www.tecnofil.net](http://www.tecnofil.net), [www.ferroberica.it](http://www.ferroberica.it)) in Italian and English, and is referred to in documentation directed at business partners. It is also attached to the main contracts agreed by the Group's companies and is applicable in all locations in which they operate.

The Group companies have adopted their own

**Organisation, Management and Governance Model** as per Legislative Decree 231/2001, of which the Code of Ethics is an integral part, and through which they promote and publish their corporate and work ethics, with a view to preventing the offences set out in said legislative decree in relation to corporate liability. Each company has appointed a **Supervisory Body**, which is responsible for overseeing the effective implementation of the Governance Model and reports to the Board of Directors on the activity performed. The Supervisory

Body is made up of qualified members with technical and professional expertise who, when carrying out their role, guarantee consistent action, autonomy and independence with respect to top management.

**Training** in relation to the **Code of Ethics** is essential for communicating the Group's guiding principles and rules of conduct within each company, and is provided along with the training delivered to the recipients of the Governance Model as per legislative decree 231/01.

## Legal and disciplinary action

GRI 205-3; GRI 206-1; GRI 307-1; GRI 419-1

In 2001 Alfa Acciai and other Italian steel manufacturers were involved in a dispute with the European Commission regarding anti-trust legislation, resulting in 3 decisions being reached over the course of almost two decades, the first two of which were annulled by the relevant courts.

More recently, in 2019, Alfa Acciai challenged the Commission's third decision before the Court of the European Union. The Commission submitted its own defence, and Alfa Acciai S.p.A. responded to this in January 2020. The Court has not yet made its ruling, which is expected by the end of 2022.

Overall, at the end of 2021, Alfa Acciai still has pending one legal action related to alleged antitrust violations.

**To support the focus given to this matter, Alfa Acciai** adopted an Antitrust Code targeted at all of the Group's companies, their managers, staff and collaborators. This code aims to clarify the principles and regulations stipulated to protect competition and develop a corporate culture to this effect, thereby preventing the risk of potential conduct that does not comply with anti-trust regulations.

It should also be noted that the Group companies have not been registered in any episodes of corruption, nor have they incurred in administrative or judicial sanctions relating to non-compliance with environmental, social and economic legislation and regulations.



## Risk Assessments regarding third-party liability

In order to ensure ability to evolve within a continually changing scenario, a procedure involving the support of independent consultants commenced in September 2020 and ended in September 2021, to carry out an in-depth analysis and a liability Risk Assessment process at all of the Group's production facilities. The analysis focused on Employee Liability, Third-Party Liability

and Product Liability, and was supplemented by a Risk Mitigation activity in support of the already solid liability risk management and control strategies in place at the Group's individual companies. Furthermore, each issue was given a current rating and an objective rating to aim for, thanks to a careful assessment of risk scenarios with the rationale of continually improving resilience.

## Risk Assessments regarding IT (Information Technology) and OT (Operational Technology)

The need for internal personnel to work from home and suppliers to connect to systems remotely has pushed the company to reinforce IT security, with considerable focus on endpoint protection when accessing from mobile devices.

The Group has increased security for all websites that have numerous reserved areas, by adopting SSL technology for all traffic.

The Group's companies have improved IT and OT security standards with the use of internal firewalls to protect users and industrial systems, and a Cyber Security

& Risk Analysis project has commenced to mitigate risk due to IT attacks.

The Group has installed the latest **Security E-mail Gateway** software to actively block spam, malware, ransomware and zero-day exploit attacks, with 14 levels of in-depth analysis and innovative sandboxing functionality. With new e-mail encryption functionality, the confidentiality and complete security of e-mail and company information is maintained.

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**Overall, risk assessments were implemented to ensure better protection of company assets, further safeguard economic and financial results over time, increase reliability, increase the supply continuity of products/services to customers and the market in general, and ensure confidentiality for our collaborators.**

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## Economic value generated and distributed

GRI 201-1

### Economic performance

#### Description of topic and its relevance

Ability to create and provide value for all stakeholders via transparent conduct in line with core business operations.

Achieving suitable economic performance is essential for sustainable, responsible business development and long-term success.

#### Scope of the topic

The creation of value for all stakeholders must involve achieving positive economic results. The Group interprets economic sustainability as a balance between growth expectations of business value, safeguarding the environment, protecting employee health and safety, and satisfying and respecting customers and suppliers.

Overall, the economic and financial information in the Sustainability Report 2021 includes the performance of Alfa Acciai S.p.A. and its operating subsidiaries: Acciaierie di Sicilia S.p.A., Alfa Derivati Srl, Ferro Berica S.r.l. and Tecnofil S.p.A.<sup>4</sup>. More specifically, in addition to Alfa Acciai S.p.A., the following companies are included within the scope of consolidation:

Denomination	Head Office	Share capital	Group share
Acciaierie di Sicilia S.p.A.	Catania	<b>24,960,000</b>	100%
Alfa Derivati S.r.l.	Brescia	<b>11,000,000</b>	100%
Tecnofil S.p.A.	Gottolengo (BS)	<b>3,500,000</b>	100%
Ferro Berica S.r.l.	Vicenza	<b>1,000,000</b>	100%

4) Given their peculiarities as real estate businesses, the non-operating companies have not been included in the scope of consolidation as they are not considered relevant for the purposes of this report.

The table below shows the Group's economic and financial figures for the financial years 2019-2021 according to GRI 201-1.

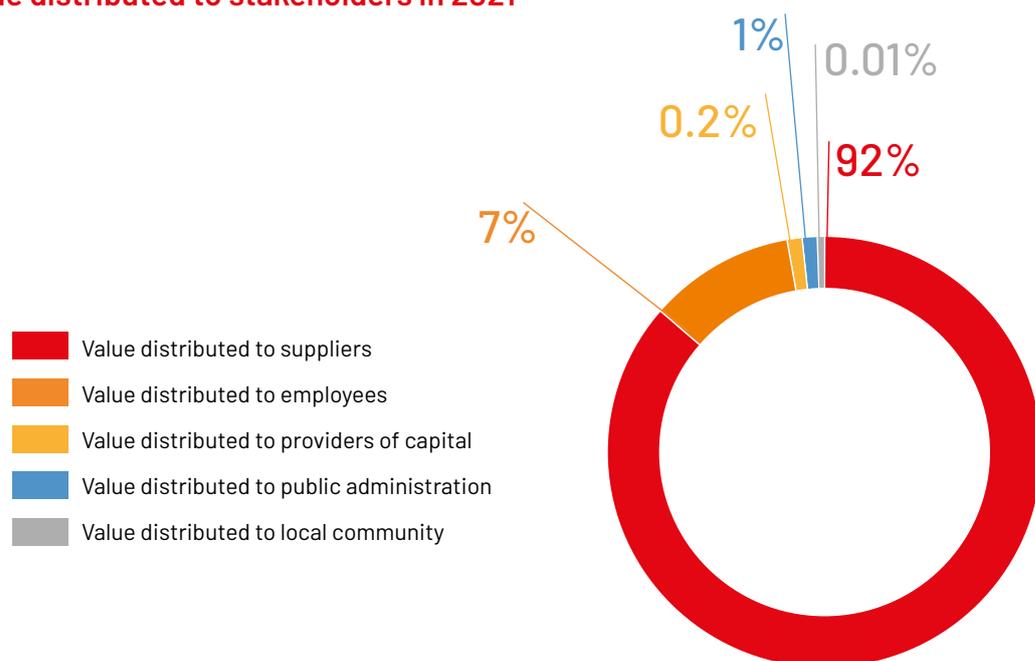
The year 2021 started very positively with a considerable upturn in the demand for steel products, despite production was impacted in the first two months as a result of organisational issues with absenteeism due to the COVID 19 virus (infections and isolation due to what was known as phase 3 of the infection). The whole 2021 financial year was characterised by a continuous increase in the price of raw materials used in the production process, especially scrap, electricity and gas. This was

however accompanied by an increase in sale prices, which kept margins positive. Consolidation scope being equal, economic value generated increased by approximately 604 million Euro with respect to 2020 (+87%), reaching a total of 1,293 million Euro. This increase is due to higher quantities sold (+12%) and the significant increase in sale prices.

Despite the bottlenecks in the global supply chain that transpired in the financial year, the Group still kept to its investment plan focused on upgrading plants, energy efficiency, the environment and safety.

Direct economic value generated and distributed	2021 (figures in EUR)	2020 (figures in EUR)	2019 (figures in EUR)
<b>Direct economic value generated</b>	<b>€1,292,784,939</b>	<b>€689,123,959</b>	<b>€851,008,295</b>
Revenues <sup>5</sup>	€1,292,784,939	€689,123,959	€851,008,295
<b>Economic value distributed</b>	<b>€1,234,959,241</b>	<b>€694,798,421</b>	<b>€816,152,463</b>
Operating costs	€1,133,673,720	€615,290,501	€726,752,912
Employee wages and benefits	€86,307,451	€75,676,377	€80,226,203
Payments to providers of capital	€1,899,234	€2,160,613	€1,695,886
Payments to public administration	€12,933,600	€1,464,971	€7,408,122
Community investments	€85,236	€205,959	€69,340
<b>Economic value retained</b>	<b>€57,825,698</b>	<b>€-5,674,462</b>	<b>€34,855,832</b>

### Value distributed to stakeholders in 2021



5) Revenues coincide with the economic value directly generated and include the value of production and revenues from financial activities

## Investment plan

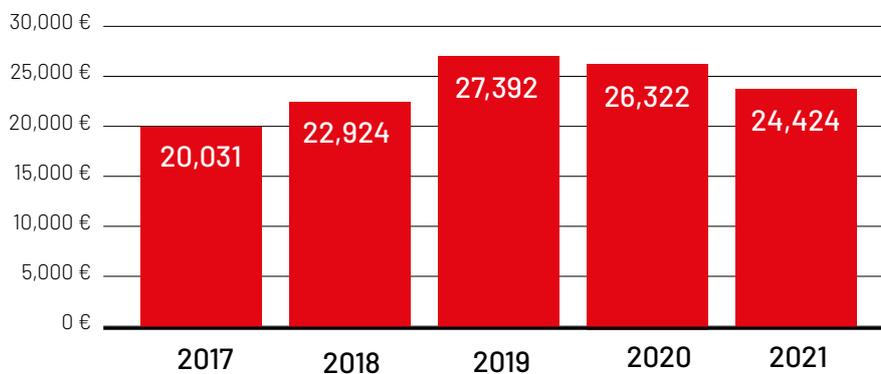
The Group's investment plan to increase safety standards, quality and environmental performance, and ensure more production efficiency and flexibility **over the entire product range**, by introducing **cutting-edge solutions**, also continued in 2021.

Actions involved all companies in the Group and all production departments because, based on strategic choices consolidated over the years, every company asset is systematically monitored and undergoes regular maintenance to ensure optimal functionality.



Giovanni Fortini  
Chief Financial Officer at Alfa Acciai

### Investments €/000



The main investments during the financial year, broken down by company, are as follows:

► **Alfa Acciai**: for the steel mill production unit, it installed a plant for the rapid discharge of lime, and a robot for attaching the slag pot with furnace and temperature control system, replaced the water system pressure pumps and optimised the furnace burners with cutting-edge solutions.

In the rolling mill production unit, the main investments concerned an upgrade to rebar mill 2, with the completion and optimisation of the spooling process on 2 lines simultaneously, and the installation of an automatic labelling robot for the wire rod mill.

► **Acciaierie di Sicilia**: carried out special maintenance operations in the steel mill area to improve production and energy efficiency, installed a new Tempcore system in the rolling mill area to increase product quality and reduce energy consumption, installed an automatic labelling robot for finished products, and commenced the installation of a second spooling line.

► **Alfa Derivati**: incorporated new technological solutions on stretching lines to further improve safety conditions, ergonomics and reduce noise levels.

New equipment for the Brescia recoiling lines was purchased to standardise product packaging between the various lines. Finally, the renewal of machinery continued.

► **Ferroberica:** at the Montirone production facility, installation was completed of a new integrated plant for processing rebar and coils, fully automating industrial processes using software for storage, the optimisation of cutting and bending operations, and checking each production step for the optimal management of every job order.

► **Tecnofil:** installed a new pickling tank, a new automated strapping and packaging line, and a plasticisation line.

All new equipment and plants installed are highly automated and connected to the production information systems and other company systems.

## Information Technologies Governance

In recent years, IT Governance in the Alfa Acciai Group has changed considerably, with increased focus on policies and processes designed to ensure the effective management of the various services in line with company requirements. To this effect, not only is Information Technology part of company processes, it now constitutes a necessity that contributes to outlining investments and objectives in the pursuit of the company's mission.

A **digital transformation** process is underway in the entire Alfa Acciai Group, enabling us to digitally archive documents by correlating them. This guarantees higher productivity and reduced paper consumption.

Using the B.I. Board for example, makes it possible to combine Business Intelligence, Performance Management, Analytics & Data Discovery tools in one single platform, enabling predictive sales evaluations by accessing information on market trends in recent years, sea-

sonality, product type, destination countries and other variables.

Furthermore, the Alfa Acciai, Acciaierie di Sicilia and Alfa Derivati management control system uses the Business Intelligence BizTool to gather information from all company databases, facilitating decisions that management must make quickly, especially in periods when the raw materials and energy markets are especially dynamic.

The synergies that have developed in the IT area, both among internal staff and with external IT partners, have enabled a cultural growth in all company departments. These factors have simplified the sharing of information between the Group's various companies, increasing synergies between them, to the benefit of business efficiency.



Giambattista Gigola, IT Manager, and his team

## The Group's tax approach

GRI 207-1

Being well aware of the importance of tax revenues in contributing to the economic and social development of the country, the Group has always pursued tax management with extreme integrity, by establishing relations of loyal cooperation and transparency with the tax authorities, in no way adopting conduct that could hinder their auditing and inspection activities.

Tax objectives in the Group can be summarised as a commitment to meeting tax obligations in a timely manner, ensuring taxation in the Group is correct, and overseeing and mitigating tax risk.

Furthermore, to achieve these objectives, the Group contributes to economic development by fulfilling

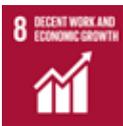
various tax requirements, such as:

- ▶ income tax, as a direct tax on corporate profit;
- ▶ property tax, collected on selling or leasing property;
- ▶ employment tax, which includes tax collected and paid to the tax authorities in relation to employees;
- ▶ indirect tax, such as VAT, customs duties and levies etc.

Tax compliance is ensured not only by Group personnel, but also by partnerships with major tax advisory firms that support companies in meeting tax obligations and understanding new legislation introduced in the tax system.

Finally, it should be noted that all Group companies are resident in Italy and fulfil their tax obligations in Italy<sup>6</sup>.

## Sustainable Development Goals by 2030

Sustainable Development goals	Target	Alfa Acciai Initiatives
<p><b>8 - Decent work and economic growth</b></p> 	<p><b>Target 8.2</b></p> <p>▶ Achieve higher levels of productivity of economies through diversification, technological upgrading and innovation, including through a focus on high value added and labour-intensive sectors.</p>	<p>▶ In 2021, the Group continued its investment plan aimed at increasing safety standards, environmental and quality performance, as well as ensuring high production flexibility and efficiency <b>throughout the product range</b> by introducing <b>the most technologically advanced solutions</b>.</p>

6) The Ferroberica branches established in the Principality of Monaco and in France fulfil their tax obligations in those countries as well.



3

Environmental  
responsibility,  
from circularity to  
decarbonisation

# 3 | Environmental responsibility, from circularity to decarbonisation

GRI 102-11



Decarbonisation undoubtedly represents the greatest challenge the steel industry is currently facing. The main aim is to implement energy transition processes that progress towards achieving more efficient, low-impact models.



Matteo Fenotti  
Environment Manager at Alfa Acciai

Environmental sustainability in the steel industry is a competitive factor that is acquiring greater importance, due to the increasing focus of European and international legislation and stakeholder expectations. Consequently, organisations that are transparent in communicating their methods for redefining their production processes to tackle the issues raised by climate change are rewarded.

Within this framework, the Alfa Acciai Group monitors the energy consumption and environmental impacts of its production facilities, the most significant of which are generated by Alfa Acciai and Acciaierie di Sicilia, given the type of process and high output. Therefore, being aware of the environmental impact of its business activities, the Group is committed to making steel production increasingly sustainable through full compliance with current environmental regulations and continually seeking the best technical, management and organisational solutions to make consumption more efficient.

This commitment is proven by a series of initiatives

implemented by the Group, including the application of the **precautionary approach**, introduced by the United Nations (UN) in Principle 15 of the Rio Declaration on Environment and Development, in order to comprehensively safeguard the environment, whether that means areas surrounding production facilities or the atmosphere surrounding planet Earth.

Through an **integrated approach** towards all environmental matrices (air, water, soil, noise, etc.), all the Group companies adopt the best available techniques (BAT<sup>7</sup>) i.e., the most economically and technically advanced solutions in the industry and driving processes towards increasingly higher levels of efficiency.

For the management of environmental issues, each Group company is organised according to specific systems with delegated powers and has appropriate organisational functions to monitor environmental risk. More specifically, the commitment to managing environmental topics and safeguarding natural resources has led Alfa Acciai, Acciaierie di Sicilia

7) The BAT is the cornerstone of policies for the prevention and control of environmental impacts from industrial sources. Introduced in 1996 with the first IPPC (Integrated Pollution Prevention and Control) directive in the steel industry, it was last renewed in 2012 within the Iron & Steel BREF (BAT reference documents).

and Tecnofil to implement an Environmental Management System certified to **ISO 14001**. The companies therefore have implemented a set of policies, procedures, tools, measures and improvement plans for managing and monitoring their environmental performance at the best, including water and energy consumption, emissions and waste. Further internal frequent audits are scheduled to make sure that the current management system as a whole is aligned with the set objectives and the path pursued is really contributing to their achievement.

An important result for the Group's steelmaking companies was obtaining the **EPD** (Environmental Product Declaration) for hot rolled products (bars and coils for reinforced concrete), and for Alfa Acciai, cold rolled products, welded wire mesh and the industrial aggregate known as Sinstone<sup>8</sup>. The EPD is based on the application of the Life Cycle Assessment (LCA regulated by ISO 14040 and ISO 14044), which quantifies the environmental performance of products at the various stages of their lifetime. Thanks to this certification, it is possible to calculate the environmental impact of products, identify focus areas for reducing this impact, define strategies, and monitor progress and improvements in performance.

Another step the Group has taken towards sustainability is the fact that Alfa Acciai and Acciaierie di Sicilia are among some of the first companies to obtain the European **SustSteel Certification** for sustainable steel established by Eurofer. This certification was designed to develop, manage and promote the concept of sustainable development based on a complex combination of economic, social and environmental issues for products used in the steel construction industry.

Last but not least, Alfa Acciai and Acciaierie di Sicilia have been awarded the **ICMQ ECO Gold** certification since 2013, a mark of sustainability that measures the performance of hot-rolled products on the basis of three topics - safeguarding the environment, protecting resources and energy savings.

Every certificate held by the Group's companies is based on an independent third-party certification scheme and is a tool that demonstrates transparency and communicates environmental and non-environmental performance levels to all stakeholders.



8) Alfa's SINSTONE granulate is an aggregate for unbound materials for use in civil engineering and road construction projects. For further information see section "Optimisation of Black Slag at Alfa Acciai".

## Alfa Acciai Group circularity

### Circular economy

#### Description of topic and its relevance

*Commitment to the rational consumption of materials by implementing recycling and reuse policies with the aim of reducing waste and adverse impacts on the environment. As a result of the recyclability and durability properties of steel, the Group has adopted a business model based on the circular economy concept, making it possible to minimise the use of virgin natural resources and enhance the value of the residues produced.*

At Alfa Acciai and Acciaierie di Sicilia, circular economy underpins the steelmaking process, which is complemented by the verticalization of finished products (reinforcing steel) and semi-finished products (wire rod) from the other Group companies.

