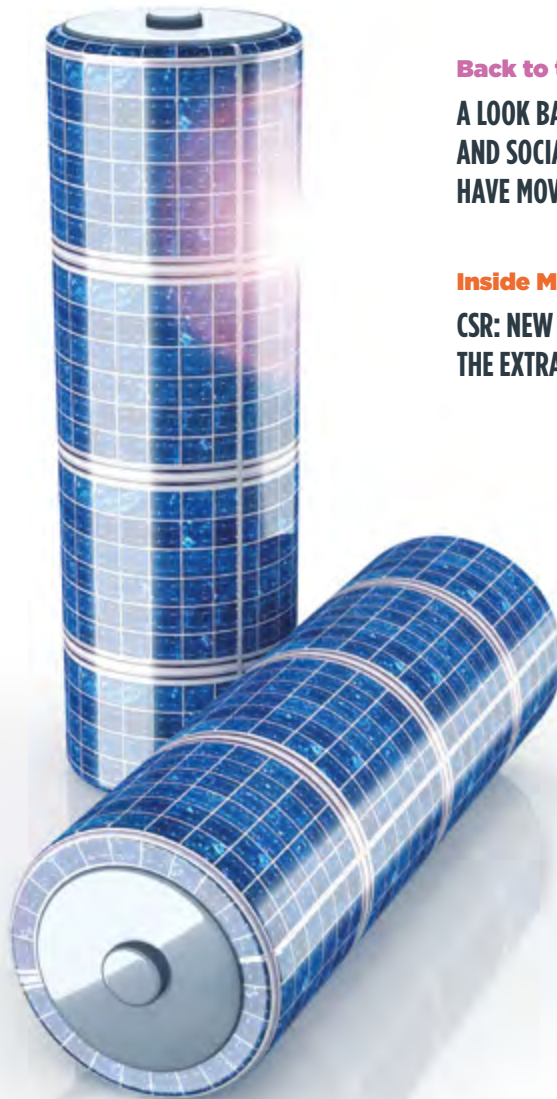


# Energy to innovate

For 130 years, **Mersen** has been bringing progress to life.

In the air

**Solar  
power,  
a market  
with  
a bright  
future**

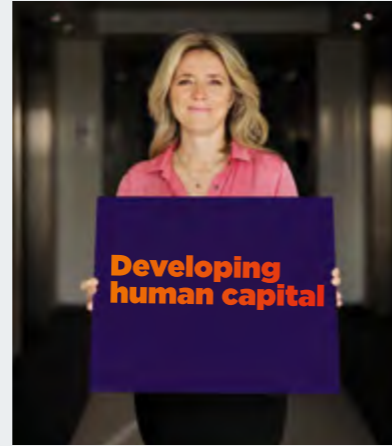


**Back to the future**

**A LOOK BACK OVER TECHNICAL  
AND SOCIAL INNOVATIONS THAT  
HAVE MOVED THE WORLD FORWARD**

**Inside Mersen**

**CSR: NEW OBJECTIVES TO GO  
THE EXTRA MILE**



In the air

Back to the future

Inside Mersen

- 6** Solar power, a market with a bright future
- 8** Mersen: central to solar power generation
- 12** Zhonghuan and Mersen, a natural fit
- 14** Interview: “The solar market continues to ramp up”

- 16** No electricity without advanced protection systems
- 18** Recharging the world
- 20** A Mersen guide to productivity
- 22** Spearheading social innovation

- 24** Matching the needs of industry
- 26** CSR: new objectives to go the extra mile
- 30** Mersen, world expert in electrical specialties and advanced materials for high-tech industries