#### Scope of the topic

The scope includes all Group companies. The most significant impact in terms of raw materials and residues are to be attributed to the two steel mills.



Steel is a permanent material and the products that leave the Group's steel mills for new applications can be recovered 100 per cent and countless times at the end of their life cycle through remelting. The special feature is that steel maintains its characteristics over time, without any loss of quality and without any degradation in mechanical properties; it is therefore an essential material

for the development of a sustainable economy. For these reasons, it is the **most recycled material in the world** today.

The following graph provides a clear, synthetic representation of the continuous cycle of steel recycling.

### The steel life cycle



Steel is a material that has always been a key strength for the EAF steel industry due to the circularity of its lifecycle.

In its Brescia- and Catania-based steel mills, the Alfa Acciai Group annually processes over 2 million tonnes of scrap. The finished product has a minimum content of certified **recycled material** (UNI/PdR 88:2020 certification according to UNI CEI EN ISO/IEC 17067) of **98.9%** for Alfa Acciai and **97%** for Acciaierie di Sicilia, providing the market truly 'green' products. This means that, for every tonne of steel produced, we generate a benefit for future generations who will not have to obtain

new material from iron ore, thus depleting the scarce resources of our planet.

Not only does the Group breathe new life into scrap, it also works continually on making use of any waste produced, by giving it to other circular economies, putting it into the supply chain, and ultimately facilitating the recovery of the material. Significant examples of how material is recycled include the optimisation of black slag, further explained below, the recovery of dust from offgas removal, from which zinc is obtained, and mill scale used to produce cement clinker.

**98.9%**

MINIMUM  
RECYCLED MATERIAL  
CONTENT  
ALFA ACCIAI

**97%**

MINIMUM  
RECYCLED MATERIAL  
CONTENT  
ACCIAIERIE DI SICILIA



## Black slag recovery at Alfa Acciai

As a result of a controlled process of its formation and subsequent solidification, the black slag generated during the melting of ferrous scrap in the electric arc furnace is shredded, deferrized and screened to become, as a by-product, a high-performance marketable material, called Sinstone®.

By controlling the process, it is possible to achieve certain chemical and geotechnical characteristics that make slag, a material that can be used in construction and civil engineering works in place of materials of natural origin (quarry aggregates), thus saving non-renewable natural resources.

Sinstone® bears the CE 2+ mark and is sold in compliance with the UNI 13242 standard, registered at European level in accordance with the REACH regulation and also has EPD certification.

The production of Sinstone® EV02 commenced in February 2021, gathering decades-long experience on the material's chemical and physical characteristics. The demand for cutting-edge high-performance road aggregates and the increasing focus on environmental issues require ongoing research into new materials and technologies to improve products and safeguard natural resources. To this effect, Sinstone® EV02 is produced for applications that require high-performance load-bearing capacity in road and rail infrastructural works.

ZERO WASTE philosophy is a cornerstone for the Group, which, by creating real forms of industrial symbiosis, makes it possible to systematically apply the principle of circular economy, with the aim of reusing, recovering and enhancing every material resulting from the various processing stages, thereby safeguarding precious natural resources.



## Consumption of materials

GRI 301-1; GRI 301-2



**The most important raw material in quantitative terms for steel production is ferrous scrap originating from Italy or abroad.**

Alfa Acciai and Acciaierie di Sicilia conduct strict and severe inspections of ferrous scrap entering the plant through documentary checks, under the supervision

and assistance of the Environment Service, as well as visual and radiometric checks, in accordance with the regulations in force<sup>9</sup>.

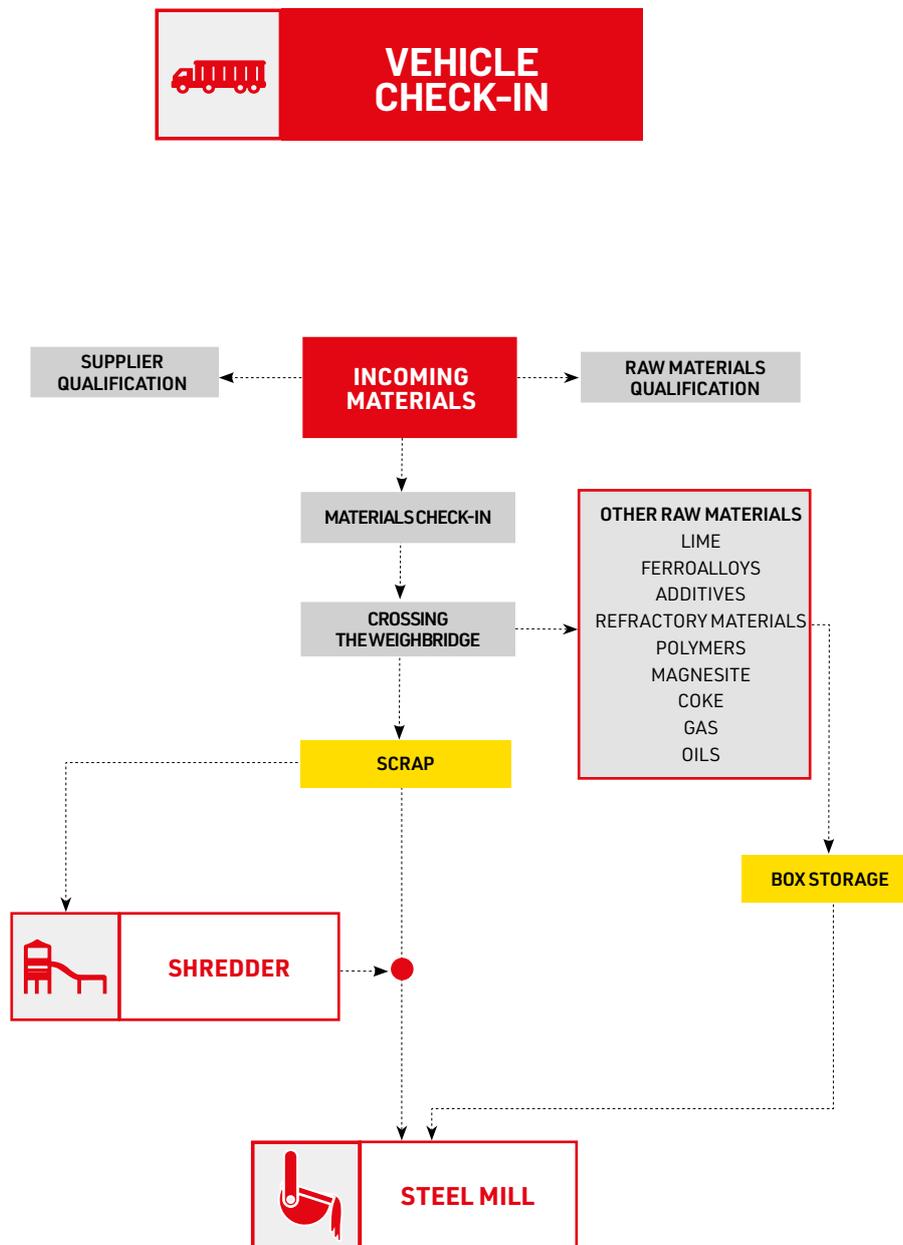
### RADIOACTIVE SOURCE detection

Among the scrap inspection operations, the most important one is a strict check to ensure that incoming scrap is not contaminated with radioactive material. Since 1997, the Group has been implementing an extensive and complete detection system covering the entire production activity in order to avoid the accidental melting of radioactive material.



A summary of the incoming raw materials acceptance process is given in the diagram below:

9) Further details on scrap procurement and radiometric source detection can be found in the section entitled "Scrap incoming inspection" and the Chapter "X-ray monitoring at the plant" in the Alfa Acciai 2021 Observatory Report. Additional information on the supplier selection and assessment process is also available herein under Chapter 5.



Ferrous scrap is the main raw material used. In fact, in 2021 over two million tonnes of ferrous scrap were melted in the furnaces at Alfa Acciai and Acciaierie di Sicilia, accounting for 75 per cent of the total raw materials used in the production process.

In addition to the various types of scrap, the steel mills use other materials such as lime, ferroalloys, magnesite and coke, while wire rod and bar for reinforcing concrete are the raw materials of Ferroberica, Tecnofil and Alfa Derivati, which verticalise the product. The following tables show the amount of raw materials and process

materials consumed in 2019-2021, where the subdivision between renewable and non-renewable materials required by GRIs is not applicable in the steel industry. In fact, the resources required are not generated in short periods of time. However, the Group is committed to containing its environmental impact and reducing its use of resources, making extensive use of recycled raw materials.

In general, in 2021 there was an increase in materials consumed due to the recovery of production, which even exceeded the values of 2019.

Raw materials	U.M.	2021	2020	2019
<b>Non-renewable raw materials used</b>				
<i>Ferrous scrap</i>	t	2,062,479	1,687,225	1,964,338
<i>Direct reduced iron (DRI)</i>	t	0	0	6,051
<i>Pig iron</i>	t	0	0	496
<i>Lime</i>	t	82,356	65,954	78,039
<i>Ferroalloys</i>	t	21,250	18,882	22,008
<i>Magnesite</i>	t	2,955	2,394	2,919
<i>Magnesite from ground refractory materials</i>	t	1,330	1,612	1,672
<i>Coke</i>	t	2,496	1,610	1,757
<i>Wire rod / rebar for reinforced concrete<sup>10</sup></i>	t	593,784	535,109	573,779
<b>Total raw materials used</b>	<b>t</b>	<b>2,766,649</b>	<b>2,312,787</b>	<b>2,652,435</b>

The manufacture of steel requires not only raw materials but also process materials which are crucial to production. For example, additives and process agents help to form and regulate the composition of the slag which protects the steel chemical analysis and the slag protecting the

steel bath; refractory materials protect the EAFs and ladles and reduce heat loss; inert gases are used to stir the bath to homogenise it. Basically, these materials are essential for a quality product.

Process materials	U.M.	2021	2020	2019
<b>Non-renewable process materials used</b>				
<i>Oxygen</i>	m <sup>3</sup>	63,946,430	54,590,695	62,430,591
<i>Inert gases (Argon + Nitrogen<sup>11</sup>)</i>	m <sup>3</sup>	4,204,288	3,495,690	3,841,302
<i>Additives and process agents<sup>12</sup></i>	t	18,166	15,373	17,225
<i>Coal</i>	t	10,519	11,328	11,675
<i>Refractory materials</i>	t	12,494	11,020	12,791
<i>Oils/lubricants</i>	t	619	551	628
<i>Aluminium</i>	t	227	199	227
<i>Total zinc and alloys</i>	t	1,944	1,642	1,654
<i>Other process raw materials</i>	t	1,383	1,444	1,507
<b>Total process materials used</b>	<b>m<sup>3</sup></b>	<b>68,150,718</b>	<b>58,086,385</b>	<b>66,271,893</b>
<b>Total materials used</b>	<b>t</b>	<b>45,351</b>	<b>41,558</b>	<b>45,708</b>

It is worth noting that since 2021 Alfa Acciai has introduced recycled polymers among its additives and process agents with the aim of replacing coal and its

derivatives. The positive outcome of the experimental project allowed the reduction of coal consumption against the use of 1,232 tonnes of recycled polymers.

Additives and process agents from recycling	U.M.	2021	2020	2019
Polymers from recycling	t	1,232	0	0
<b>Total additives and process agents used</b>	<b>t</b>	<b>18,166</b>	15,373	17,225
<b>% of recycled additives and process agents used</b>	<b>%</b>	<b>7%</b>	<b>0%</b>	<b>0%</b>

10) This is the raw material used by the Group companies that verticalize production, i.e., Alfa Derivati, Ferroberica and Tecnofil.

11) It is worth noting that, with reference to the two-year period 2019-2020, the nitrogen data has been updated with regard to the unit of measurement used for the relevant reporting with respect to the Sustainability Report 2020.

12) Includes: electrodes - coal - deoxidisers - de-sulphurisers - calcium aluminates - various additives and recycled polymers since 2021 (equal to 1,232 tonnes).

## POLYMERS

A test project commenced at Alfa Acciai in 2021, involving the use of polymers obtained by recycling used plastic in accordance with standard UNIPLAST-UNI 10667, capable of replacing coal and its derivatives as a reducing agent in the oxidation reactions of ferrous materials.

The replacement process transpired gradually with a use percentage of 7% in 2021, and the commencement of another test phase at Acciaierie di Sicilia is planned in 2022.

The use of these recycled materials facilitates a reduction in emissions and decarbonisation, while also ensuring that more plastic is recycled and optimised.

**7%**

POLYMERS USED  
AT ALFA ACCIAI IN 2021



In addition to ferrous scrap, which is the main input for the process, another recovered material used is **spent refractory material** coming from the demolition of the melting furnace, which is fed back into the production cycle as a partial raw material substitute. The raw material to be replaced is magnesite, which is used as an additive in the Electric Arc Furnace (EAF) melting process. Their reuse in the furnace has no negative impact on the

environment; indeed, it preserves the consumption of new natural resources.

Looking at the figures relating to recycled raw materials for the two steelmaking companies, the percentage of use is 95% in 2021, in line with the previous two years.

This result highlights the Group's circular vocation with a very high portion of recycled materials entering its production process.

Recycled raw materials	U.M.	2021	2020	2019
<i>Ferrous scrap</i>	t	2,062,479	1,687,225	1,964,338
<i>Magnesite from grinding refractory material</i>	t	1,330	1,612	1,672
<b>Total recycled raw materials used</b>	<b>t</b>	<b>2,063,809</b>	<b>1,688,837</b>	<b>1,966,010</b>
Total raw materials used	t	2,172,865	1,777,708	2,077,279
<b>% of recycled raw materials used<sup>13</sup></b>	<b>%</b>	<b>94.98%</b>	<b>95.00%</b>	<b>94.64%</b>

For the purpose of sustainability along the entire value chain, in 2021 the company Tecnofil adopted a packaging system with metal straps in place of traditional plastic straps to ensure packaging that is 100% recyclable.

Where plastic is not yet replaceable, the company is seeking a partner to design sustainable packaging for its products, to further reduce its environmental footprint.

<sup>13</sup>) GRI 301-2 was calculated considering the quantities of raw materials used for Alfa Acciai and Acciaierie di Sicilia only. The figure differs from the one obtained from the UNI EN ISO 14021 certification (98.9% in Alfa Acciai and 97% in Acciaierie di Sicilia) because GRI (301-1 and 301-2) has different calculation methods from the UNI standard.

## Management of water resources

GRI 303-1 303-2 303-3



**Water plays a crucial role in the steel production process. The effective use of water is very important for the Group, which uses supply sources that minimise impact on the territory, and the best technical solutions for cooling systems to limit water consumption.**

Water comes from the council water supply for domestic and sanitation purposes and from company wells for industrial use. More specifically, the water for industrial purposes is used to make up evaporated water from indirect circuits (furnaces, rolling mills, ingot moulds and continuous casting plants) and direct circuits

(continuous casting spray and direct cooling for rolling mill products).

The table below shows the Alfa Acciai Group's water supply figures for the three-year period considered.

Water withdrawal <sup>14</sup>	U.M.	2021	2020	2019
<b>Total supplied</b>	<b>MI</b>	<b>3,296,637</b>	<b>2,877,251</b>	<b>2,908,895</b>
- of which from water stress areas	MI	3,296,637	2,877,251	2,908,895
<b>Water supplied by the company</b>				
<b>Total supplied by the company (groundwater – fresh water)</b>	<b>MI</b>	<b>3,243,747</b>	<b>2,837,856</b>	<b>2,870,702</b>
- of which from water stress areas	MI	3,243,747	2,837,856	2,870,702
<b>Water supplied by third parties</b>				
<b>Total supplied by third parties (groundwater – fresh water)</b>	<b>MI</b>	<b>52,890</b>	<b>39,395</b>	<b>38,193</b>
- of which from water stress areas	MI	52,890	39,395	38,193

The water stress level was assessed using the Aqueduct tool. This is based on an overall water risk index and 13 indicators that cover various types of risk, aggregating and prioritising all indicators selected from Physical

Quantity, Quality and Regulatory & Reputational Risk categories i.e. indicators that consider availability in terms of quantity, quality, legislation and its evolution.

14) It is worth noting that Acciaierie di Sicilia's water withdrawal data for the three-year period 2021-2019 has been estimated at 255,000 m<sup>3</sup>/year as there are no physical water meters and, in addition, the company is not connected to the aqueduct network. Moreover, for the reporting of water volumes from water stress areas, these have been considered from medium-high upwards, based on what is reported on the website [www.wri.org](http://www.wri.org).



Considering this overall indicator, all of the Group's companies fall within a medium-high/high water stress category.

Consumption trends are affected by steel production in general. In practice, the increase in performance efficiency of cooling systems is directly proportional to the increase in steel production, as evaporation and discharges also occur with low production levels.

Alfa Acciai and Acciaierie di Sicilia consume the largest amount of water in the Group because hot processes, such as melting and rolling, require large amounts of water for the indirect cooling of plants and the direct cooling of products/semi-finished goods.

Alfa Acciai has a water **collection and treatment** system for first flush and runoff rainwaters which, following a specific process, enables rainwater to be put back into the industrial water circuits, reducing the amount taken from wells. Moreover, the Group's policy is to reuse water as many times as possible before it is discharged. The cooling system actually **recirculates the water for over 30 cycles** before discharging it. This enables significant water savings with regard to the need to cool plants,

amounting to approximately 74 million m<sup>3</sup>/year for Alfa Acciai alone. Makeup water from wells represents less than 3% of plant requirements, and is required to offset steam from cooling towers and industrial discharges. The remaining 97% of plant water required therefore undergoes continuous recirculation before being discharged.

With regard to water discharged, given that Alfa Acciai, Acciaierie di Sicilia and Tecnofil have obtained Integrated Environmental Authorisation, they must comply with specific quality standards based on BATs in the respective production sectors. Where necessary, these are integrated with local evaluations implemented in the authorisations to establish quality and monitoring frequency. Domestic wastewater, which can be discharged into the sewage system, is not monitored.

The Group systematically monitors water consumption and is committed to preventing water used in cooling processes from being wasted, **by implementing closed circuits, using the latest technologies, and blowing down indirect cooling circuits to fulfil the needs of direct cooling circuits.**

## Waste management

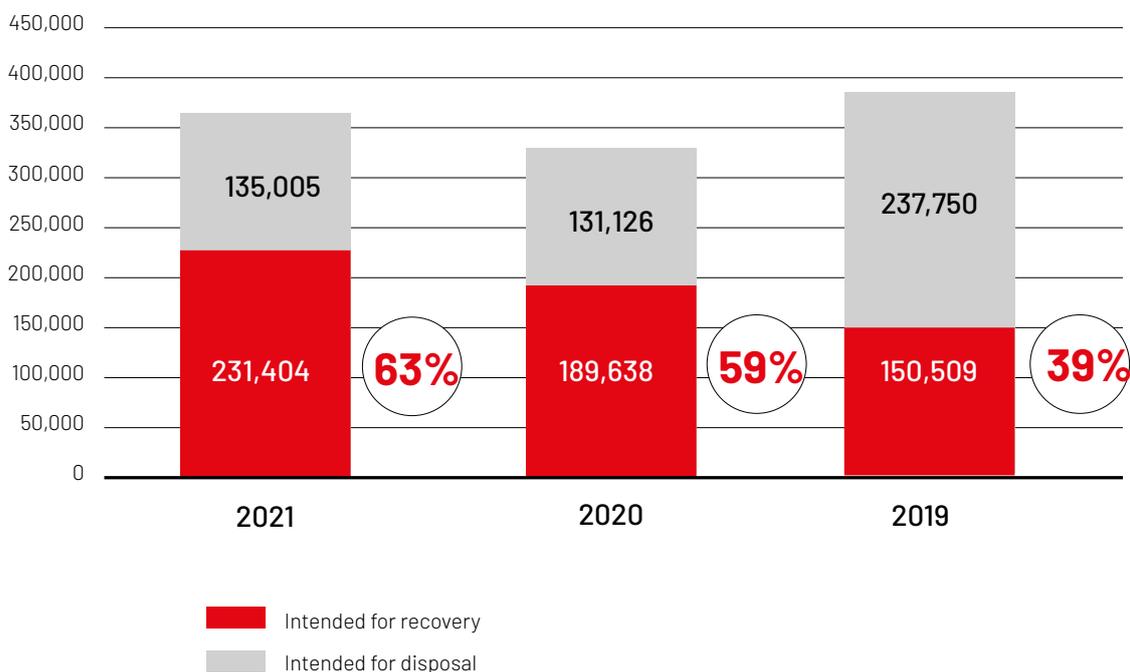
GRI 306-1; GRI 306-2; GRI 306-3; GRI 306-4; GRI 306-5

**Based on one of the most established circular economies, the Group continues to pursue a responsible and, more importantly, sustainable production strategy, devoting the utmost attention not only to the use of resources but also to the valorisation of residues from its own production.**

Alfa Acciai and Acciaierie di Sicilia, the two Group's steel mills, base their production process on circular economy principles by melting ferrous scrap in electric arc furnaces, to reuse it and give it new life and avoiding waste dispersion into the environment and thus reducing the consumption of raw materials. Steel manufacturing also creates residue which the Group is committed to reuse in other production processes, thus fuelling the **value chain in other circular economies**, thereby optimising every output material. Reducing the amount of waste produced is certainly one of the Group's main objectives, which is flanked by a series of measures aiming at optimising waste, where it cannot be

minimised, thus encouraging recovery instead of landfilling. The Group's commitment to this is demonstrated with Alfa Acciai's results alone, whereby the figure for waste recovered went from 15% in 2017 to 64% in 2021, mainly due to defining better processes for managing black slag (aggregate material developed when ferrous scrap is being melted in the electric arc furnace). Furthermore, the optimisation of waste also involves hazardous waste, where almost 90% of the amount generated by the Group is set aside for recovery operations. The positive development of this indicator has enabled the Group to reduce its waste for disposal to 36% (against 40% in 2020 and 60% in 2019).

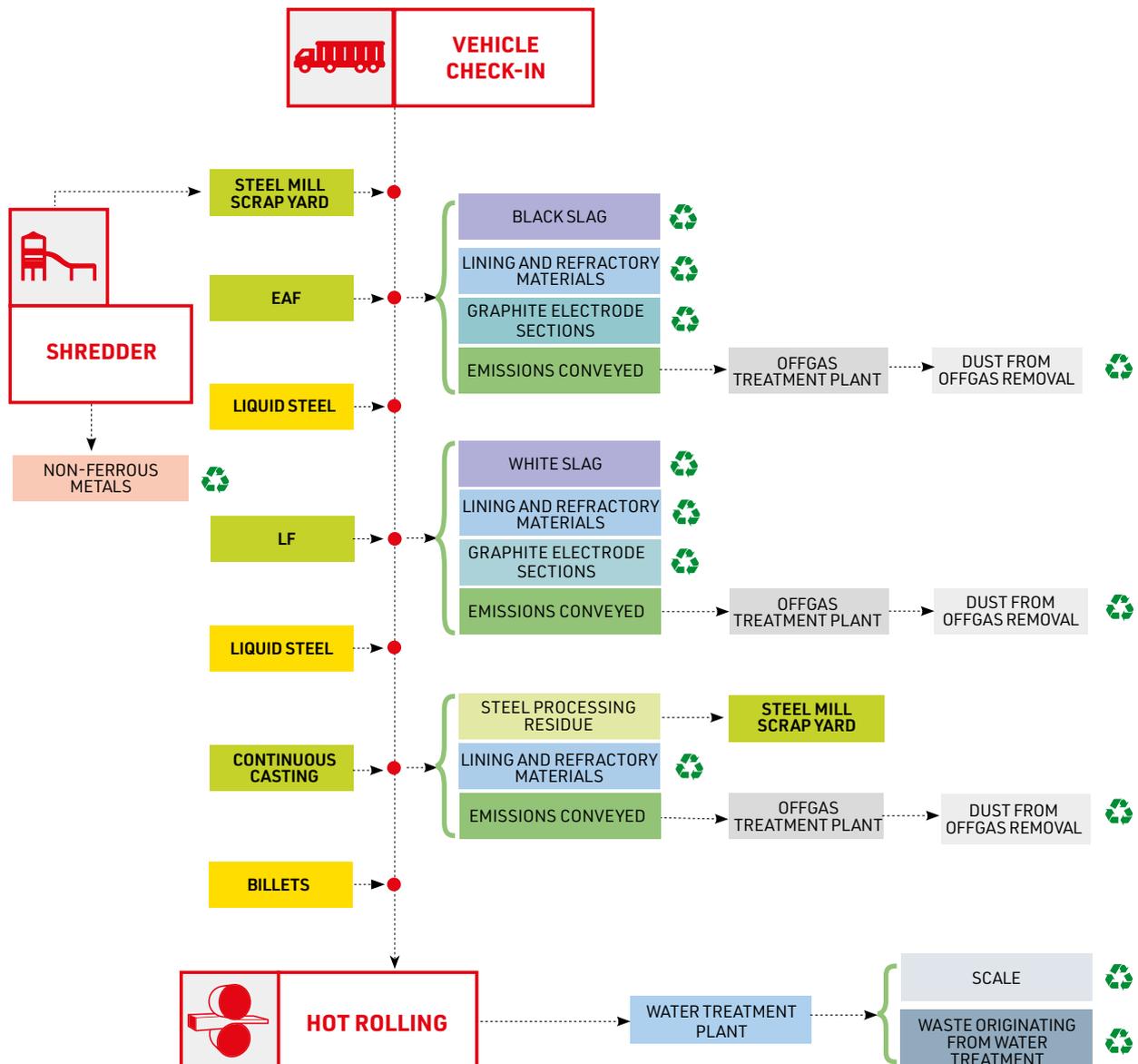
**Total waste generated (t)**



The diagram below shows how the ferrous scrap circular economy is related to other circular sub-economies resulting from the steel production process:

- ▶ black slag from the steel production process is sent to recovery systems to obtain an inert material that can be used to replace virgin materials mined from quarries, thereby preserving natural resources;
- ▶ thanks to sorting operations, non-ferrous metals (aluminium, copper etc.) are obtained from the ferrous scrap shredding process, and can be put to good use on other external production cycles;

- ▶ metal dust with a high zinc content is generated from the melting process, which enters other circular production cycles designed to extract zinc metal, a highly precious element for our economy;
- ▶ mill scale is generated from rolling processes, which is basically an iron oxide that is used to produce cement clinker;
- ▶ recovering refractory materials is also important for making the most of production waste, as it preserves important natural resources.



The Group is continually looking for new opportunities, including through R&D activities, that can further optimise the recovery of all production waste in accordance with legislation. In particular, in the coming years, primary efforts will be focusing on white slag (aggregate that develops during steel treatment in the ladle), which is the final obstacle to reaching 100% circular steelmaking.

The Group systematically monitors information on waste through specific departments (e.g., environment

departments), which is analysed by the company management system. These departments are well-established, showing that many things have been achieved, but driven automation and computerisation activities are still progressing as the evolution of processes and legislation require increasing focus to remain innovative.

The table below contains amounts of waste produced, split into hazardous and non-hazardous waste for the three-year period 2019-2021.

Waste generated	U.M.	2021	2020	2019
<b>Total NON-HAZARDOUS waste</b>	<b>t</b>	<b>331,247</b>	<b>289,172</b>	<b>352,614</b>
Melting slag (black)	t	155,839	139,072	189,757
Secondary metallurgical slag (white)	t	82,747	58,483	75,568
Waste from shredding ferrous scrap	t	55,692	50,304	45,770
Mill scale	t	21,528	26,944	27,110
Refractory materials	t	2,056	1,179	1,939
Other waste	t	13,386	13,190	12,471
<b>Total HAZARDOUS waste</b>	<b>t</b>	<b>35,163</b>	<b>31,591</b>	<b>35,645</b>
Dust from offgas removal	t	33,111	29,700	33,697
Other waste	t	2,052	1,892	1,948
<b>TOTAL WASTE</b>	<b>t</b>	<b>366,410</b>	<b>320,763</b>	<b>388,259</b>

In line with the reporting standards adopted (GRI standards), a breakdown of the waste produced is shown in the table below, highlighting the quantities sent for

recovery and those for disposal, with an indication of the specific process used. All processes are carried out at external sites.

Waste intended for recovery	U.M.	2021	2020	2019
<b>Total NON-HAZARDOUS waste</b>	<b>t</b>	<b>199,983</b>	<b>162,462</b>	<b>120,506</b>
Melting slag (black)	t	123,700	95,599	43,455
Secondary metallurgical slag (white)	t	10,886	5,059	10,903
Waste from shredding ferrous scrap	t	29,310	23,071	25,984
Mill scale	t	21,528	26,944	27,110
Refractory materials	t	2,056	1,067	1,821
Other waste	t	12,503	10,722	11,233
<b>Total HAZARDOUS waste</b>	<b>t</b>	<b>31,421</b>	<b>27,176</b>	<b>30,003</b>
Dust from offgas removal	t	31,023	26,327	28,977
Other waste	t	398	849	1,026
<b>TOTAL WASTE FOR RECOVERY</b>	<b>t</b>	<b>231,404</b>	<b>189,638</b>	<b>150,509</b>

Waste intended for disposal (t)	2021				2020				2019			
	Incineration (with)	Landfilling	Other disposal operations	Total	Incineration (with)	Landfilling	Other disposal operations	Total	Incineration (with energy recovery)	Landfilling	Other disposal operations	Total
<b>Total NON-HAZARDOUS waste</b>	-	<b>131,256</b>	<b>7</b>	<b>131,264</b>	-	<b>126,709</b>	<b>2</b>	<b>126,711</b>	-	<b>232,107</b>	<b>1</b>	<b>232,108</b>
Melting slag (black)	-	32,139	-	32,139	-	43,473	-	<b>43,473</b>	-	146,302	-	<b>146,302</b>
Secondary metallurgical slag (white)	-	71,861	-	71,861	-	53,424	-	<b>53,424</b>	-	64,665	-	<b>64,665</b>
Waste from shredding ferrous scrap	-	26,381	-	26,381	-	27,233	-	<b>27,233</b>	-	19,786	-	<b>19,786</b>
Mill scale	-	0	-	0	-	-	-	-	-	-	-	-
Refractory materials	-	0	-	0	-	112	-	<b>112</b>	-	118	-	<b>118</b>
Other waste	-	875	7	882	-	2,466	2	<b>2,468</b>	-	1,237	<b>1</b>	<b>1,238</b>
<b>Total HAZARDOUS waste</b>	-	-	<b>3,742</b>	<b>3,742</b>	<b>2</b>	-	<b>4,413</b>	<b>4,415</b>	<b>5</b>	<b>4,720</b>	<b>918</b>	<b>5,642</b>
Dust from offgas removal	-	-	2,088	2,088	-	-	3,373	<b>3,373</b>	-	4,720	-	<b>4,720</b>
Other waste	-	-	1,653	1,653	2	-	1,040	<b>1,042</b>	5	-	918	<b>922</b>
<b>TOTAL WASTE FOR DISPOSAL</b>	-	<b>131,256</b>	<b>3,749</b>	<b>135,005</b>	<b>2</b>	<b>126,709</b>	<b>4,415</b>	<b>131,126</b>	<b>5</b>	<b>236,827</b>	<b>919</b>	<b>237,750</b>

The Group's commitment to waste recovery also applies to hazardous waste. In 2021, the quantities sent for recovery increased by 3 percentage points (from 86% to

89%) compared to the total amount of hazardous waste generated by production processes.

## Commitment to energy efficiency

GRI 302-1; GRI 302-3; GRI 302-4



Steelmaking facilities, which melt scrap using an electric arc furnace (EAF), are particularly energy-intensive and Alfa Acciai Group companies have set ambitious targets to reduce energy consumption from fossil fuels and will strive to increase the amount of energy from renewable sources.

### Energy efficiency

#### Description of topic and its relevance

*Implementation of initiatives geared towards optimising the use of energy resources and reducing consumption, e.g., through energy optimisation processes based on the recovery of heat generated by industrial facilities.*

The steel industry and downstream processes are highly energy intensives. Commitments to reducing consumption and replace fossil fuels with other renewable and sustainable sources make this issue of great interest to the Group.

#### Scope of the topic

Electricity and other energy sources have a local reach that is managed and supervised by the Energy Manager, who works with the staff involved in the production processes.

Energy efficiency affects all Group companies, but the most significant impacts in terms of consumption and energy efficiency, in absolute terms, are attributable to the two steel mills.

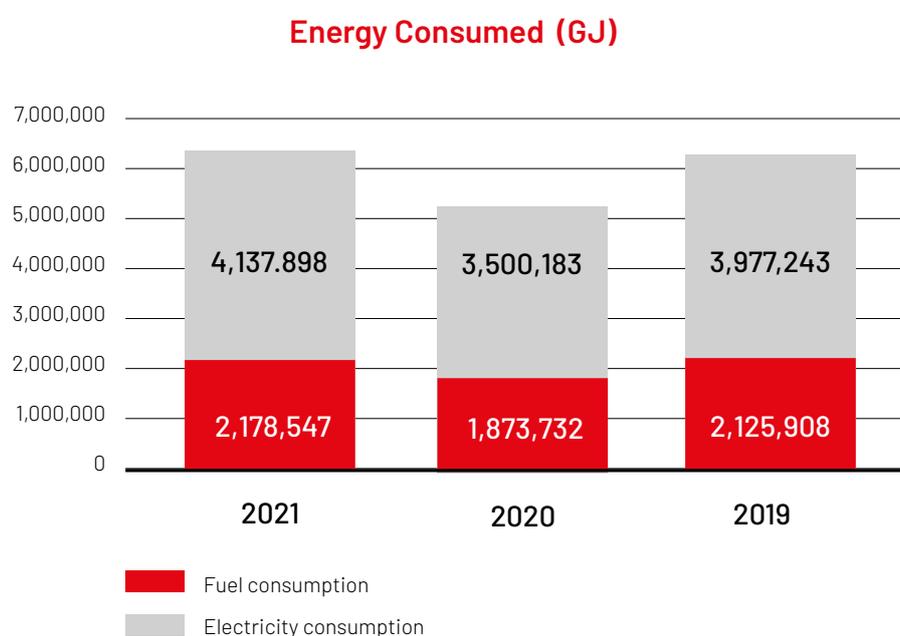


The main source of energy required to melt scrap is electricity, which accounts for the Group's main energy consumption, followed by the combustion of natural gas, which is a much smaller source. Electricity consumption is also necessary for auxiliary processes, such as environmental monitoring and production services. With regard to the hot rolling of billets produced by the

steel mill, the main source of energy is instead natural gas, which is used to power the billet heating furnaces, where electricity consumption is secondary.

Lastly, the consumption of Diesel fuel to power vehicles and the means used to handle the finished or semi-finished product is minimal, as is the consumption of LPG for cutting rebar to size.

A comparison between 2020 and 2021 shows an increase in all consumption items over the past year. Overall, the increase accounts for 19% and is linked to the marked upturn in production activities following the easing of the pandemic situation during the year.



Energy consumed <sup>15</sup>	U.M.	2021	2020	2019
Natural gas	GJ	2,139,464	1,773,560	2,006,080
LPG <sup>16</sup>	GJ	51	68	86
Diesel fuel	GJ	39,031	32,071	33,517
<b>Fuel consumption</b>	<b>GJ</b>	<b>2,178,547</b>	<b>1,805,700</b>	<b>2,039,684</b>
Purchased electricity <sup>17</sup>	GJ	4,137,898	3,500,183	3,977,243
<b>Electricity consumption</b>	<b>GJ</b>	<b>4,137,898</b>	<b>3,500,183</b>	<b>3,977,243</b>
<b>Total energy consumed</b>	<b>GJ</b>	<b>6,316,445</b>	<b>5,305,883</b>	<b>6,016,927</b>

15) In line with GRI Standards requirements, energy consumption is expressed in GJ, using the 2019, 2020 and 2021 conversion factors stated by the Department for Environment, Food and Rural Affairs of the United Kingdom (DEFRA) for the years of reference.

16) It is worth noting that the 2019-2020 LPG figures have been updated, compared to the 2020 Sustainability Report, with regards to the unit of measurement used.

17) The figure is net of grid losses and reflects the electricity actually consumed.

Compared to 2019, which was not affected by the pandemic, energy consumed in 2021 increased by 5% against a 3% increase in production. A comparison of

overall energy consumption to total finished/processed products shows a continuity in energy intensity on the previous year.

Energy intensity	U.M.	2021	2020	2019
Energy consumed within the organisation	GJ	6,316,445	5,305,883	6,016,927
Alfa Acciai Group's total finished/processed products	t	2,362,130	2,016,907	2,293,937
<b>Energy intensity</b>	<b>GJ/t</b>	<b>2.67</b>	<b>2.63</b>	<b>2.62</b>

## 1

## PAST INITIATIVES

In 2021, **Alfa Acciai** consolidated some previously-initiated experimental activities that generated energy savings of 4.5 kWh/t (22,995 GJ). These initiatives include:

- ▶ improved management of the scrap charge with variation of the mix according to the steel grade to be produced and with feedback according to the steel analysis;
- ▶ fine tuning of electrical parameters to make energy transmission more efficient and cooling calibrated so as not to remove too much heat;
- ▶ increase in liquid steel tapped into the ladle with resulting increase in the productivity of melting furnaces and the respective energy consumption efficiency;
- ▶ system for regulating the flow rate of electrode cooling water to optimise consumption of the actual electrodes.