ENERGY TO INNOVATE IS A MAGAZINE PUBLISHED BY MERSEN – Tour Trinity, 1 bis place de La Défense, 92400 Courbevoie – RCS Nanterre B572 060 333 – Tel. : 01 46 91 54 49 – www.mersen.com – Managing Editor: Luc Themelin – Chief Editor: Véronique Boca – Editorial Committee: Thomas Baumgartner, Laurence Lamy, Luc Themelin – Design and production: Avant d’aller dormir sous les étoiles – 119 rue de la Pompe, 75116 Paris – Writing: Le Prompteur – Photos: Florence Brochoire, Coll. Mersen, Istock, Gettyimages/artpartner-images – Publication: March 2022 – OTT Imprimeur, 67310 Wasselonne – France

# The importance of long-term thinking

LUC THEMELIN, CEO



**These are very singular times.** With the pandemic still raging, new geopolitical tensions emerging and rather gloomy prospects for global warming, it’s sometimes hard to look to the future with optimism. Yet that is precisely what we must do – especially since there are growth opportunities to be seized as we actively take part in the collective effort required to meet these challenges. Very modestly, on its own scale, Mersen is one of those industrial players that continue to chart their course. It’s a demanding task, but also a consistent and above all a sustainable one. We

demonstrated this once again in 2021 by delivering very satisfactory results, with sales of €923 million and growth of nearly 10%. These figures don’t stem from good luck or casual opportunism. Rather, they’re simply the rewards of the strategy we embarked on several years ago. By positioning ourselves on a few buoyant markets, starting with those linked to sustainable development, we at Mersen have chosen to think long term, addressing today’s big-picture issues in all their complexity. These challenges have no secrets for us. They range from the reduction of our collective

impact – especially our carbon footprint – to the development of renewable energies to replace fossil fuels, without forgetting the promotion of green mobility and alternative transportation methods. Meeting these challenges will of course require tremendous political and industrial will, but also the sort of cutting-edge expertise that few

players possess. Throughout its history, Mersen has been a trailblazer when it has come to optimizing the most complex industrial processes and making them reliable and secure. By putting our know-how at the service of solar, wind, electronics, automotive and electrical infrastructure players, and indeed all industrial companies (including those





in the chemical and process industries) looking to grow while keeping their impact under control, we have resolutely chosen to play the long game. Naturally, we apply the same demanding standards to our business as our customers do to theirs. We released a new CSR roadmap to make further progress on the social, societal and environmental aspects of our business. While the news proves day after day that we can't control everything, we think it's essential to use all the tools at our disposal. And since we believe that CSR drives growth, we want to move up to the next level on many issues – by reducing our greenhouse gas emissions intensity, curbing our water use, and promoting responsible purchasing, the circular economy, health and safety at work, and diversity in management teams.

You can find out more about our approach in this latest edition of our magazine, which also includes a feature report on the solar market – among our main growth drivers in 2021 and one of the keys to developing a less carbon-intensive energy mix worldwide. More than ever, our aim is to embody that “spirit of innovation” that has made us unique since day one and which allows us, at our level, to take action for a more balanced world.

I hope you enjoy reading our magazine.

**“Throughout its history, Mersen has been a trailblazer when it has come to optimizing the most complex industrial processes and making them reliable and secure.”**

# In the air

**PROGRESS AND THE MERSEN SPIRIT GO TOGETHER WELL. SINCE ITS ORIGINS IN FRANCE IN 1889, THE GROUP HAS FACILITATED CHANGE IN SOCIETY. WHAT'S NEW TODAY AND FOR TOMORROW? SPOTLIGHT ON SOLAR POWER, A RADIANT MARKET.**

Solar power, a market with a bright future **p.6**

Mersen: central to solar power generation **p.8**

Zhonghuan and Mersen, a natural fit **p.12**

Interview: “The solar market continues to ramp up” **p.14**

# Solar power, a market with a bright future

Although it currently accounts for just 3% of global electricity generation, solar power is set to play a major role in the energy transition over the coming years.

## The main source of energy on Earth – and the oldest

Used since Antiquity for its many virtues, especially heat, the Sun could also be on the verge of becoming our primary source of electricity generation in the near future. Whatever tomorrow holds, barely more than a century after solar photovoltaic (PV) cells were first invented and after decades of ups and down, solar power today appears to have finally reached a turning point in its industrial development.