## 2

## INITIATIVES IN PROGRESS

As part of ongoing quest for greater energy savings, throughout 2021 Alfa Acciai has implemented the following initiatives, the results of which will be quantifiable and verifiable during 2022:

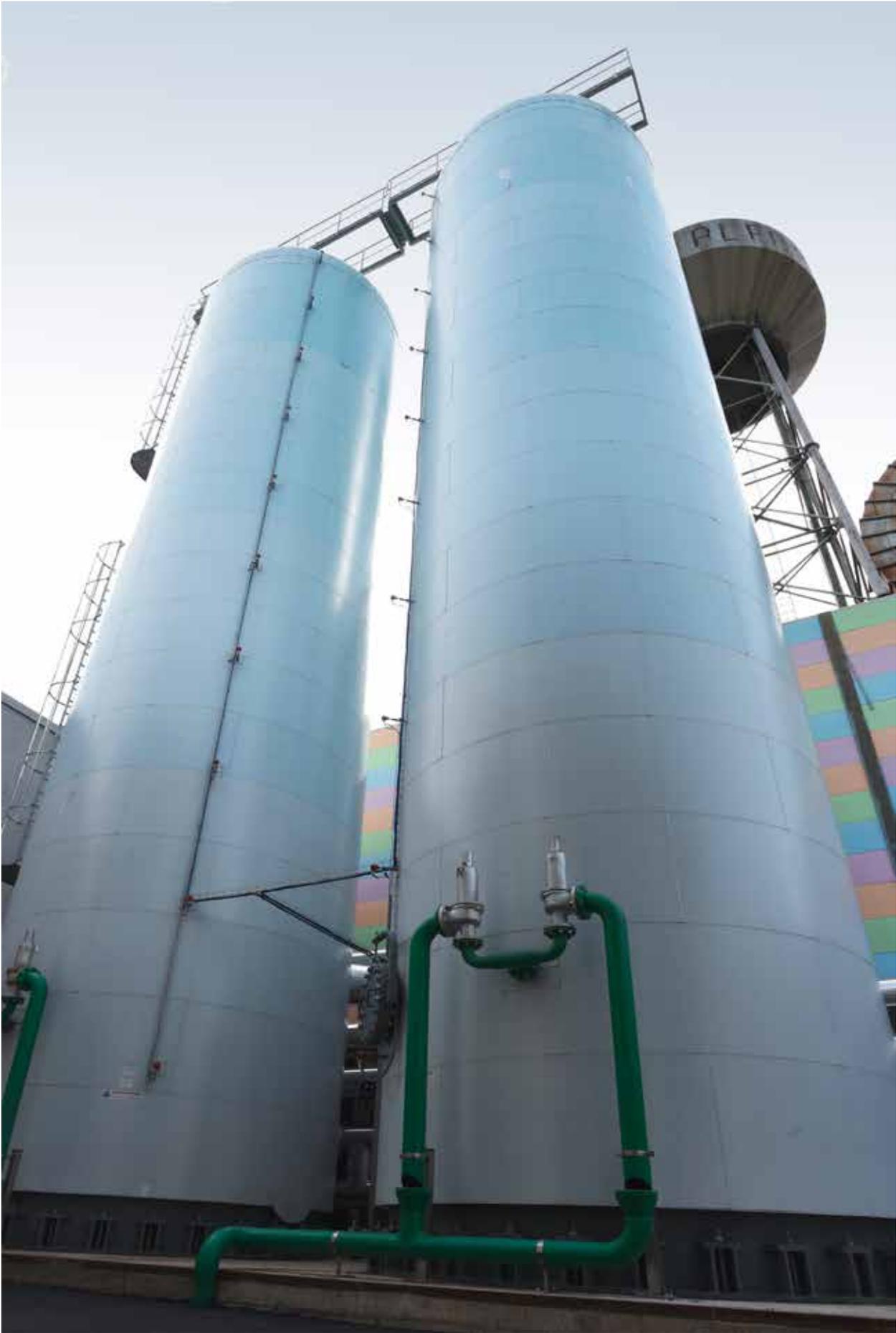
- ▶ quick lime unloading in EAF 1 carried out in August 2021, leading to energy and cycle time savings;
- ▶ the use of polymeric materials from recycled post-consumer plastics in compliance with UNIPLAST-UNI 10667 that can replace coal and its derivatives as reducing agent in iron ore oxidation reactions in order to decarbonise the steelmaking process.
- ▶ energy efficiency of the rolling mill through better management of reheating furnaces and production, favouring the charging of hot billets in the furnace;
- ▶ "Smart Grid Pilot": this system for recovering thermal energy from the steel mill is an experimental project for heat recovery and heat transfer to the Brescia district heating system. Given the great impact this initiative generates for the community of Brescia, it has been decided to devote an in-depth study to the project on the following page.

## 3

## FUTURE INITIATIVES

Additional initiatives for 2022 onwards are being evaluated, such as:

- ▶ installation of a new slag door with cleaner to reduce liquid cooling and oxidation in the the EAF.
- ▶ installation of a new high-efficiency burner to maintain ladle temperature before tapping out, with the aim of reducing electricity consumption in secondary metallurgy;
- ▶ level 2 system to check combustion in heating furnaces during transients;
- ▶ complete revamping of the intermediate phase in the wire rod mill, (TV), which will lead to benefits in terms of mechanical and electrical reliability, as the entire electronic and electrical equipment will also be replaced, motors included;
- ▶ replacement of part of the delivery pumps for the cooling water for the wire rod rolling mill. This is a long-term pump replacement project to save energy, as cooling requirements have changed over the years;
- ▶ audits of compressed air generating systems.



Hot water storage tanks serving the heat recovery system

## Smart Grid Pilot<sup>18</sup>

Alfa Acciai is aware of its role in the community in which its facilities are located, near the residential area south-east of Brescia, and has continually invested in projects over the years to research new sustainable solutions.

The innovative Smart Grid Pilot project is one of them, involving a prototype to recover heat from the offgas plant cooling system serving one of the furnaces at the steel mill, which melts steel at 1660 degrees. The aim is to meet the energy requirements of Brescia's inhabitants by constructing a highly energy-efficient heat exchange system that connects the Alfa Acciai process and the A2A district heating network. More specifically, the design is based on a sophisticated control system that guarantees the recovery of heat energy through predictive algorithms. These follow the steel mill process, and drive the heat exchange system with high-efficiency pumps with variable flow rates on large energy tanks.

The project is part of the Smart Specialisation Strategy (S3) set up by Lombardy Regional Government, which supported this project in partnership with Alfa Acciai, A2A Calore & Servizi & District Heating Planet & UniBS. Brescia University has provided scientific and technical experience by initiating research activities on the new system to increase the efficiency of large heat storage systems, the thermal/dynamic behaviour of the buildings served by the district heating network, the method of allocating energy to users of the district heating network, and the use of heat energy currently dissipated in evaporation towers.

During the 2021-22 winter period, project test activities progressed successfully with regard to energy transfer, in terms of reaching a temperature compatible with the district heating and Alfa Acciai's business continuity, as the activities did not interfere with the steel mill's melting process.

Thanks to the new plant the following is expected each year:

- savings amounting to 2,340 TOE (tonnes of oil equivalent);
- atmospheric emissions prevented: 5,609 tonnes/year of CO<sub>2</sub>, 933 kg/year of CO and 4,405 kg/year of NO<sub>x</sub>, plus a drastic reduction in PM10 and PM2.5 particles;
- reduction in the heat dispersed into the atmosphere and the consumption of makeup water by approximately 2,300 m<sup>3</sup>/year.

Just like all other steel mills with electric arc furnaces, Alfa Acciai represents an ethical example of circularity by recycling ferrous scrap, and with this project the company is moving towards energy circularity, by capitalising on heat that would otherwise be released into the atmosphere, and contributing to the decarbonisation of urban life.



18) With support from POR FESR 2014-2020 / Innovation and Competitiveness.



Close-up of the interconnection hub with the district heating network

With regard to **Acciaierie di Sicilia**, in 2021 the Tempcore® system was revamped to increase product quality and reliability, and save electricity and water. In addition to this the heating furnace parameters were adjusted to improve the management of natural gas consumption.

In 2022 Acciaierie di Sicilia activities mainly focused on two major operations:

- ▶ the installation of a Static Var Compensator (SVC) to achieve an increase in the furnace's average active power to the order of 5%; reduction in energy consumption of approximately -1.5%, power-on reduction of approximately 1-2 min/casting, reduction in electrode consumption due to increased electric arc stability;
- ▶ installation of plants required for the hot charging process (800 °C approximately) directly in the heating furnace for billets completing the continuous casting process, thereby enabling energy savings to the order of 30-50% compared with conventional cold charging processes.

**Tecnofil** has in turn initiated and consolidated the following initiatives:

- ▶ during the three-year period 2019-2021, the company implemented extensive LED lighting in all production

departments, resulting in a significant improvement of the lighting quality in the processing areas and significant savings in electricity. This activity was completed during 2021;

- ▶ electrical revamping of a further two wire drawing machines that will shift from DC motors to AC motors, which, given their construction characteristics, combined with increasingly high-performance control systems, provide better management of absorption peaks during restarts, achieving significant efficiency compared to the previous situation.

Last but not least, in 2021, **Ferroberica** continued to report a decrease in LPG consumption compared to 2019. In particular, 21% reduction was achieved in 2020 and 25% in 2021. In fact, a new machine for the cold cutting of bars using a saw was successfully installed in Vicenza in 2021, and the purchase and installation of the same machine for the Catania-based facilities will be completed in 2022, which is expected to generate a reduction in LPG consumption. Although this is a relatively small measure, it will contain the use of fossil fuels and thus a reduction in CO<sub>2</sub> (scope 1) emitted by the company.

## Management and monitoring of GHG emissions

GRI 305-1; GRI 305-2; GRI 305-4;



### Management of pollutant emissions and decarbonisation

#### Description of topic and its relevance

*Compliance with environmental regulations on polluting emissions generated, directly or indirectly, by the companies' production activities, including energy consumption, and initiation of a process aimed at decarbonisation.*

*The main objective is to implement energy transition processes towards more efficient and lower impact models.*

#### Scope of the topic

Atmospheric emissions have a local perimeter that is managed and controlled by the organisation through the synergy between the operational staff and the Environment departments. This topic concerns all Group's companies, but the most significant impacts in term of emissions are attributable to the Group's two steel mills.

Energy efficiency levels are returning to pre-pandemic levels in Europe though they are not yet in line with the trend expected for achieving net zero in terms of pollutants and climate changing emissions. The 2021 report by the International Energy Agency outlined the need to increase investments before 2030 to incentivise the expansion of technologies and solutions to reduce greenhouse gases to zero by 2050, as set out in the

Roadmap to Net Zero by 2050.

The EU emission trading system (ETS) was reformed to achieve these targets. This initiative aims to reduce assigned quotas of greenhouse gas emissions, especially those from energy-intensive industries and power stations, thereby including Alfa Acciai and Acciaierie di Sicilia as electric arc furnace steel producers.

### Emission Trading System

The EU ETS is based on a Cap-and-Trade principle, i.e. a limit is set on the maximum amount of CO<sub>2</sub> that can be released by plants covered by the system at European level. Companies can buy or sell allowances on the basis of their requirements within this limit. Once a year the companies that participate in the EU ETS must report the tonnes of CO<sub>2</sub> released. A limited number of emission allowances is assigned free of charge to some companies, on the basis of standard allocation rules applied throughout Europe. Companies that do not receive free emission allowances, or those received are insufficient to cover the emissions produced, must buy the emission allowances at auction or from other companies.

In the third ETS period (2013-2020), the Alfa Acciai Group did not need to purchase allowances in addition to those allocated as a result of its plant performance; the same occurred in the first year (2021) of the fourth ETS period.

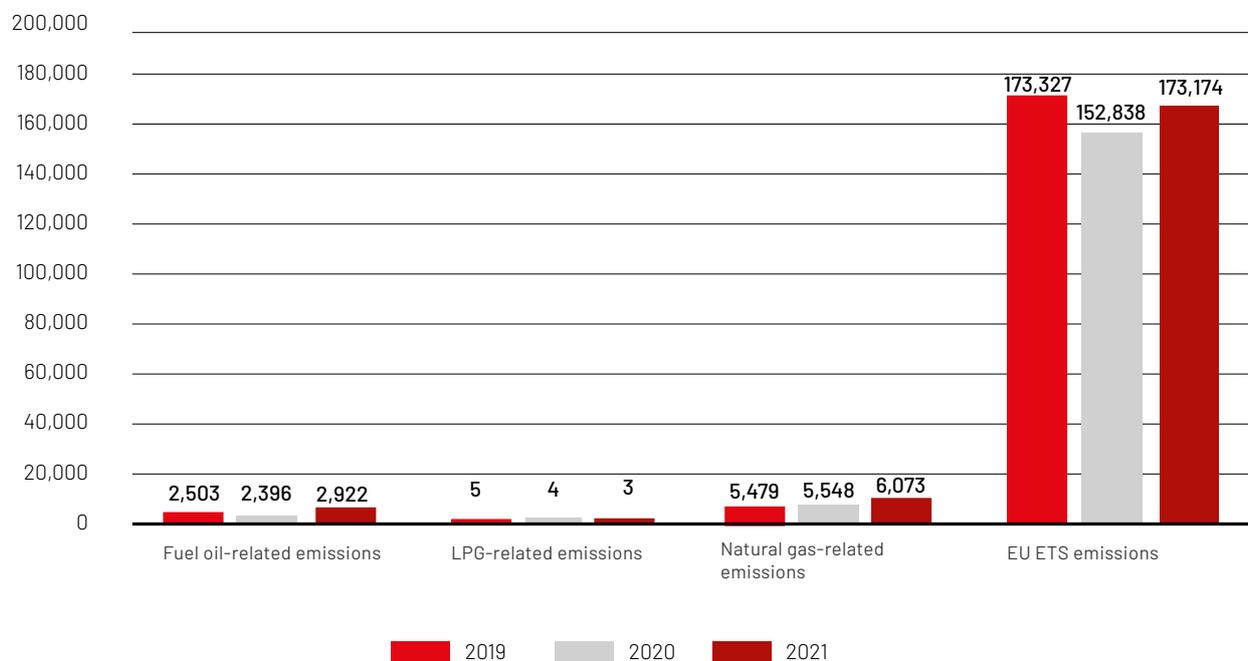
The emissions monitored and reported by Alfa Acciai Group companies are divided into Scope 1 and Scope 2 categories. More specifically, according to the definition of the Environmental Protection Agency (EPA), Scope 1 emissions are direct greenhouse gas (GHG) emissions that are generated by sources controlled or owned by an organisation (e.g., emissions associated with the combustion of fuels in boilers, furnaces, vehicles).

Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat or cooling. Although Scope 2 emissions physically occur at the facility where they are generated, they are accounted for in an organisation's GHG inventory because they are the result of the organisation's use of energy.

The Group's direct greenhouse gas emissions (Scope 1) for 2019-2021 are shown below. A 13% increase in direct emissions was recorded in 2021 compared to 2020, mainly related to the resumption of production in Italy, while the difference is minimal compared to 2019 emissions.



### Direct GHG emissions (Scope 1) (tCO<sub>2e</sub>)



Direct GHG emissions (Scope 1) <sup>19</sup>	U.M.	2021	2020	2019
Fuel oil-related emissions	tCO <sub>2e</sub>	2,922	2,396	2,503
LPG-related emissions	tCO <sub>2e</sub>	3	4	5
Natural gas-related emissions <sup>20</sup>	tCO <sub>2e</sub>	6,073	5,548	5,479
<b>EU ETS emissions<sup>21</sup></b>	<b>tCO<sub>2e</sub></b>	<b>173,174</b>	<b>152,838</b>	<b>173,327</b>
<i>of which natural gas-related emissions</i>	tCO <sub>2e</sub>	111,389	91,850	104,267
<i>of which emissions related to the use of fossil fuels</i>	tCO <sub>2e</sub>	61,784	60,989	69,061
<b>Total Scope 1 emissions (tCO<sub>2e</sub>)</b>	<b>tCO<sub>2e</sub></b>	<b>182,172</b>	<b>160,787</b>	<b>181,314</b>

Likewise, indirect greenhouse gas emissions (Scope 2), calculated according to the location-based methodology<sup>22</sup>, showed a 13% increase in 2021, compared to 2020, and 3% compared to 2019, influenced by the national average emission factors (gCO<sub>2</sub>/KWh).

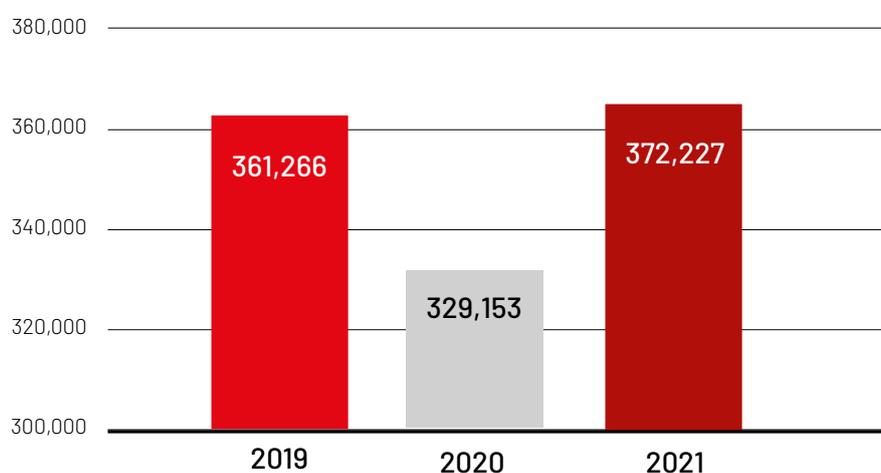
19) For the calculation of direct CO<sub>2</sub>eq (Scope 1) emissions, DEFRA emission factors 2021, 2020 and 2019 were used for the relevant years.

20) Relating to Alfa Derivati, Ferroberica, Tecnofil.

21) For the calculation of emissions linked to the consumption of natural gas and the use of carbon materials at Alfa Acciai and Acciaierie di Sicilia, which are covered by the EU-ETS Emissions Trading Scheme, the 2019, 2020 and 2021 ETS method has been adopted for the years of reference.

22) The location-based method consists of calculating emissions from electricity consumption using national average emission factors for the different countries where electricity is purchased. The values of 327 gCO<sub>2</sub>/kWh, 338.54 gCO<sub>2</sub>/kWh and 323.84 gCO<sub>2</sub>/kWh were considered for 2019, 2020 and 2021, respectively. These values are taken from the Association of Issuing Bodies (2018 and 2020 reports).

### Emissions from purchased electricity (Scope 2) (tCO<sub>2e</sub>)



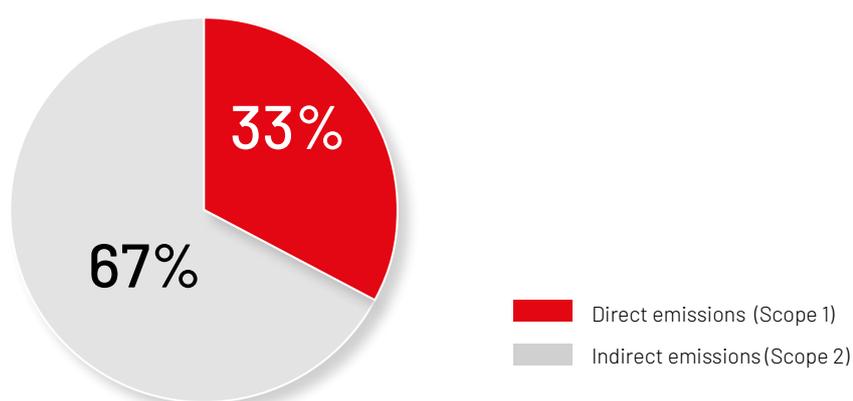
Indirect GHG emissions from energy consumption (Scope 2)	U.M.	2021	2020	2019
Emissions from purchased electricity	tCO <sub>2e</sub>	372,227	329,153	361,266
<b>Total Scope 2 emissions – Location Based</b>	<b>tCO<sub>2e</sub></b>	<b>372,227</b>	<b>329,153</b>	<b>361,266</b>

Looking at the Group's emission intensity, an improvement can be seen between 2020, a year significantly affected by the pandemic, and 2021. The comparison between the years 2019 and 2021, which are similar years from a production point of view, shows an equal emission intensity.

Intensity of GHG emissions	U.M.	2021	2020	2019
Total Scope 1 and Scope 2 LB emissions	tCO <sub>2e</sub>	554,399	489,940	542,581
Total Alfa Acciai Group's finished/processed products	t	2,362,130	2,016,907	2,293,937
<b>Emission intensity</b>	<b>tCO<sub>2e</sub></b>	<b>0.235</b>	<b>0.243</b>	<b>0.237</b>

Indirect emissions from electricity (Scope 2 LB) account for two thirds of the Group's total greenhouse gas emissions (tCO<sub>2e</sub>).

### 2021 Emissions



We would like to highlight how other initiatives can directly contribute to the reduction of CO<sub>2</sub> emissions at a global level, and this is why the Group is also committed to reducing greenhouse gas emissions generated by **transport**. As a matter of fact, since 2020 a **booking scrap supply time-slot** system has been in operation at Alfa Acciai, which in 2021 was extended to process raw materials and Acciaierie di Sicilia, thereby allowing a more regular incoming flow, eliminating waiting times and queues of heavy vehicles, with the direct consequence

of more sustainable transport with less environmental impact.

The year 2022 will witness the emergence and testing of the extended booking system for finished products, at Alfa Acciai first, followed by Acciaierie di Sicilia.

The Group's further significant commitment to sustainable logistics is the use of an intermodal transport mode to and from Central Europe, thereby finished products are exported and raw materials (ferrous scrap) are imported through the Montirone railway hub.



The railway hub in Montirone (BS)

## Other atmospheric emissions

GRI 305-7

### Nitron dioxide (NO<sub>x</sub>) and other significant emissions

Atmospheric emissions from the stacks connected to the melting and rolling process, especially for Alfa Acciai and Acciaierie di Sicilia steel mills, account for almost all emissions. Emission management is a priority for the Group, which complies with it in accordance with the provisions of the environmental authorisations of the various production sites with a view to reducing the impact and complying with current legislation.

By adopting continuous monitoring systems for filtration performance and related parameters, very high performance can be achieved in terms of dust removal from offgas stacks, even exceeding the performance indicated at the EU level in the BAT conclusions.

The Alfa Acciai Group regularly monitors significant emissions generated by its production processes, the total values of which are presented in the table below.

Other significant emissions	U.M.	2021	2020	2019
NOx emissions	t	331	283	475
CO emissions	t	1,778	1,638	1,992
COT	t	121	86	90
Total dust (PTS)	t	17	11	14
Inorganic chlorine compounds expressed as HCl	t	7	19	13
HF	t	3	2	6
Pb	kg	701	512	712
Zn	kg	5,871	3,985	4,043
Other metals (As, Cd, Cr, Ni, Cu, Sn, V, Co, Mn)	kg	890	600	891
Hg	kg	35	39	42
Dioxins and furans PCDD/F	g-Teq	0.11	0.07	0.06
IPA	kg	5.03	2.25	0.54
Pcb	Kg	0.57	0.14	0.05

The total flow of emissions is calculated in the same way for all Group companies and is based exclusively on the analytical certificates of emissions as provided for in the monitoring and control plan of the various environmental authorisations in place.

All actions to reduce dust at the stack have contributed significantly to minimising other pollutant emissions linked to dust concentrations, such as heavy metals and organic micropollutants. In particular, Alfa Acciai and Acciaierie di Sicilia have installed a system to inject activated carbon in the outlet upstream of the bag filter which, alongside controlling process parameters and raw materials, has effectively reduced the concentration

of dioxins and furans (PCCD/F), which are monitored continually with a sampling device called a Dioxin Monitoring System (DMS).

In addition, the Group takes constant action with plant maintenance programmes in order to maintain efficient facilities and ensure high performance resulting in dust and metal emissions close to the technical minimum possible.

All the measures put in place, combined with careful management of the environmental installations, make it possible to keep the concentrations of atmospheric emissions **well below the limits set by the integrated environmental authorisations.**



## Other atmospheric emissions – air quality

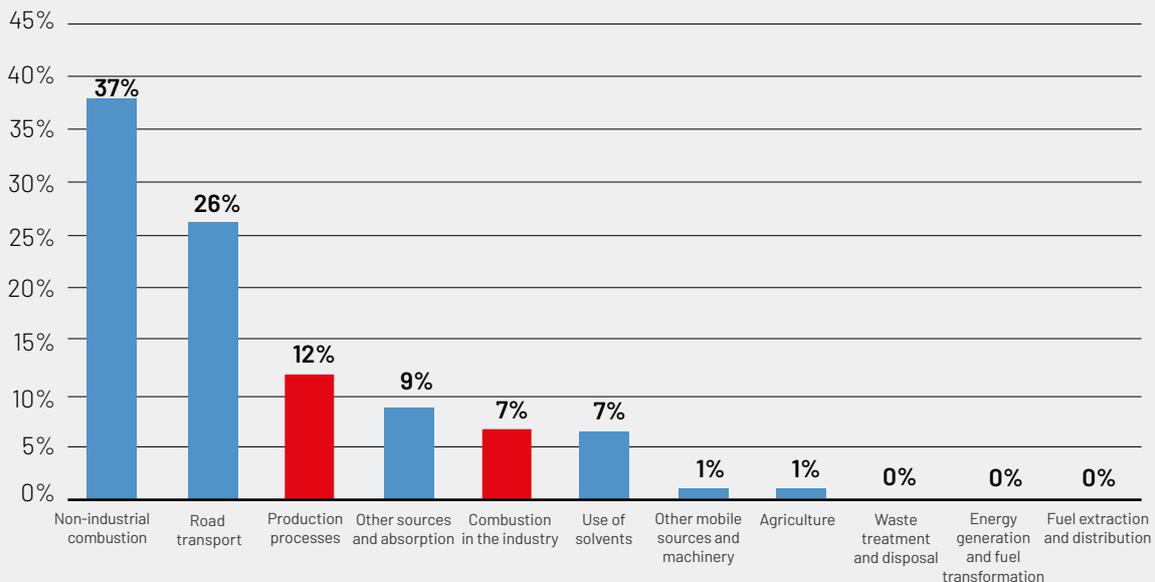
Air quality is a very complex issue, as the atmosphere is subject to continuous exchanges and interactions and, in a given area, it not only depends on local sources of emissions, rather it can often be affected significantly by sources of emissions localized in distant geographical areas, which reach us through complex transport and diffusion phenomena characterising the atmosphere.

In November 2015, the Brescia City Council set up an **Air Quality Observatory** to handle the complex subject of air quality in a succinct and accessible manner for the public, and to promote and publicise good individual practices to safeguard the environment and wellbeing. In January 2021 this observatory published its first report, focusing on particulate (PM10) given that this pollutant was considered the marker of the complex phenomenon of environmental pollution in the Po Valley.

The atmospheric emissions inventory (INEMAR), developed and managed by the Lombardy Environment Agency (ARPA), provides a list of polluting sources split into 11 macro sectors, in which industrial emissions are in turn defined by two macro categories - industrial combustion and production. With regard to Alfa Acciai, emissions attributable to melting operations come under the macro category 'production processes', whereas all heating activities for rolling operations come under the macro category 'industrial combustion'.

The diagrams below show annual emission calculations for the Brescia City Council district and the Brescia municipality.

### Yearly Emissions from the Brescia City Council district - PM10 (INEMAR 2017 inventory - public revision)



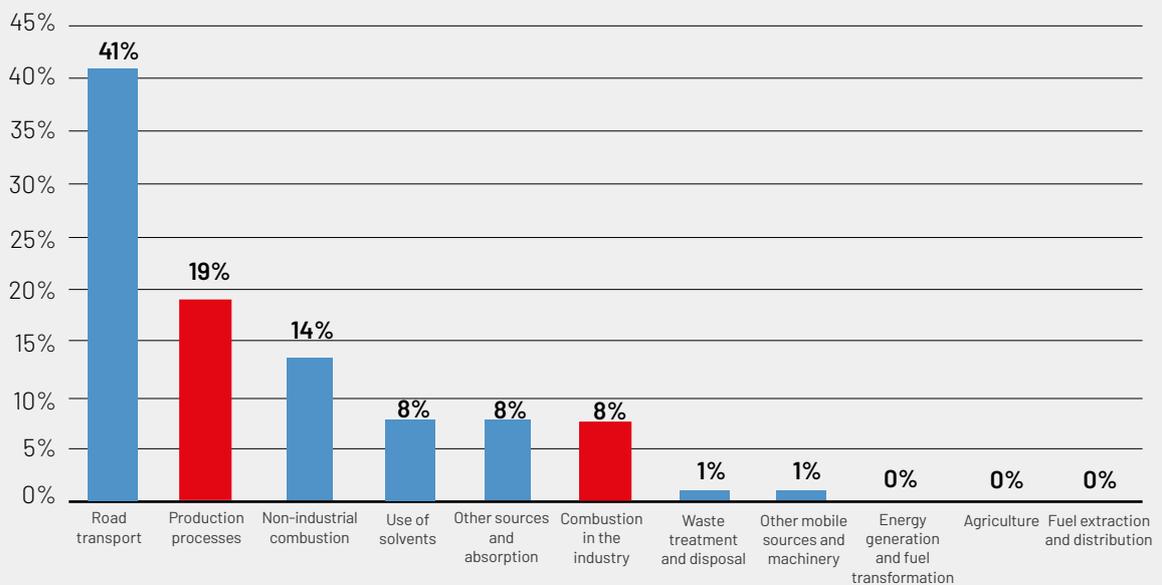
23)According to the criteria set out in regional legislation, the Brescia city council district includes: Botticino, Bovezzo, Brescia, Castelmella, Castenedolo, Cellatica, Collebeato, Concesio, Flero, Gardone Val Trompia, Gussago, Lumezzane, Marcheno, Nave, Rezzato, Roncadelle, San Zeno Naviglio, Sarezzo and Villa Carcina.

The analysis of emissions shows a major contribution from the macro sectors Road Transport and Non-Industrial Combustion, especially biomass combustion. In the Brescia City Council district, the weighting factor of this latter contribution drops significantly thanks to the presence of the town district heating network to which Alfa Acciai contributes through the above-described Smart Grid Project.

For further information, you can read the full document by framing the following QR code.



**Yearly Emissions from the Brescia Municipality - PM10**  
(INEMAR 2017 inventory - public revision)



## 2030 Sustainable Development Goals

Sustainable Development Goals	Target	Alfa Acciai action
<b>6 – Clean water and sanitation</b> 	<b>Target 6.4</b> ► Considerably increase the efficiency of water use in every sector by 2030 and ensure sustainable drinking water supplies and procurement to address water scarcity and substantially reduce the number of people impacted by it.	► 97% of water demand at Alfa Acciai's facilities, relating to water withdrawn from wells, is continuously recirculated for more than 30 cycles before being drained off. In this way, some 74 million m <sup>3</sup> /year of water savings can be achieved in relation to the plant cooling needs of Alfa Acciai alone. ► Alfa Acciai has a first flush and runoff rainwater collection and treatment system that, following a specific process, allows rainwater to be replenished into industrial water circuits, thus reducing withdrawals from wells.
<b>7 – Clean and affordable energy</b> 	<b>Target 7.3</b> ► Double the rate of improvement in energy efficiency globally by 2030.	► During 2021, Alfa Acciai further consolidated some earlier experimental activities that generated 4.54 kWh/t energy savings (i.e., 22,995 GJ) compared to 2020.
<b>9 – Industry, innovation and infrastructure</b> 	<b>Target 9.1</b> ► Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.	► Through an innovative and efficient system for recovering thermal energy from the production site, the Smart Grid Pilot will contribute to the supply of the district heating network already serving the city of Brescia.
<b>11 – Sustainable cities and communities</b> 	<b>Target 11.6</b> ► Reduce the adverse <i>per capita</i> environmental impact of cities by 2030, including by paying special attention to air quality and municipal and other waste management.	

Sustainable Development Goals	Target	Alfa Acciai action
<p><b>12 - Responsible consumption and production</b></p> 	<p><b>Target 12.2</b></p> <p>▶ Achieve the sustainable management and efficient use of natural resources by 2030.</p>	<p>▶ The finished product of Alfa Acciai and Acciaierie di Sicilia has a minimum recycled content of 98.9 percent for Alfa Acciai and 97 percent for Acciaierie di Sicilia as proven by UNI/PdR 88:2020 Certification according to UNI CEI EN ISO/IEC 17067.</p> <p>▶ Spent refractory materials from the demolition of the melting furnace are crushed and returned to the production cycle as partial raw material substitutes (magnesite).</p>
<p><b>13 - Climate action</b></p> 	<p><b>Target 13.2</b></p> <p>▶ Integrate climate change measures into national policies, strategies and planning.</p>	<p>▶ Alfa Acciai is committed to replacing coal and its derivatives, which are used as additives and process agents, with recycled polymers that help reduce emissions.</p> <p>▶ Alfa Acciai and Acciaierie di Sicilia have implemented a booking scrap and process raw materials supply time-slot system, thereby reducing the environmental impact of PM10 dust emissions generated by heavy vehicles, which are partly responsible for the complex phenomenon of environmental pollution in the Po Valley.</p>



Acciaierie di Sicilia



# 4

## Social responsibility, caring for people and local communities



## 4 | Social responsibility, caring for people and local communities



### The people of the Alfa Acciai Group

GRI 102-8; GRI 401-1; GRI 405-1

As stated in the Code of Ethics, employees and collaborators are essential for the success of a business. As a result, the Group's companies protect and develop human resources in order to improve and increase company assets and the competitiveness of the skills of each and every person.



Vincenzo Sidoti  
HR Manager at Alfa Acciai

### Employment, health and wellbeing of workers

#### Description of topic and its relevance

*Creation of stable and long-term labour relationships, in compliance with national and second-level labour collective bargaining agreements, in a health- and wellbeing-oriented climate for employees.*

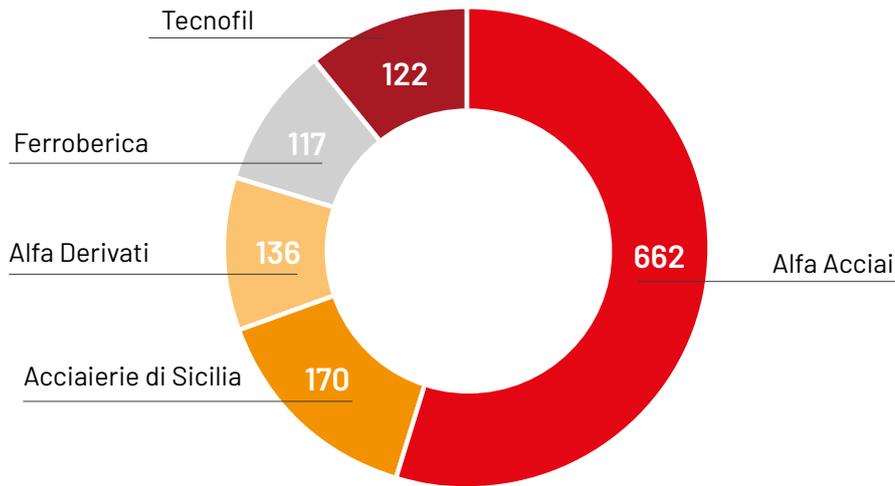
Care for people is a fundamental issue for the Alfa Acciai Group as it helps to build employee loyalty, enhance the value of own resources and create long-term working relationships.

#### Scope of the topic

Caring for people involves all Group employees and collaborators, including workers of outsourced companies, as they are involved in prevention and health and safety activities.

The management of the Alfa Acciai Group's staff is inspired by the principles of the Code of Ethics and is supervised by the Alfa Acciai Group's Human Resources function, which also supports the other companies in this regard.

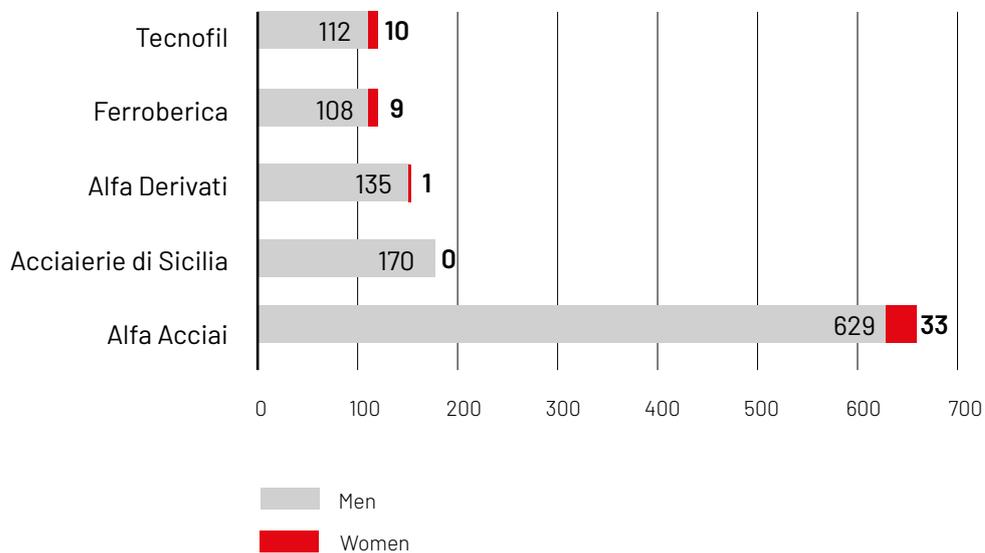
### Workforce by company (2021)



Taking a look at the composition of Group’s workforce, the total number of employees as at 31.12.2021 was 1,207, up by 39 compared to 2020 (+3%). Most of the staff

belongs to Alfa Acciai (662 in 2021) and Acciaieria di Sicilia (170 in 2021), followed by Alfa Derivati with 136, Ferroberica with 117 and Tecnofil with 122 employees.

### Workforce by company and gender



Employee qualifications	Gender	2021	2020	2019
	<b>Total</b>	<b>17</b>	<b>14</b>	<b>14</b>
<b>Executives</b>	<i>Men</i>	16	13	13
	<i>Women</i>	1	1	1
	<b>Total</b>	<b>24</b>	<b>26</b>	<b>28</b>
<b>Middle-managers</b>	<i>Men</i>	23	26	28
	<i>Women</i>	1	0	0
	<b>Total</b>	<b>311</b>	<b>302</b>	<b>290</b>
<b>White-collars</b>	<i>Men</i>	260	255	247
	<i>Women</i>	51	47	43
	<b>Total</b>	<b>855</b>	<b>826</b>	<b>808</b>
<b>Blue-collars</b>	<i>Men</i>	855	826	808
	<i>Women</i>	0	0	0
	<b>Total</b>	<b>1,207</b>	<b>1,168</b>	<b>1,140</b>
<b>Total</b>	<i>Men</i>	1,154	1,120	1,096
	<i>Women</i>	53	48	44

In addition, the Alfa Acciai Group's companies contract external staff for in-house services such as: cleaning, plant installation work<sup>24</sup>, ordinary and extraordinary maintenance. The table below shows an estimate of

the number of workers hired by contractors operating permanently in Group companies<sup>25</sup> in 2021 and in the previous two years.

Outsourced staff	Gender	2021	2020	2019
	<b>Total</b>	<b>562</b>	<b>523</b>	<b>528</b>
<b>Alfa Acciai and Alfa Derivati<sup>26</sup></b>	<i>Men</i>	538	504	510
	<i>Women</i>	24	19	18
	<b>Total</b>	<b>75</b>	<b>75</b>	<b>75</b>
<b>Acciaierie di Sicilia</b>	<i>Men</i>	75	75	75
	<i>Women</i>	0	0	0
	<b>Total</b>	<b>79</b>	<b>79</b>	<b>79</b>
<b>Tecnofil</b>	<i>Men</i>	77	77	77
	<i>Women</i>	2	2	2
	<b>Total</b>	<b>212</b>	<b>201</b>	<b>201</b>
<b>Ferroberica</b>	<i>Men</i>	212	201	201
	<i>Women</i>	0	0	0
	<b>Total</b>	<b>928</b>	<b>878</b>	<b>883</b>
<b>Total</b>	<i>Men</i>	902	857	863
	<i>Women</i>	26	21	20

24) These installation works are classed as "contracts" or "construction sites" under legislative decree 81/08.