*“The first phase of expansion for solar power dates back to the 1960s and the space race,”* says Philippe Meunier,

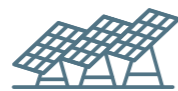
Senior Strategic Marketing Manager for Mersen’s Graphite Specialties.

*“Don’t forget that solar is the only technology – other than nuclear – capable of powering satellites.”*

However, despite obvious potential, the development of solar technology was fairly low-key in the early days. Too expensive to produce at the time, and hard to store, solar power was no match for fossil fuels, nuclear power and other renewables such as hydro.

## A key role to play in tackling the climate emergency

Half a century later, things have changed dramatically.



**85%**  
of solar cells are produced in China



Solar cell production costs have fallen by **80%** in 10 years

While global electricity consumption has more than doubled (source: International Energy Agency – IEA), solar power has become substantially more competitive on the back of an 80% reduction in cell production costs over the last ten years.

China, currently the world’s biggest power consumer, is striving to diversify its sources of production so as to reduce its dependence on coal, and has taken the lead in the solar market. At the same time, global awareness of the threat posed by climate change has spurred progress worldwide



Porta Susa train station in Turin, Italy. The 15,000-square-meter glass roof is entirely covered with PV cells.

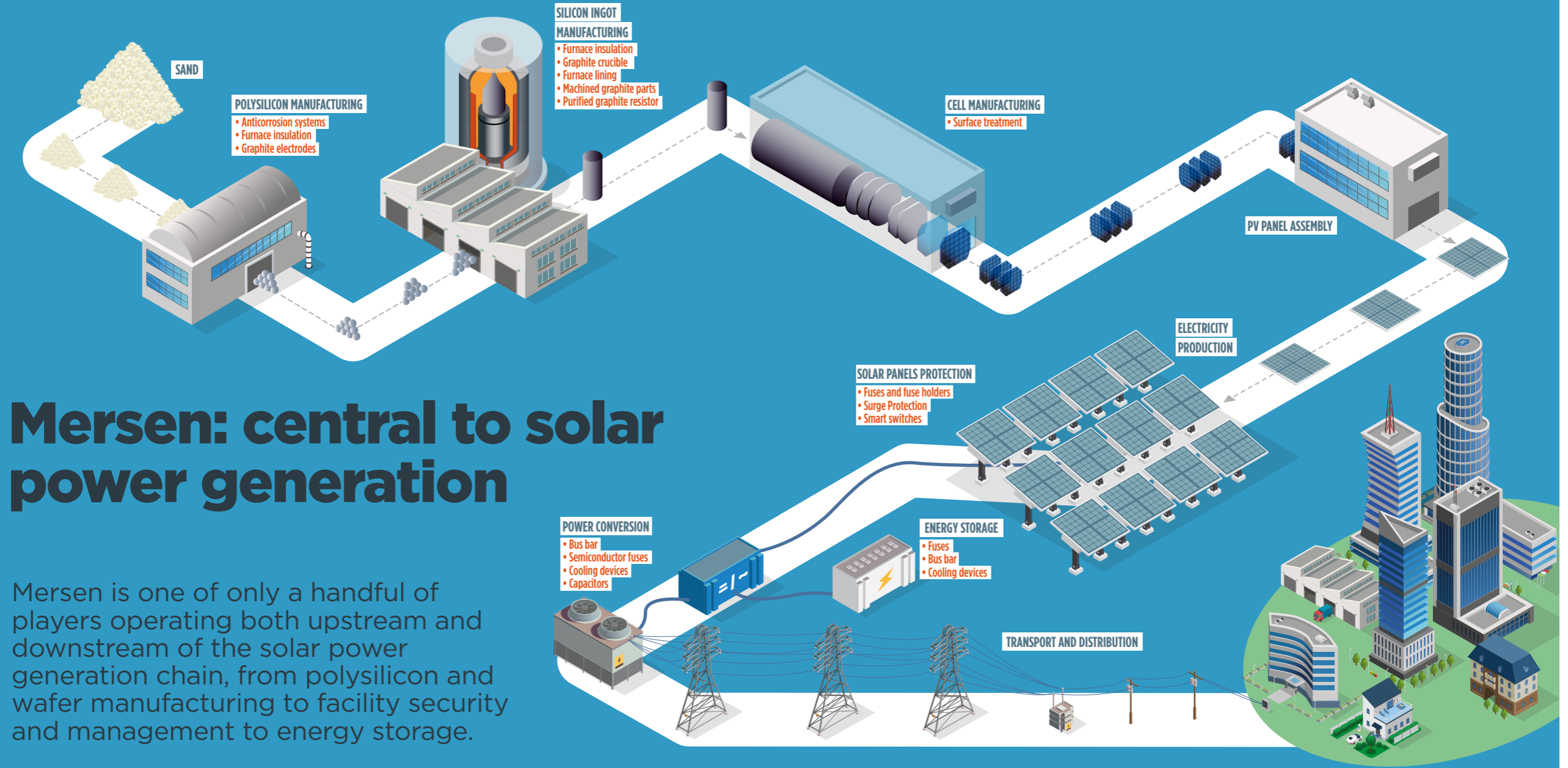
in the shift toward renewables.

*“Since the Kyoto Protocol came into force, the energy transition and the response to the climate emergency have become the driving forces behind the development of the solar industry,”* says Meunier. *“Representing just 3% of global electricity generation, solar power is still quite a small part of the global energy mix, but the momentum is there and solar power has a big role to play going forward – mainly for residential and industrial use, but also via the development of solar farms.”* The recent surge in energy costs, especially in Europe,

will be another argument prompting increasing numbers of countries to include solar power in their energy independence strategies. A few technical challenges remain to be met, particularly in terms of energy storage, but specialists like Mersen are already working to facilitate the next steps in the development of the industry and its key players. ■

**Solar power could account for 20% of global electricity generation by 2050, versus 3% today.\***

\* Source: International Energy Agency



# Mersen: central to solar power generation

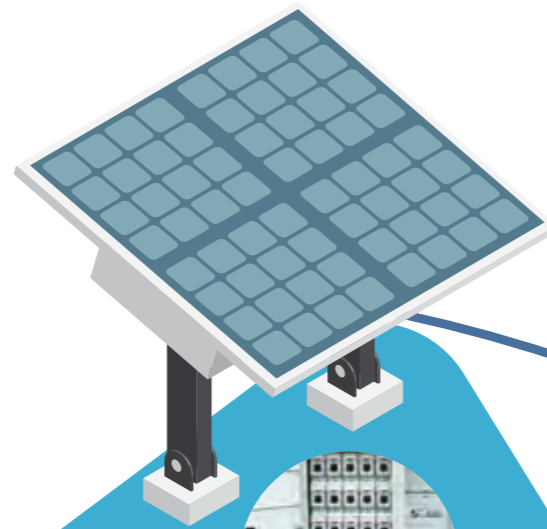
Mersen is one of only a handful of players operating both upstream and downstream of the solar power generation chain, from polysilicon and wafer manufacturing to facility security and management to energy storage.