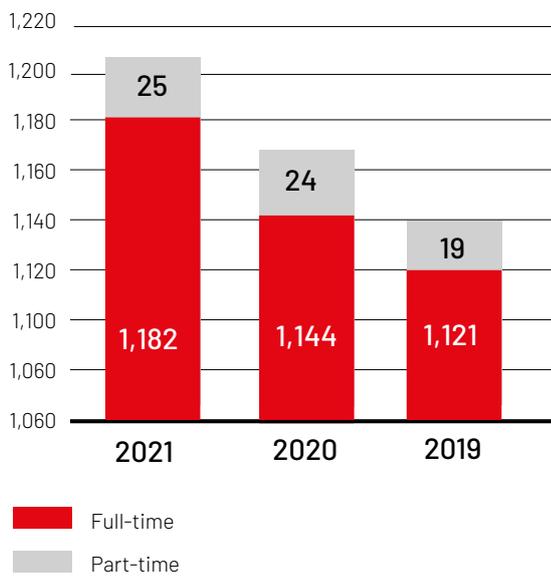
25) It is specified that for Alfa Acciai and Alfa Derivati these data were extracted from the AlfaGest software, adopted by the two companies for the computerized management of safety (an in-depth discussion of the role and importance of this management system is provided here under the section "The management system in place"). For Acciaierie di Sicilia, Tecnofil and Ferroberica, however, this is a rough estimate based on the number of personnel employed by permanently outsourced companies.

26) It is worth noting that the AlfaGest software provides the incoming clocking in of workers from outsourced companies and access to Alfa Acciai and Alfa Derivati is through the same gatehouse. Therefore, data are provided jointly for these two companies.

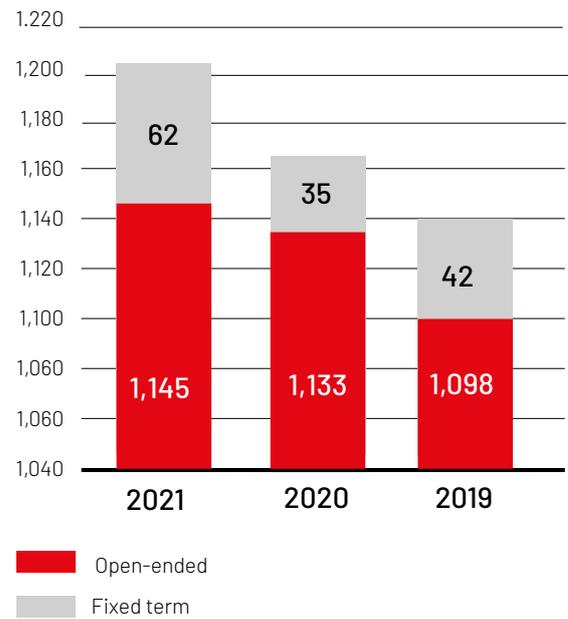
As for the type of contract, the Group prefers the open-ended contract, which in 2021 accounted for 95% of staff, slightly down by 2% on the 2020 figure as a result of the entry at Alfa Acciai of new positions with other types of contracts. Furthermore, in line with the 2020

figure, 98% of the Group staff are employed full-time. Through these employment contracts the Group receives and offers stability, which ensures the presence of a stable and experienced workforce on the one hand and offers its employees a secure and permanent job on the other.

**Number of employees by type of employment**



**Number of employees by type of contract**



Number of employees by type of employment		Gender	2021	2020	2019
Full-time	Men		1,151	1,116	1,094
	Women		31	28	27
	<b>Total</b>		<b>1,182</b>	<b>1,144</b>	<b>1,121</b>
Part-time	Men		3	3	4
	Women		22	21	15
	<b>Total</b>		<b>25</b>	<b>24</b>	<b>19</b>
Total	Men		1,154	1,119	1,098
	Women		53	49	42
	<b>Total</b>		<b>1,207</b>	<b>1,168</b>	<b>1,140</b>
Number of employees by type of contract		Gender	2021	2020	2019
Open-ended	Men		1,094	1,088	1,060
	Women		51	45	38
	<b>Total</b>		<b>1,145</b>	<b>1,133</b>	<b>1,098</b>
Fixed term	Men		60	31	37
	Women		2	4	5
	<b>Total</b>		<b>62</b>	<b>35</b>	<b>42</b>
Total	Men		1,154	1,119	1,097
	Women		53	49	43
	<b>Total</b>		<b>1,207</b>	<b>1,168</b>	<b>1,140</b>

All group companies, except Alfa Acciai, also resort to temporary workers to overcome problems and unforeseen issues related to the personnel recruitment and selection and have an immediate response to the need for an increase in staff for urgent and unplanned orders.

Furthermore, when looking at staff turnover, it can be seen that the improvement in the pandemic situation in Italy has resulted in an upturn in production and a consequent increase in the number of staff entries. The

recruitment rate, in fact, rose from 9% in 2020 to 13% in 2021, however, it was lower than the 20% rate recorded in 2019. The layoff rate of 10% in 2021 also increased from 7% in 2020, but was lower than the pre-Covid 19 levels of 2019 when it was 17%.

The increase is mainly related to the recruitment of new personnel at Alfa Acciai and Alfa Derivati in order to incorporate new technical and management resources for replacing staff leaving due to retirement and ensure the achievement of set production targets.

Recruitment	2021		2020		2019	
	No.	%	No.	%	No.	%
<b>Total Group recruitment</b>	<b>158</b>	<b>13%</b>	<b>108</b>	<b>9%</b>	<b>226</b>	<b>20%</b>
Men	148	12%	100	9%	218	19%
Women	10	1%	8	1%	8	1%
< 30 years	53	4%	38	3%	37	3%
30 ≤ x < 50 years	83	7%	55	5%	116	10%
≥ 50 years	22	2%	15	1%	73	6%

Layoffs	2021		2020		2019	
	No.	%	No.	%	No.	%
<b>Total Group layoffs</b>	<b>119</b>	<b>10%</b>	<b>80</b>	<b>7%</b>	<b>195</b>	<b>17%</b>
Men	113	9%	77	7%	193	17%
Women	6	1%	3	0%	2	0%
< 30 years	23	2%	9	1%	19	2%
30 ≤ x < 50 years	36	3%	25	2%	85	7%
≥ 50 years	60	5%	46	4%	91	8%

## Caring for wellbeing

GRI 102-41; GRI 406-1

**Among the key objectives pursued by the Group is the focus on the well-being of employees to ensure a corporate climate that values people and fosters a harmonious coexistence between working life and the private domain.**

As our Group operates in a country that has ratified the fundamental human rights conventions of the International Labour Organisation (ILO), all the Alfa Acciai Group companies are engaged to comply with these protocols.

In line with previous years, the Group is committed to maintaining an ongoing dialogue with trade unions with the aim of ensuring compliance with regulations and meeting the needs of its employees. In particular, collective bargaining applies to 100% of the Group's staff and follows the stipulations of collective agreements for first and second level employees.

The elimination of discrimination in the workplace (ILO conventions 100 and 111) is facilitated by the fact that the Alfa Acciai Group employees who work on production sites are of various nationalities, and operate in a climate of sound social integration and mutual respect. Such diversity represents added value for the Group, and no cases of discrimination were reported for the three years reporting period.

Furthermore, the Group undertakes to comply with the following conventions, even though they are not specifically relevant to the socio-economic context in which it operates:

- ▶ Elimination of forced or compulsory labour (ILO conventions 29 and 105);
- ▶ Abolition of child labour (ILO conventions 138 and 182).

As part of ongoing improvement, the Group is aiming to increase involvement internally and offer Alfa-specific welfare programmes and services that meet the needs of its employees.

To this effect, the Group plans to further engage with personnel and carry out a survey to understand their specific needs and requirements. In this regard, in 2021 some Group companies launched a study on the introduction of a platform for the provision of welfare services.



## Training and professional development

GRI 404-3

The Group is committed to delivering regular training courses on different topics to facilitate professional development and update the skills and knowledge of personnel.

The training courses are generally outsourced and, in the last three years, they mainly covered the following topics:

- ▶ **Health and safety in the workplace;**
- ▶ **Environmental skills;**
- ▶ **Metallurgical and engineering skills;**
- ▶ **Management skills.**

In order to constantly stimulate the growth and further training of its employees, Group companies regularly participate in qualified seminars, webinars and conferences, covering a multitude of topics, both specific to the steel industry and general on economic and industrial trends.

Given that **professional development** is central to fostering business development, since 2010 the Group has implemented an employee performance appraisal process to analyse the work of personnel, with a view to

continuous improvement and professional development. Compared to the Group's total workforce, only 9% are currently involved in the performance appraisal process, up from 8% in 2020. This percentage rises to 31% if we exclude blue-collar staff, who represent 71% of the workforce in 2021 and who are not currently involved in such an appraisal process.

With reference to the individual professional categories, which are detailed in the table below, more than half of the Group's executives and middle managers are regularly assessed for performance, although the number decreased compared to 2020. In fact, 57% of executives and 69% of middle managers were involved in the assessment process in 2020, compared to 53% and 58% in 2021, respectively. Conversely, white-collar workers are involved to a lesser extent than the other professional categories, despite the number being slightly increased at 24% compared to 2020.

Percentage of employees receiving regular performance and professional development appraisals	Gender	2021	2020	2019
Executives	<b>Total</b>	<b>53%</b>	<b>57%</b>	<b>50%</b>
	Men	56%	62%	54%
	Women	0%	0%	0%
Middle managers	<b>Total</b>	<b>58%</b>	<b>69%</b>	<b>52%</b>
	Men	61%	69%	52%
	Women	0%	0%	0%
White-collar staff	<b>Total</b>	<b>24%</b>	<b>23%</b>	<b>22%</b>
	Men	27%	27%	26%
	Women	10%	2%	2%

## Safety in the workplace



The safeguarding and enhancement of workers' health and safety is one of the Alfa Acciai Group's top priorities.

### Occupational health and safety

#### Description of topic and its relevance

*Promoting a culture of safety at all its sites and production facilities through specific training, awareness-raising and prevention activities.*

For the Alfa Acciai Group, safety is at the core of its business activities and each Group company is committed to adopting new safety measures and obtaining certifications in order to constantly protect the health of all own employees and stakeholders.

#### Scope of the topic

Safety is a key concern at every stage of a company's production process and in its relations with its employees, so it is a vital topic that affects all levels of the company in its daily work.



OH&S managers of Alfa Acciai's production units: from left, Giambattista Cò for the Steel Mill, Alessandro Giovannelli for Central Services and Massimiliano Benedetti for the Rolling Mills.

## Current management system

GRI 403-1; GRI 403-2; GRI 403-4; GRI 403-6; GRI 403-7

The risks to workers' health and safety in a steel manufacturing environment are high for reasons closely related to the locations where production activities are carried out and the equipment and machinery used by workers. Therefore, safety is perceived as crucial by all workers and the Alfa Acciai Group, which is committed to always maintaining a high level of attention on this topic, especially in contexts where routine actions lead workers to reduce their attention to risk and automatically apply procedures without reflecting on the implications of minimal differences. Therefore, the Group companies - Alfa Acciai, Acciaierie di Sicilia, Alfa Derivati and Tecnofil - have adopted and implemented the workers' health and safety management system, certified by an accredited third party to guarantee its compliance with the UNI EN ISO 45001 standard through yearly audits.

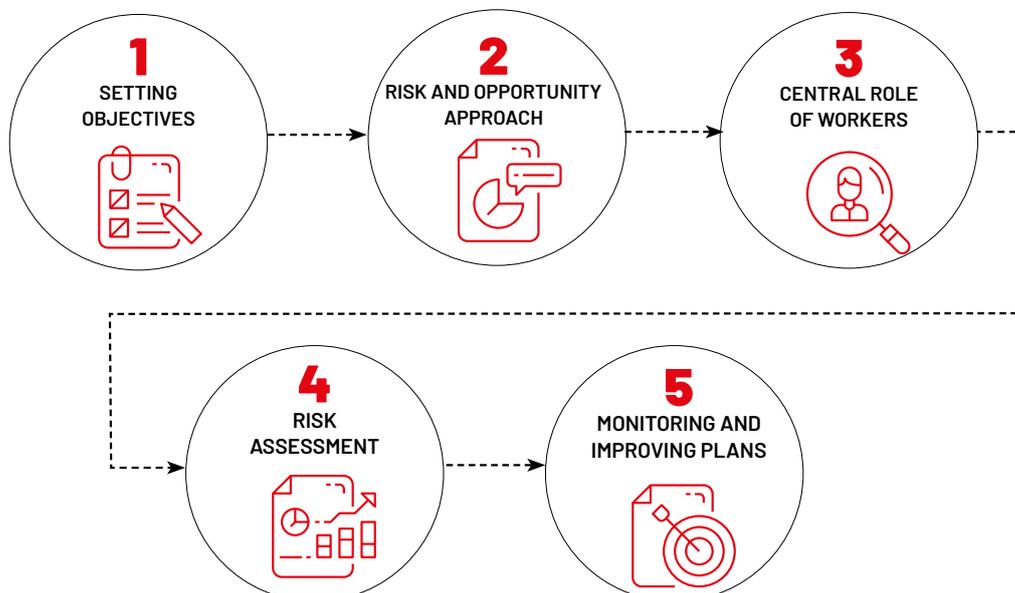
Certified systems are a means of ensuring to all stakeholders that the company's management is monitoring and continuously improving its safety and health performance. Updated certificates can be found on the Group's website: [www.alfaacciai.it](http://www.alfaacciai.it). Ferroberica has an OH&S management system in place, which is not certified given the type of business carried out.



Osvaldo Mingotti, Steel Mill Production Unit Manager at Alfa Acciai

The **management system** is supported, maintained and improved alongside an articulated delegation system that assigns powers and responsibilities; it is the main organisational tool with which to plan, implement and verify the pillars of the corporate strategy shared with all stakeholders and articulated in programmes of measurable and periodically monitored objectives and targets.

The current Management System is characterized by five key elements:



**1.** When **setting safety objectives and targets**, employers, jointly with their delegates, take into account the Safety Policy, legal requirements, analysis of accidents occurred and any communications from stakeholders, the outcome of Risk Assessment and Management reviews, operational needs and possible effects on the organisation's public image. All these elements enable the Group to define clear, relevant and comprehensive objectives.

**2.** In order to ensure the Group's ability to achieve its objectives, the Group has developed and is adopting an **approach based on the Risk and Opportunity concept**, and all companies share the following responsibilities with regard to safety:

- promoting continuous improvement by ensuring that the relevant Management<sup>27</sup>/Entities/Competent Departments achieve the safety objectives;
- ensuring that the implementation process of the Safety System is complied with in the various work phases;
- ensuring that the Entities and/or Functions under their direct control operate in compliance with the Safety System, contributing to its improvement.

**3.** As regards the **role of workers** in the management of safety aspects, they are also involved in the development and implementation of the OSH system through workers' safety representatives (WSR). Participation takes place through periodic meetings at intervals that vary from company to company and formal and informal meetings held on a daily basis.

**4.** The results of **specific risk assessments, including the Risk Assessment Document pursuant to Legislative Decree 81/2008**, are shared with managers and the WSR in order to inform workers on risks and the management of all accidents and events, by posting the relevant analyses on notice boards in company's communal places.

**5.** For the purposes of **monitoring OS&H improvement plans and objectives**, each Group company has set up periodic meetings at company level, during which the performance trends and process indicators are illustrated, any anomalous trends are analysed, opportunities for improvement are assessed and, in the event of

significant deviations from the planned schedule, the competent Management establishes the corrections to be implemented, including any extensions.

As a rule, the corporate improvement plans are reviewed annually as part of Management Reviews and following the occurrence of any critical events or situations.

In 2021, Alfa Acciai deemed it appropriate to update its organisation, management and control model in accordance with Legislative Decree 231 by voluntarily introducing a **quantitative assessment of the 231-related risk analysis** to highlight which of the sensitive activities are most at risk for offences that are relevant under this decree.

In recent years, Alfa Acciai and Alfa Derivati invested in the development of new application modules for the AlfaGest software, which plays a crucial role in safety management and is also being implemented in the other Group companies. In relation to the growing relevance of this application in terms of health and safety for the Group, an in-depth section is provided below.



Vincenzo Cardaci, Steel Mill Manager at Acciaieria di Sicilia

27) Employers as defined by Legislative Decree 81/08

## AlfaGest

AlfaGest is a multi-level software package that has been used by Alfa Acciai, Alfa Derivati and Acciaierie di Sicilia since 2004 for computer-based safety management. As a result of the continuous fine-tuning of its functions and application modules, AlfaGest now makes it possible to collect and manage all the activity records related to workers, machinery, facilities and equipment used in operations, including their suppliers or licensors.

The use of AlfaGest has also recently been extended to contractors who, in order to qualify as such, are required to upload all the necessary documents into the application system, which is specifically designed to be open to outside access via ID and password. All documents need to be validated by Alfa Acciai and only then authorisation to enter the plant is given.

AlfaGest is also used for the digital filling of the Interference Risk Assessment Document (DUVRI) by the Employer's delegates, the Operational Managers of Alfa Acciai and those of the contractors involved. The same applies to construction worksite management according to Title IV of legislative decree 81/08. The new system ensures greater monitoring of the contractor qualification process, the definition of DUVRI stakeholders' tasks in contract management, and the widespread preparation of paper and digital DUVRI documents.

Alfa Acciai is committed to enhancing the training of all those entrusted with the guided filling in of documents through AlfaGest, and promoting the use of the DUVRI by streamlining the document collection and storage process.

In September 2021, Alfa Acciai held a conference organised by the Italian Metallurgy Association (AIM) on the creation and management of computer-aided DUVRIs. More specifically, the company discussed the process of managing the documentation for companies operating under the contracting system.

Lastly, AlfaGest is also used as a healthcare monitoring tool through the Occupational Medicine module. Access to this module is restricted to company doctors, who have the possibility of creating the so-called 'electronic health record' for each employee, thereby collecting all health status monitoring and performing analyses, including statistics, of the entire workforce. Furthermore, in the case of environmental and bio-medical analyses, aggregated results can also be compared with the average values recorded in the city population not working within the Company.



## Safety training

GRI 403-5

The Group feels that disseminating a culture of safety in all its locations and production facilities is of the utmost importance.



The Group companies are strongly committed to disseminating an appropriate health and safety culture in the workplace in order to avoid (or at least minimise) any risk to health or physical safety and optimise working conditions by choosing suitable equipment and working methods.

Accordingly, staff training plays a decisive and invaluable role and, right at the beginning of each year, all Alfa Acciai Group companies usually plan their training activities by defining the Training Plan to be implemented during the year and any updates, as required. The main courses held are:

- ▶ Safety training for all workers (general and specific, according to the Central-Regional Government agreement);
- ▶ Managers;
- ▶ Supervisors;
- ▶ Fire-fighting;
- ▶ First aid;
- ▶ Use of equipment (forklift trucks, cranes, elevating platforms);
- ▶ Category III PPE.

The courses are held in-house and generally by accredited training schools and/or freelance technical teachers. In addition, ad hoc training courses and meetings are held for workers following the review of operating procedures and instructions, while newly-hired employees or ones who have changed their position are followed by experienced workers (tutors) who assess their learning and final performance skills.



Gianluca Violante, Operational Health and Safety Manager Acciaierie di Sicilia

## Health monitoring

GRI 403-3

A further key aspect of Occupational Safety is an ongoing health surveillance of workers. Accordingly, the Group companies maintains a Corporate Health Service, which is set up according to the specificities of each company.

The task of company doctors, who work jointly with OH&S managers, is to develop an in-house health protocol on the basis of the results of specific risk assessments. The risk of occupational disease is monitored, as a preventive measure, via regular medical examinations at the company medical centre, at intervals determined by the duties of each employee.