**Upstream**

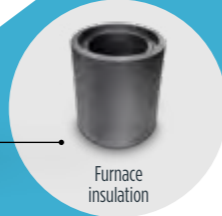
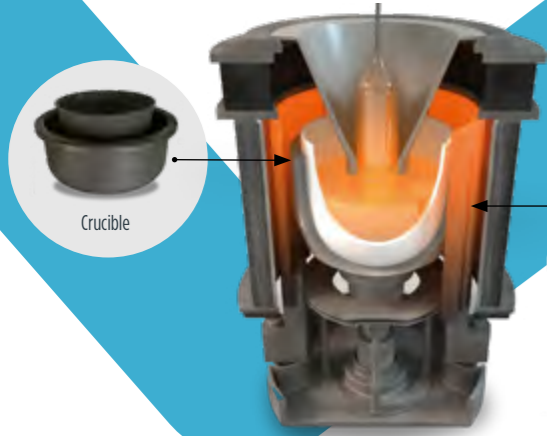
**Increasing production capacity while maintaining a high level of purity**

Mersen has made the quality and technicality of its solutions a decisive advantage in supporting the world's leading suppliers in the solar market. In addition to offering consumables and equipment for manufacturing polysilicon – a key raw material for PV cell production – Mersen has developed comprehensive ranges to optimize furnaces used for DSS multicrystalline and especially CZ

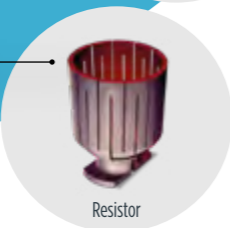
monocrystalline processes. Today, the CZ method is the main technology used to make wafers for the solar PV industry (see below). Purified graphite heating elements, thermal insulation and crucibles are just some of the breakthroughs that have made it possible to gradually increase furnace and wafer size, while maintaining the same level of purity and keeping production costs on a tight rein.



Fuse protection



Furnace insulation

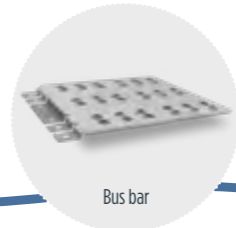
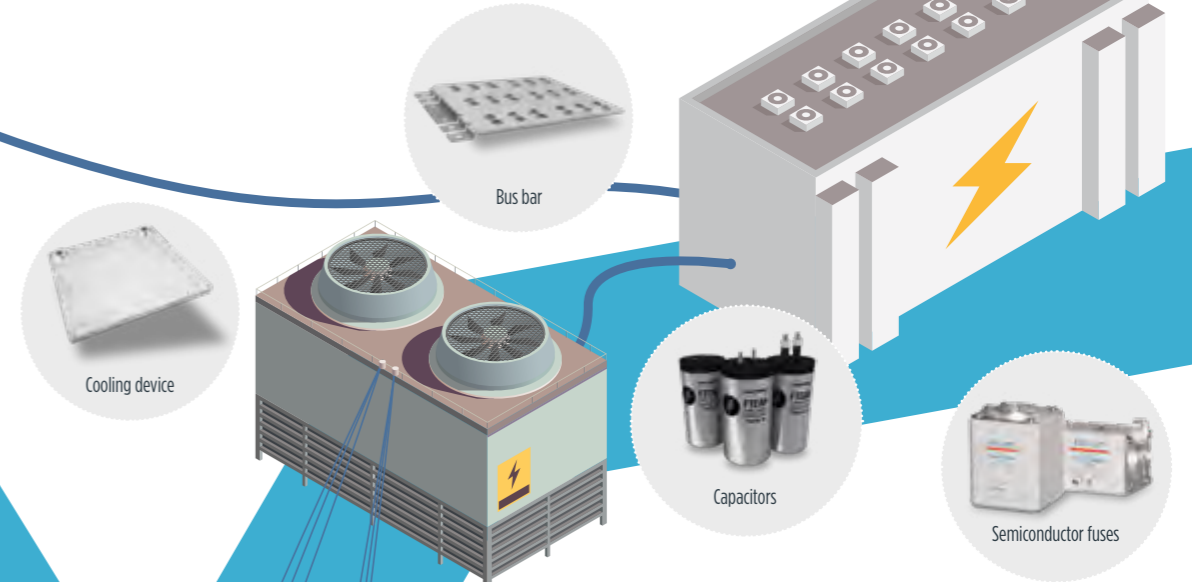


Resistor

**CZ, a process in step with the growing market**

The CZ process consumes less energy, limits silicon losses and guarantees a near-25% increase in cell efficiency. Because of these qualities, it now represents the lion's share of wafer manufacturing. Mersen, already at the forefront of this technology, plans to drive further development in the coming years, thanks in large part to new ranges of flexible insulating felts and ultra-resistant crucible supports.

**More effective storage solutions and higher solar farm voltage will be game changers for the market.**



Bus bar



Cooling device



Capacitors



Semiconductor fuses

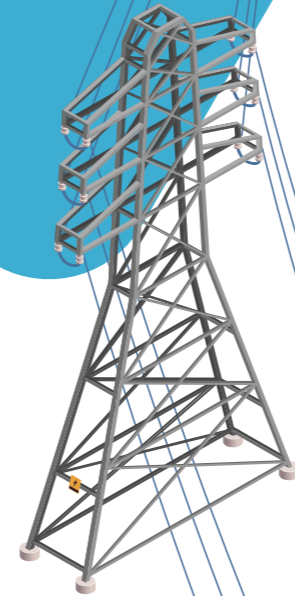
**Downstream**

**Securing, converting and storing solar power**

Operating primarily in the industrial, commercial and solar farm segments, Mersen plays an active role in securing and optimizing these large-scale facilities, both by protecting them from power surges with its ranges of fuses, fuse holders and switches, and by facilitating the conversion of direct current (DC) into alternating current (AC). The Group supplies the world's leading manufacturers of power converters with protection fuses, bus bar connectors, cooling systems

and filter capacitors. Lastly, Mersen is also investing in the future by supporting research into the storage and nighttime use of solar power (notably by recovering used batteries from electric cars), and the rise in solar plant voltage. This last item, synonymous with a drop in current or a reduction in cable diameter, could play a major role in lowering solar operating costs.

**Solutions to advance the entire value chain**





**Declan Li**  
GENERAL MANAGER, GRAPHITE SPECIALTIES,  
MERSEN CHINA

**Zhang SongYue**  
PURCHASING DIRECTOR, ZHONGHUAN

## Zhonghuan and Mersen, a natural fit

The Zhonghuan group, currently world number two in single crystal production for the solar market, has been using Mersen’s solutions to consolidate its growth and leadership for over 12 years.

**“With China keen to increase the share of renewables – particularly solar – in its energy mix, we’re continuing to pool our expertise to support Zhonghuan’s growth.”**

**DECLAN LI**, GENERAL MANAGER, GRAPHITE SPECIALTIES, MERSEN CHINA

**This is the tale of a longstanding strategic partnership** that has seen two players grow side by side as the industry has taken shape. Since 2009, the Zhonghuan group, a major player in solar power in China, known and recognized for the quality of its silicon single crystals, has used Mersen solutions to optimize its production – starting with its furnaces. As Declan Li, General Manager of Mersen’s Graphite Specialties Business Unit in China, says, *“Zhonghuan’s launch of its first furnace for single crystals more or less coincided with the creation of Mersen’s Yantai subsidiary. The strategic partnership forged 12 years ago has gone from strength to strength: we’ve advanced together, with Mersen providing its expertise and graphite solutions to support each stage of Zhonghuan’s industrial development.”*

Mersen’s know-how has been particularly useful to Zhonghuan in increasing the size of the hot zone of its furnaces over the years – from 20 inches to 22, 24, 26, 28, 32 and now 36 inches in diameter. At each stage, Mersen has been able to provide the manufacturer with stability by supplying all of the graphite components needed for the hot zone, from crucibles and heating elements to heat shields. Since graphite is particularly resistant to high temperatures and silicon vapors, the quality of each component in the hot zone requires great attention to guarantee the purest single crystals after the process.