Furthermore, company doctors and healthcare staff are able to carry out first aid as required and apply minor dressings. Doctors may also request specialist examinations at hospital out-patient departments if necessary, and provide advice on various health issues suffered by employees.

The year 2021 continued to be affected by the SARS-

COV2 virus with consequent Covid-19 contagion, and the Alfa Acciai Group companies committed to ensuring their employees' health since the very start of the health emergency by issuing a specific Protocol for the dissemination of measures to combat and contain the Covid-19 in the workplace, thereby requiring all outsourced contractors to adopt the same measures. In addition, each Group company established a Covid-19 commission consisting of the employer, the OH&S managers and workers' safety representative, with the task of monitoring the progress of the situation, identifying preventive and protective measures with support from the company doctor and also deciding on the ongoing management of company operations, with direct involvement of trade union representatives.

Lastly, the ongoing implementation of the occupational health monitoring plan, set up at the outbreak of the pandemic, helped contain the spread of contagion within Group companies by the use of both molecular and antigenic swabs.



## Work-related injuries

GRI 403-9

A look at the accident figures for employees in 2021 shows that the injury rate increased by 13% compared to 2020, from 36.02 to 40.71 as a result of the resumption of production activities following the easing of the pandemic situation in Italy, while remaining lower than in 2019.

The number of outsourced workers decreased from 62

in 2020 to 55 in 2021. The doubling of the number of casualties was actually mitigated by the number of hours worked, being 181,582 in 2021 compared to 79,940 in 2020.

As a result of the Group's investments and focus on the safety of its employees, there have been no fatalities for decades and serious injuries are very rare.

Employee injuries	2021		2020		2019	
	No.	Rate <sup>28</sup>	No.	Rate	No.	Rate
Injuries reported as at 31.12 <sup>29</sup>	81	40.71	62	36.02	87	44.84
of which fatalities	0	0.00	0	0.00	0	0.00
of which severe injuries <sup>30</sup>	1	0.00	0	0.00	0	0.00
Hours worked	1,989,491	-	1,721,084	-	1,940,357	-

Non-employee injuries (other workers) <sup>31</sup>	2021		2020		2019	
	No.	Rate	No.	Rate	No.	Rate
Recordable injuries 31.12	10	55.07	5	62.55	12	152.66
of which fatalities	0	0.00	0	0.00	0	0.00
of which severe injuries	1	0.00	0	0.00	0	0.00
Hours worked	181,582	-	79,940	-	78,608	-

In general, the main types of injuries reported over the last two years are:

- ▶ Contusion;
- ▶ Sprain;
- ▶ Foreign body in the eye;
- ▶ Burns from incandescent material.

Following each accident, hazards are identified and removed. Where this was not possible, temporary or permanent improvement or containment measures were introduced.

28) Injury rate is the ratio between the total number of accidents and the total number of worked hours, multiplied by 1,000,000.

29) A recordable injury is one that results in an absence of at least 24 hours.

30) A severe injury, as defined by Gri Standards, is one that results in an absence of at least 180 days.

31) Note that the term "non-employee - other workers" refers only to those temporary staff for whom the reporting of injury rates was required.

## Engaging with local communities

GRI 413-1



**The Alfa Acciai Group feels that it is essential for local communities to view the presence of its companies in their areas as a benefit and opportunity, and not something to be endured.**

### Care for local communities

#### Description of topic and its relevance

*Development of projects aimed at listening to and involving local communities, encouraging collaboration and the creation of shared value.*

The Alfa Acciai Group is aware of the direct and indirect impact that its own activities can have on the conditions, economic and social development and general well-being of the community, as well as the importance of social understanding of the communities in which it carries out its activities. For this reason, the Group is committed to operating in respect of local communities and supporting initiatives of cultural and social value.

#### Scope of the topic

Care for local communities involves all Group staff, who are committed to considering the needs of all stakeholders that are influenced by the Group's industrial activity.

The Alfa Acciai Group represents an entity which, with its significant industrial sites, needs to establish an ongoing dialogue with local communities. On the one hand, it allows the community to get closer to the world of Alfa Acciai and know what goes on within it and, on the other, to encourage in all possible ways a “value creation” process for local communities.

By way of example, one of the most positive effects that the various Group companies has on surrounding area consists of offering people good jobs, typically characterised by higher wages than those in the market. In this regard, when in 2016 Alfa Acciai took over the decommissioned steel mill “Stefana S.p.A.”, a company located in Montirone in the province of Brescia, then under receivership, it hired the existing 69 employees and launched a major environmental redevelopment plan, which is still in progress, to the benefit of the entire

community. Following huge renovation investments, the Alfa Montirone site is now fully operational with production and logistics departments for the Group companies, and its railway link has been reopened and is bound to become a major logistics hub in northern Italy with a view to the increasing sustainability of heavy goods transport.

Likewise, always with the aim of fostering sustainable traffic in the area, the Alfa Acciai plant also sponsored works for the **extension and landscaping of the 2.5-kilometre bike track and walkway** linking the city of Brescia to the San Polo district, where the company is based. This track has been opened to the public since 2021.

Alfa Acciai also sponsored the installation of the 70th parking station of *Bicimia*, the bike-sharing service offered

by the municipality of Brescia to meet the requirements of bikers in the area and provide employees with a green and affordable commuting means.

Over the years, the entire management has developed a culture characterised by greater awareness of these issues, which has led the organisation to implement various initiatives aimed at developing and maintaining an ongoing dialogue as a basis for the creation of shared value.

The first relevant measure implemented by Alfa Acciai to monitor and involve the local socio-economic fabric is the **Alfa Acciai Observatory** described in Chapter 1. This forum is chaired by the Brescia Concillor for the Environment and is attended by Brescia administrative districts and environmental associations. Through this committee, which was set up in 2007, the company "opens up" to the surrounding area and gathers the most varied requests, both as regards the impact generated by its production activity to the outside and the support the company can provide through its organisation and resources.

As a result of ongoing dialogue with the local communities on the various issues, further initiatives have been developed and useful ideas have been implemented.

Sharing the vision of culture as a driver for change, in 2021 Alfa Acciai established a first partnership with

**Fondazione Soldano**, a trust that, for over 20 years has had as its flagship the "Le X Giornate" Festival, which has played a prominent role within the cultural arena of the City of Brescia. Indeed, this organisation has always been committed to promoting a new type of culture and, more recently, it has opted to actively and innovatively involve the new generations, with all their uncertainties, by paving the way to scalable and replicable projects in the advanced tertiary sector.

In sharing education in the values of sport as an effective response to the challenges arising from the socio-economic development of the area, Alfa Acciai has been sponsoring sporting activities with the local **Le Rondinelle** football team and the **Rugby Brescia** team.

Reminiscent of the past glories, rugby is a sport that unites, because the element of support is the prerequisite for reaching the goal. And this is precisely the spirit that drives the people of the Alfa Acciai Group.

Further initiatives range from specific projects concerning the surrounding area to more far-reaching initiatives, such as the recovery of heat to feed the Brescia district heating system, as detailed in Chapter 3, not to mention activities promoting the fairness of the ferrous scrap collection chain by adopting strict protocols that allow for full monitoring of flows.

## Sustainable Development Goals by 2030

Sustainable Development Goals	Targets	Alfa Acciai Initiatives
<b>8 - Decent work and economic growth</b> 	<b>Target 8.8</b> ► Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women and those in precarious employment.	► The Group is committed to safeguarding the health and safety of its employees by providing safe, secure and healthy working environments. Furthermore, the Group companies have implemented and certified the OH&S management system to UNI EN ISO 45001. Given the type of business, Ferroberica has not certified its OH&S management system.
<b>11 - Sustainable cities and communities</b> 	<b>Target 11.2</b> ► Provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations (namely women, children, persons with disabilities and the elderly)	► Extension of the bike track and construction of the Bicimia bike-sharing parking area. ► Investment for the creation of a logistics hub at the Montirone site to carry by train the goods produced by the Alfa Acciai San Polo-based site, which will help reduce emissions from heavy road traffic.



ALFA ACCIAI

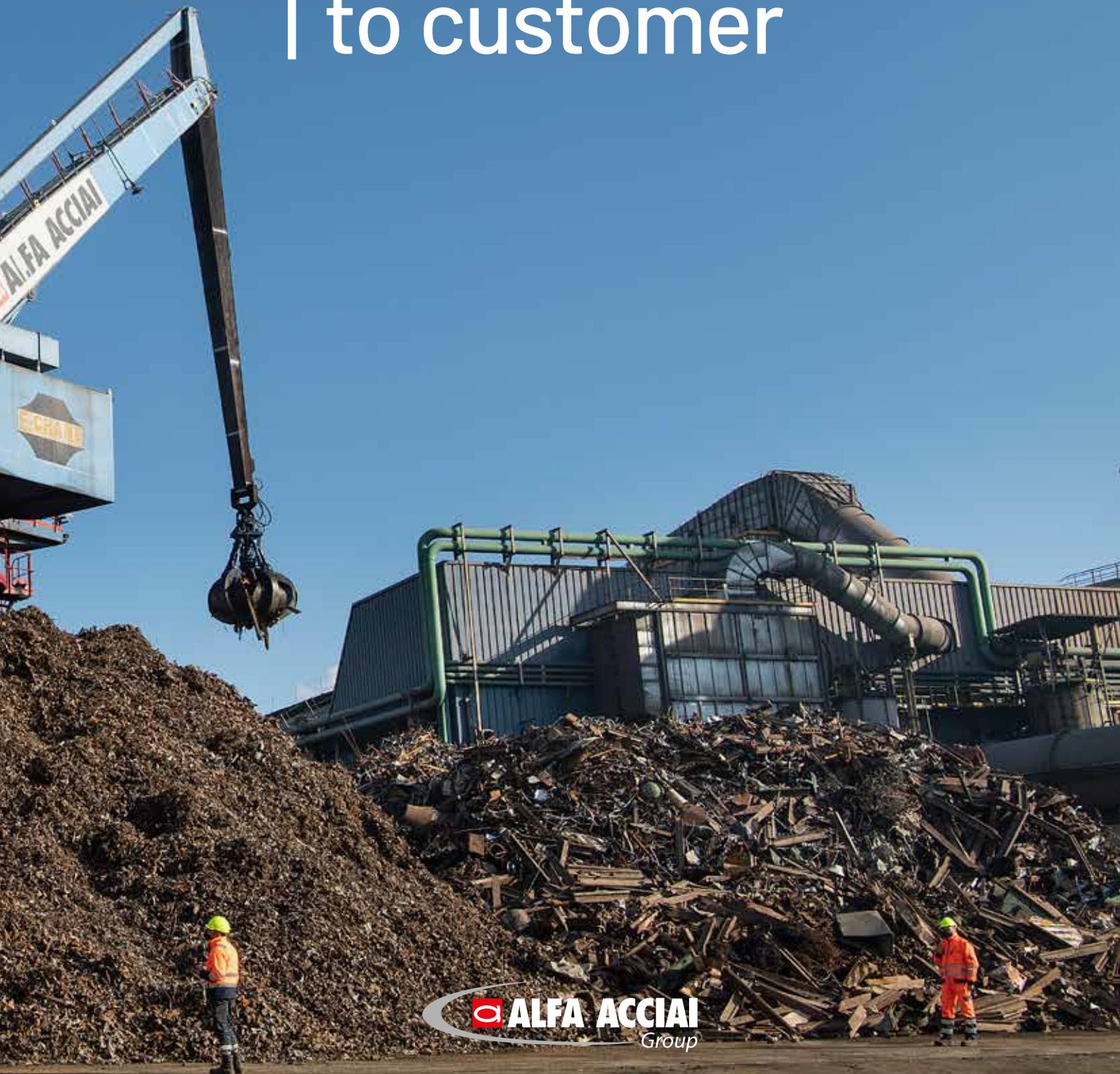
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# 5 | Quality system: from supplier to customer



## 5 | Quality system: from supplier to customer

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All companies in the Alfa Acciai Group have an integrated quality, environmental and safety system to ensure the maximum product quality, reliability and competitiveness for all stakeholders, safeguard occupational health and safety, and respect the environment.

In line with the Group's highly vertical approach, the supply chain is involved at various levels in quality systems to optimise supply operations, ensure the repeatability of our processes, and guarantee customer satisfaction, commencing with the knowledge and expertise of our collaborators through to the planning, monitoring and ongoing improvement of processes.

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## Relationships with suppliers

GRI 102-9; GRI 102-10

**All companies in the Group are aware of the strategic importance of their supply chain, therefore selecting stable, reliable and ethically responsible partners is deemed crucial.**

### Sustainable supply chain management

#### Description of topic and its relevance

*Selection, assessment and management of suppliers on the basis of technical and economic criteria, as well as constant monitoring of environmental and social factors in order to ensure a high level of sustainability performance and respect for human rights, including through a process of digital transformation that allows the optimisation of supply planning in a logic of forecasting and tracking, reducing economic and environmental costs in the procurement process.*

*The Group is committed to establish and develop positive ethical relationships with its stakeholders, especially the suppliers who play a key role in Alfa Acciai's business and sustainability decision-making process.*

#### Scope of the topic

Suppliers of goods and services have an impact on the Group's business activities, ensuring their continuity and contributing to the quality and reliability of the products and services offered.

When managing relationships with suppliers, the Group's companies continually refer to the principles set out in the Code of Ethics, among which the utmost **professionalism and competence** as well as regulatory **compliance**.

Furthermore, contact with parties implicated in activities which are illegal or do not meet requirements of professionalism and reliability is not tolerated, nor are relationships with third parties carrying out activities that are detrimental to the environment, health and human rights. For example, Ferroberica works with numerous companies to provide manufacturing, assembly, installation and haulage operations, and only uses suppliers registered on the White List held by the relevant authorities,

which contains a list of suppliers and service providers who are not vulnerable to attempts of Mafia infiltration. Furthermore, the genuine nature of tenders relating to companies that regularly work with Ferroberica has been endorsed by the Certification Commission in the Marco Biagi Department of Economics (University of Modena and Reggio Emilia).

Particular focus must be put on the quality of goods and services provided and how they are implemented. Therefore, the Group is committed to selecting its suppliers on the basis of their credentials, considering factors such as **quality, innovation, market reputation, and environmental protection policies**.

It is worth noting that in recent years the structure of the supply chain has not undergone any significant changes, except for an increased number of service suppliers with which the Alfa Acciai Group has come into contact, thus proving continuity in business relations and relationships. The various suppliers can be grouped into two macro-classes:

### Suppliers of goods

- Suppliers of scrap and other raw materials;
- Suppliers of technology and materials.

### Suppliers of services

- Outsourcers (suppliers performing part of the process);
- Contractors (suppliers providing on-site installation works, ordinary and extraordinary maintenance, tenders and construction sites);
- Suppliers of other services.

Number of suppliers by category <sup>32</sup>	2021	2020	2019
Suppliers of goods	1,766	1,730	1,794
Suppliers of services	1,639	1,389	1,357
<b>Total number of suppliers</b>	<b>3,405</b>	<b>3,119</b>	<b>3,151</b>

In order to achieve set strategic objectives, the Group applies specific policies and procedures when selecting and assessing suppliers, to identify those who are the most reliable.

Illustrated below are the two separate **supplier selection and assessment procedures** used by the Group - one for *ferrous scrap suppliers* and the other for *suppliers of other goods and services*.

## Selecting suppliers of goods and services

It is the job of the Quality Department and the Procurement Department to select the suppliers of goods and services. More specifically, the Quality Department is responsible for approving the suppliers jointly with the heads of the department concerned and the Procurement Department and subsequently monitoring the progress of supplies. The Procurement Department is responsible for determining purchasing strategies, formulating purchase orders and settling any economic disputes with suppliers. With reference to monitoring systems, a questionnaire may be sent to suppliers to verify their compliance with quality standards and, where necessary, it includes the implementation of audit activities to ascertain the suppliers' ability to meet product and/or system requirements,

or possibly investigate particular aspects of suppliers' organisation.

During the initial supplier qualification, a number of different checks are carried out depending on whether or not the supplier has a quality system certification issued by an independent officially recognised entity. The positive outcome of the checks determines the qualification of suppliers in the Vendor List (qualification is valid for two years).

Finally, direct checks on products and/or services are carried out, and performance is verified during and after use in order to establish and assess the supplier's progress over time.

<sup>32</sup>) It is noted that in the 2020 Sustainability Report an error was found in the ranking of suppliers for the years 2019 and 2020.

## Selecting scrap suppliers

GRI 308-1

The selection of scrap suppliers follows a detailed in-house procedure, which again requires that the supplier qualification is obtained before the material is delivered. More specifically, given the specific nature of scrap, in-house procedures provide for **compliance with reference regulations** and **environmental factors**. Everything is done digitally through a dedicated web portal accessible

and editable by the suppliers themselves, where the documentation is prepared and subsequently examined by the relevant departments.

The scrap Supplier qualification process comprises the following steps:

1

### INITIAL INSPECTION

Gathering information and checking the instrumentation used for radioactive monitoring, the type of equipment used in the production unit and the quality of the material on the site

2

### FILLING IN THE CHECK-LIST

If the outcome of the inspection is satisfactory, an initial information checklist is filled in with the data collected from the supplier

3

### GATHERING AND SENDING INFORMATION

Gathering the documentation required by the Qualification procedure and forwarding to the relevant departments

4

### SUPPLIER QUALIFICATION

Following the analysis of the information obtained and the agreement of the relevant departments, the supplier is qualified and is included in the Suppliers' List

5

### DOCUMENTATION ARCHIVE

Digital archiving of the documentation collected and periodically updated by the relevant departments

As was the case for previously qualified suppliers, all the new scrap suppliers of Alfa Acciai and Acciaierie di Sicilia, namely 48 domestic and foreign suppliers in 2021, were assessed in terms of environmental criteria and financial soundness, in accordance with the Qualification procedure.

The qualification of suppliers and subcontractors of scrap presupposes:

- ▶ the continued fulfilment of the requirements for their initial qualification;
- ▶ compliance of the scrap delivered with the requirements for its acceptance, in accordance with the applicable regulations.



## Spending on local suppliers

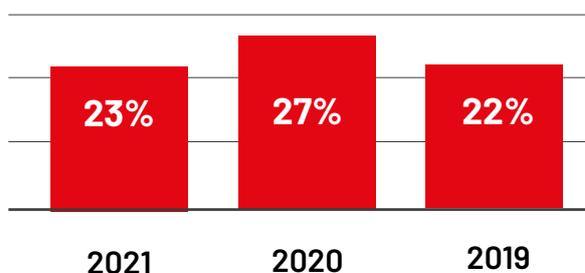
GRI 204-1

When selecting its suppliers, the Group is committed to enhancing the value of players located in the areas surrounding the production units by seeking out and selecting, where possible, local suppliers with the aim of further contributing to the socio-economic development of these areas.

More specifically, all suppliers are considered 'local' if they are based in the same province in which the operations of the various Group companies are established: namely Brescia for Alfa Acciai, Tecnofil and Alfa Derivati, Catania for Acciaierie di Sicilia, and Vicenza for Ferroberica.

Overall, the percentage of expenditure with local suppliers at Group level is 23%, which is stable compared to the pre-pandemic year 2019 when it was

% of expenditure on local suppliers



22%. In particular, Acciaierie di Sicilia features a high percentage of local suppliers, i.e. 55% in 2021, is in line with 2020, which accounted for 56%.

## Product quality

We strive to always be the benchmark in the EAF steel market in terms of production process efficiency and product quality to the satisfaction of our customers.



Donato Celenza  
Quality, Production Planning and  
Logistics Manager - Alfa Acciai

### Product quality and customer satisfaction

#### Description of topic and its relevance

The marketing of products with high quality standards, manufactured using modern and safe production processes, which guarantee high reliability for customers in terms of both technical features and service, with a focus on customer satisfaction and loyalty.