*“Mersen has consistently been able to design and produce the materials we’ve needed over the years, in terms of both quality and quantity,”* says Zhang SongYue, Zhonghuan’s Purchasing Director. *“To achieve our goal of 20% annual growth over the next five years and become the world number one in terms of production capacity and sales, we plan to continue working to increase the size*

*of the hot zone of our furnaces. And we’ll be counting on Mersen to maintain the same quality of production, with no major impact on the cost of materials.”* The two partners are already working on the transition to a 40-inch hot zone – the next major step in a fertile collaboration that earned Mersen a Strategic Partner Trophy in 2019. ■

**“Mersen has proven its ability to support us over the long term and help us stay competitive while increasing our production capacity.”**

**ZHANG SONGYUE**, PURCHASING DIRECTOR, ZHONGHUAN

# “The solar market continues to ramp up”

**Jean Liu**  
HEAD OF SALES, GRAPHITE SPECIALTIES CHINA



## How has the solar market held up during the pandemic?

Despite a turbulent global environment, solar power capacity increased by 22% in 2020, bringing total installed capacity to 773 gigawatts, ahead of a similar increase again in 2021. And the pace is set to continue accelerating, with capacity expected to double in barely five years to reach nearly 2 terawatts by 2025. In fact, solar power accounted for 39% of new generation facilities worldwide in 2020, the highest figure ever achieved. But it's important to put things into perspective: the industry still represents only 3% of global energy production, compared with 70% for fossil fuels and nuclear power.

## How do you explain solar power's popularity? It's not the cheapest energy to produce...

It's not the cheapest, no, but production costs for solar power have fallen significantly in recent years, whereas prices for gas, coal and nuclear power have been skyrocketing. Above all, there's been a global shift in favor of renewable energies, recently reaffirmed at COP26. If we want to achieve the goal of keeping the global temperature rise below 1.5°C by 2050, we'll have to invest

heavily in cleaner energy sources like solar. Many players, with help from specialists like Mersen, are ready to support the ramp-up in production and capacity, and the PV industry has already made enormous progress in a short time. All of this will ensure the market gradually stabilizes and reaches maturity.

## How has Mersen managed to make its mark in this industry, where many local players have established strong positions in recent years?

Our main strength is that we're the only Western player still operating in China, where more than 85% of PV cells are now manufactured. We've also chosen our battles, clearly positioning ourselves at the top of the market – we're fast and reliable, and above all our expertise and the quality of our solutions are widely recognized by industry leaders. In particular, we have all the technological solutions we need to support growth segments like the CZ process for wafer manufacturing and the PECVD process for solar energy conversion. In a very demanding industry, where you need a high level of process expertise – especially in high temperatures – to achieve good performance, Mersen is always one step ahead. ■