For a commodity like steel, the quality of the products and the service offered to customers is crucial to establishing a solid partnership.

#### Scope of the topic

Focus on quality involves the Group's business departments at all levels in order to offer ongoing product and service improvement.

## Quality assurance structure

Quality is one of the key factors in establishing precise and rigorous standards in production processes in order to obtain a compliant product. This commitment involves identifying specific individuals to oversee this topic: the Quality Manager at Group level and various Quality Managers for each production unit, i.e. for each operating company. These figures constantly liaise with each other and with the functions of their unit or company, in order to be able to immediately tackle any problems that arise, analyse quality KPIs and facilitate the flow of information and the progress of activities related to the product, process or plants.

It is worth noting that as a result of signing the **Quality Policy** and obtaining quality management system certification to EN-ISO 9001 standard, all Group companies are aligned and structured in the management of this issue.



## Quality Management System (ISO 9001)

GRI 416-2; GRI 417-2

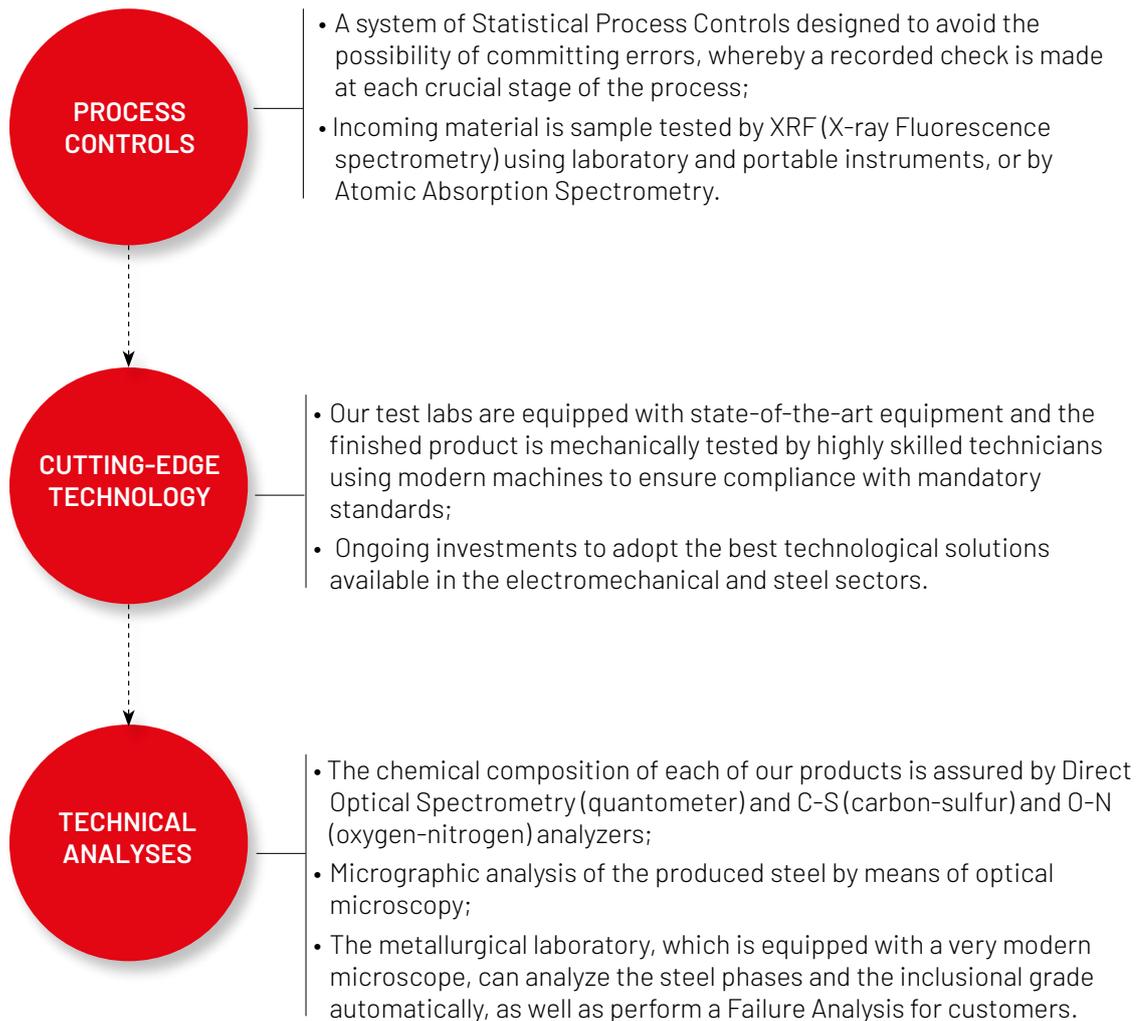
In order to strengthen Quality Management, the Alfa Acciai Group has adopted a Quality Management System complying with UNI EN ISO 9001 and certified by IGQ - Italian Institute for Quality Assurance - and by IQNet - International Certification Network - which guarantees operation in accordance with clear operating procedures and instructions that are constantly updated to the company's technical and organizational development, covering all operations: from the acceptance of incoming materials to process and finished product inspection and testing.

For the satisfaction of customers, the Group strives to be always the benchmark in the EAF steel market in terms of production process efficiency and quality. In particular, the quality system is based on the following pillars:

- ▶ Continuous improvement based on scientific method, adopting KPI (Key Performance Indicators) metrics;
- ▶ Application of LEAN Production principles, in order to streamline the production process by reducing it only to the phases that create added value;
- ▶ Painstaking attention to detail, for the achievement of objectives and continuous improvement, without neglecting the relentless pursuit of lower costs;
- ▶ Involvement of all people at all levels, by defining roles and responsibilities;
- ▶ Active participation in UNISIDER (Italian steel unification body), for the drafting and development of technical standards both at national and European level;
- ▶ Thinking and acting fast to be always one step ahead.



As a whole, the quality level of the Group's products, recognized both nationally and internationally, is guaranteed by the following factors:



In addition to the inspections envisaged for system certification, the effectiveness of the management systems in place is guaranteed by the numerous control procedures carried out both in-house and outside. During 2021, in Alfa Acciai alone, a total of 712 hours of inspections were carried out, including external system audits, external product audits, audits for the Sinstone® CE mark and internal audits. Furthermore, Group companies are also continually subjected to audits by national certifying

bodies for the marketing of reinforcing steel.

As a result of the continued focus on quality and monitoring of production processes, in the last three years the Alfa Acciai Group has neither reported any non-compliance cases regarding the impact of the products sold on health and safety nor any non-conformities regarding the information and labelling of products and services.

## Investing in quality

Over the years the Alfa Acciai Group has devoted considerable resources to improving the quality of its products, through dedicated research and development activities as well as heavy investment in equipment, digitalisation and personnel training.

One of the results achieved by the Alfa Acciai R&D department in 2019 was the **development of a new wire with control magnetic permeability** for energy transport applications in the offshore industry. The magnetic coupling between the copper wire and iron strands placed to protect it is a factor to be considered when calculating the cost-effectiveness of complex energy production and transport systems. A material with low magnetic permeability (other than very costly stainless steel) generates less

stray currents, making the system more cost-effective.

With a view to correctly managing the entire production cycle, enhancing product quality and end-customer satisfaction, the Group has decided to invest heavily in **process digitisation** and **Industry 4.0** in order to interface production plants with IT systems and automatically access data.



## SME.UP Project

An investment project with SME.UP software house was launched in 2019 at Alfa Acciai to develop a computer system for production, product tracking and warehouse management. The following objectives have been achieved in collaboration with our suppliers and customers:

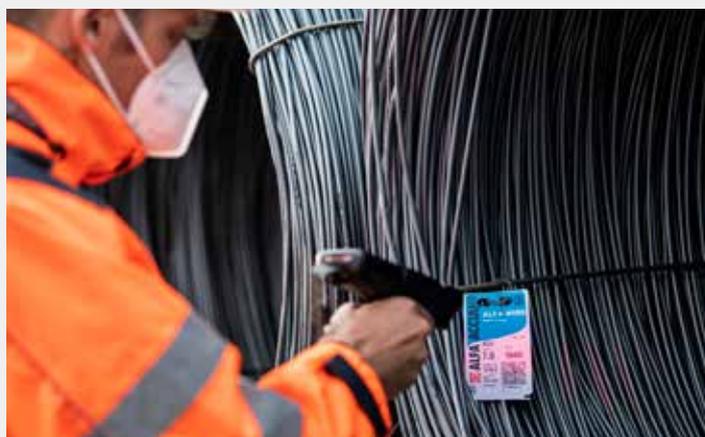
- improve demand forecasting to better meet market demand;
- optimize production planning and programming;
- optimize the planning of the raw materials procurement and the production of semi-finished products;
- manage the supply deliveries and track steel mill purchased materials;
- oversee the shipment of end products;
- improve warehouse management for enhanced customer service;
- ensure product quality and traceability;

Today, a unique tag with its **QR-Code** is attached to each item, whether it is a semi-finished product such as a billet or a bundle of wire rod, in order to ensure its tracking both from a logistical point of view (timely entry into the warehouse, internal handling, release for sale or consumption), and the quality point of view (managing any non-conformities and reporting the production cycle characteristics of each package to the customer).

More specifically, quality tracking has been strengthened both from the customer's point of view, being able to provide all the necessary information on the specific batch shipped, and from the internal point of view, allowing the rapid identification and management in case of production failure and providing the possibility to perform diagnostics by focusing on individual pieces, going back to the semi-finished products used and the conditions at the time of production.

In order to ensure a complete tracking and greater guarantee of quality, even all procured raw materials, where possible, are equipped with a QR-Code that allows tracking from arrival to final use. Such a practice makes it possible, in case of any anomalies occurring during use, to conduct analysis and interface with the supplier, besides being a valid support for procurement planning.

In 2021, instruments were put in place at management level to verify efficiencies, and devices were developed on the shop floor to monitor and certify productivity in real time.



## Partnerships in favour of quality

In addition to the extensive digitalisation process that involved the entire Alfa Acciai site, which was implemented in collaboration with Milan Polytechnic, as detailed in

our 2021 Sustainability Report, below is a list of other ongoing activities and collaborations relevant to the Group, according to the flow of our production process:

### Harsco Metal

With the aim of achieving maximum efficiency upstream the melting process and improving the quality of the ferrous scrap used, Alfa Acciai has chosen Harsco Metals as its strategic partner. This US-based multinational is a global leader in the supply of innovative technologies and services to steel manufacturers in their processing operations, logistics and recovery of metals from process waste.

From the outset, the agreement contributed significantly to the digitalisation of the steel mill and scrap yards through this partner's expertise, and the collaboration is progressing successfully, resulting in the ongoing improvement in managing furnace charge and slag optimisation.

### Danieli

Throughout 2021, activities continued on the collaboration with Danieli (Alfa Acciai's historical partner) that started up in 2020 and is aimed at improving the production process of semi-finished and finished products, enhancing the company's know-how and the major plant-engineering work on the Wire Rod Rolling Mill, which is scheduled for completion in 2022-2023. Danieli's expertise was used to carry out an all-round benchmarking process, which resulted in improvement in economic performance and reduction of the environmental impact of production activities.

### Brescia University

Following the Alfa Acciai Group's fruitful partnership in 2019 and 2020, whereby the application of statistical analyses on a wide data collection led to significant improvements in the welding structure of the product to avoid problems in-house and, most importantly, for the end customer, Alfa Acciai entered into another partnership in 2021 to identify what factors determine the 'fatigue' strength of our finished products for reinforced concrete.

### Ancona University

Since 2017, Tecnofil initiated a study in conjunction with Ancona University to improve the hot-dip galvanisation process. Alfa Acciai decided to embark on this collaboration immediately after the takeover, as this centre of excellence is viewed as an Italian point of reference in hot-dip galvanisation following extensive research and numerous publications and consultations over the years. Thanks to this research, it has been possible to considerably improve product quality by ensuring a constant coverage of zinc and aluminium, depending on the grade to be guaranteed, placing Tecnofil as a benchmark in terms of corrosion resistance, surface quality and dimensional tolerances, all this with no additional costs or waste of material, but rather optimizing all process steps.

After this initial fruitful and intense activity, the collaboration has continued and now Tecnofil uses the Failure Analysis and advisory services provided by the university.

## Customer satisfaction

The Alfa Acciai Group has been able to proactively experience the context in which it operates, anticipating and interpreting the megatrends that have affected the world of steelmaking over the years. A holistic view of business management always starts from its focal point - the Customer.

Corporate strategy is based on two essential factors:

- ▶ **Analysis of customer satisfaction**
- ▶ **Management of complaints**

On the first point, customer requirements are ascertained, understood and met regularly, using different types of monitoring activities, such as satisfaction questionnaires, marketing visits, technical site surveys and consulting services for new requirements. More specifically, in 2021 the Group launched a **stakeholder engagement** initiative addressed to its customers in order to update the materiality analysis on sustainability issues, as described earlier in Chapter 1 of this Report, which did not entail any changes to what the company had anticipated on their behalf but rather wanted to acknowledge it. Similarly, the activity called for specific evaluations on other environmental issues, such as the certified environmental product and system certifications granted, which met with a general appreciation. Last but not least, it also included sections dedicated to **surveying the customer's**

**degree of satisfaction** regarding the various features characterising a business relationship, such as product quality, order management and after-sales service, the communication level, the staff's readiness and expertise, as well as the perceived priorities within the relationship.

In this regard, the Group has set up an easy yet detailed online questionnaire, translated into several languages, which, starting from a common matrix sent out by all group companies at the same time, was adapted in each case to the specificities of the supplier companies. The results of the questionnaires, wherever a courtesy response was received during this particularly critical period, enabled the Group to precisely understand the generally very high customer satisfaction level, even in relation to competitors, and to take targeted action where discrepancies between expected and promised quality were found.

The second point is crucial as it is necessary to react promptly to address a problem and accordingly take immediate steps on the process or product to avoid the recurrence of the same situation. The Group believes that only in this way can the real needs of customers be best interpreted, and then be able to design and manufacture a product that closely meets what is expected in terms of guaranteed performance and repeatability.



Work on the construction of the new headquarters of the Galeazzi Orthopaedic Institute in the former Expo 2015 site, Milan.

This effort has a twofold advantage:

- ▶ not overlooking issues that could damage the company's business, rather seeking to prevent and solve them;
- ▶ learn from experience by trying to “make it our own” and enhance the KAIZEN process.

Furthermore, Alfa Acciai can share experiences from within the Group with customers, by capitalising on the verticalisation process with its subsidiaries. Any issues arising at Alfa Derivati, Ferroberica and Tecnofil, which

process products marketed by Alfa Acciai and Acciaierie di Sicilia, are managed promptly to ensure excellent customer service. Even the development and application of new products takes place quickly. What is essential is sharing this knowledge with our customers - our aim is to be viewed as reliable partners committed to a process of shared growth, and not just as mere suppliers.

This is how the Group can manage to combine the right mix of continuity and innovation that has always featured in its history.



## 2030 Sustainable Development Goals

Sustainable goals	Target	Alfa Acciai initiatives
<p><b>8 – Decent work and economic growth</b></p> 	<p><b>Target 8.5</b></p> <p>▶ By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.</p>	<p>▶ In managing relations with their suppliers, Group companies always refer to the principles defined in the Code of Ethics, including: utmost <b>proficiency and expertise</b>, as well as maximum regulatory <b>compliance</b>. Furthermore, the Group is committed to selecting its suppliers also on the basis of their competitiveness, taking into account elements such as quality, innovation, market reputation, and <b>environmental protection policies</b>.</p>

## GRI Content Index

GRI 102-55

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### **Limited Assurance report on the Sustainability Report**

To the Board of Directors of Alfa Acciai SpA

We have been engaged to undertake a limited assurance engagement on the Sustainability Report of the Alfa Acciai Group (Alfa Acciai SpA and the companies Acciaierie di Sicilia SpA, Tecnofil SpA, Ferro Berica Srl and Alfa Derivati Srl are considered as a whole for the purposes of this Report, hereinafter also the "Group") for the year ended 31 December 2021.

#### **Responsibilities of the Directors for the Sustainability Report**

The Directors of Alfa Acciai SpA are responsible for the preparation of the Sustainability Report in accordance with the "Global Reporting Initiative Sustainability Reporting Standards" issued by GRI - Global Reporting Initiative (the "GRI Standards") in 2016 (and updated in 2018, 2019 and 2020), as illustrated in the "Methodological note" section of the Sustainability Report.

The Directors are also responsible for such internal control as they determine is necessary to enable the preparation of a Sustainability Report that is free from material misstatement, whether due to fraud or error.

The Directors are also responsible for defining the sustainability performance targets of the Alfa Acciai Group, as well as for identifying its stakeholders and material topics to be reported on.

#### **Our Independence and Quality Control**

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies International Standard on Quality Control 1 (ISQC Italia 1) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

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### ***Our Responsibilities***

Our responsibility is to express a conclusion, based on the procedures performed, on whether the Sustainability Report complies with the requirements of the GRI Standards. We conducted our work in accordance with “International Standard on Assurance Engagements ISAE 3000 (Revised) - Assurance Engagements other than Audits or Reviews of Historical Information” (hereinafter also “ISAE 3000 *Revised*”) issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. That standard requires that we plan and perform procedures to obtain limited assurance about whether the Sustainability Report is free from material misstatement.

The work performed was less in scope than in a reasonable assurance engagement conducted in accordance with ISAE 3000 *Revised* and, consequently, we did not obtain assurance that we became aware of all significant facts and circumstances that might be identified in a reasonable assurance engagement.

The procedures performed on the Sustainability Report were based on our professional judgement and included inquiries, primarily of personnel of the company responsible for the preparation of the information presented in the Sustainability Report, inspection of documents, recalculations and other procedures designed to obtain evidence considered useful.

In detail, we performed the following procedures:

- 1) We analysed the process of definition of the material topics reported on in the Sustainability Report, with reference to the method of their identification in terms of priority for the various categories of stakeholders and to the internal validation of the results of the process;
- 2) We obtained an understanding of the processes underlying the generation, collection and management of significant qualitative and quantitative information included in the Sustainability Report. In detail, we inquired of and discussed with management personnel of Alfa Acciai SpA and we carried out limited analyses of documentary evidence, in order to obtain information about the processes and procedures supporting the collection, aggregation, processing and submission of non-financial information to the corporate function in charge of the preparation of the Sustainability Report.

Furthermore, for significant information, taking into account the activities and characteristics of the Group:

- at the level of Alfa Acciai SpA
  - a) with reference to the qualitative information presented in the Sustainability Report, we carried out interviews and obtained supporting documents to verify its consistency with available evidence;
  - b) with reference to quantitative information, we performed both analytical procedures and limited tests to verify, on a sample basis, the accuracy of data aggregation.
- for the following entities Acciaierie di Sicilia SpA, Tecnofil SpA, Ferro Berica Srl and Alfa Derivati Srl we obtained documentary evidence, on a sample basis, about the correct application of the procedures and calculation methods applied for the indicators.



**Conclusion**

Based on the work performed, nothing has come to our attention that causes us to believe that the Sustainability Report of Alfa Acciai Group for the year ended 31 December 2021 is not prepared, in all material respects, in accordance with the requirements of the GRI Standards as illustrated in the “Methodological note” section of the Sustainability Report.

Brescia, 6 September 2022

PricewaterhouseCoopers Business Services Srl

*Signed by*

Paolo Bersani  
(Partner)

*This report has been translated from the Italian original solely for the convenience of international readers. We have not performed any controls on the Sustainability Report 2021 translation.*





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All-round sustainability