# Back to the future

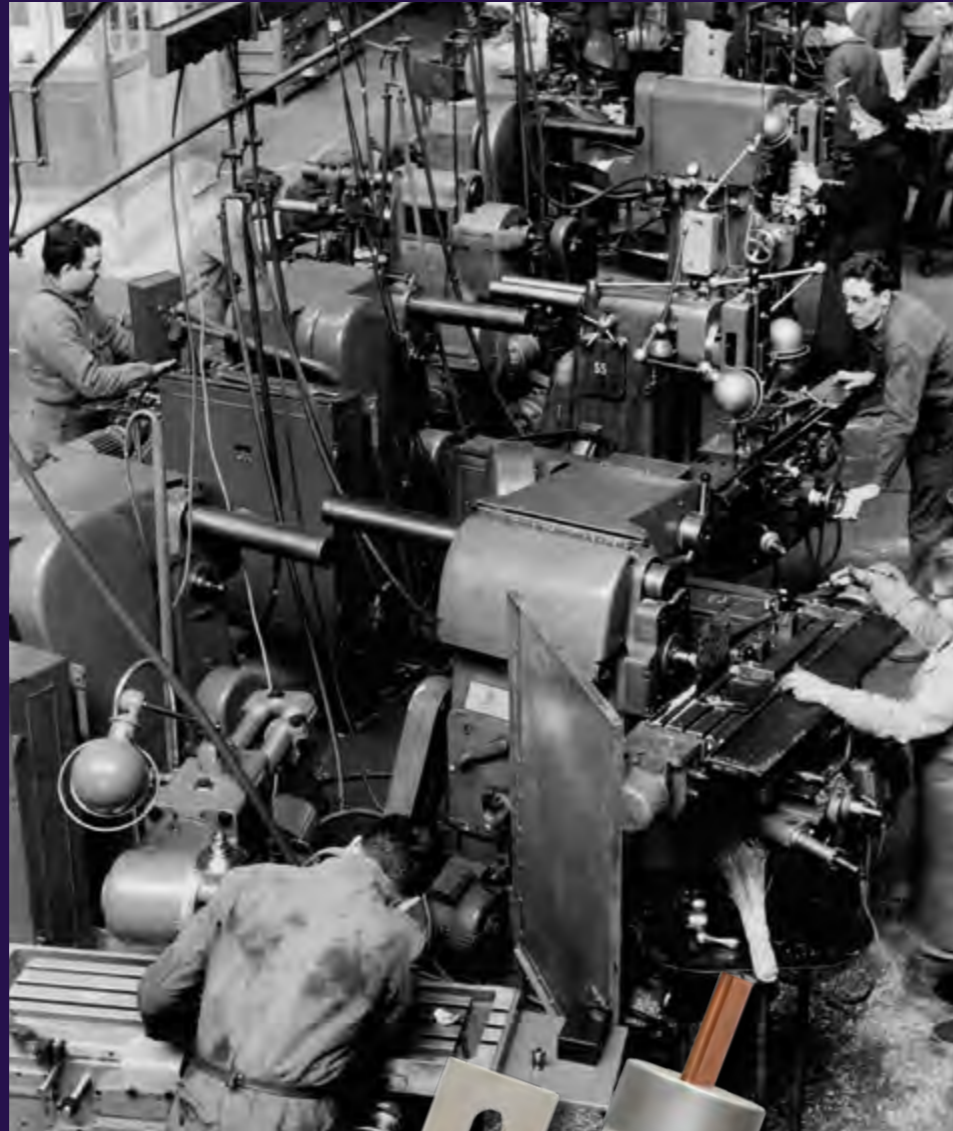
MERSEN'S HISTORY IS DOTTED WITH INNOVATIONS AND PRODUCTS THAT HAVE ALLOWED COUNTLESS INDUSTRIES TO GROW AND REVOLUTIONIZE THEIR TIMES. KEYS TO THIS SUCCESS ARE A VISION AND A DETERMINATION TO SERVE PROGRESS.

No electricity without advanced protection systems **p.16**  
Recharging the world **p.18**  
A Mersen guide to productivity **p.20**  
Spearheading social innovation **p.22**



## NO ELECTRICITY WITHOUT ADVANCED PROTECTION SYSTEMS

Mersen's history with electrical equipment goes back a long way. It was at the dawn of the 20<sup>th</sup> century that Le Carbone first divined its commercial potential. Fabius Henrion, the company's founder, invested in the production of electrographite brushes – still used today in DC motors. Gradually, the company expanded its range to include cables, switches, fuses and dynamos, thereby covering all electrical systems. More than a century later, and after major steps such as the acquisition of Ferraz in the 1980s and then Gould Shawmut in 1999, this comprehensive approach remains the hallmark of Mersen, which today ranks as a world leader in all industrial fuses – for all global markets. ■



Model 001. Dijon 1863  
Model 002. Lyon 1864  
Model 003. Nancy 1864  
Model 004. Lille 1864  
Model 005. Paris 1864  
Model 006. Bruxelles 1867  
Diplôme d'Honneur Bruxelles 1887

# Fabius Henrion

Nancy

Today Mersen ranks as a world leader in all industrial fuses – for all global markets.

### Henrion, Nancy

Coupe-circuit ordinaires à lamelles fusibles

<p><b>Coupe-circuit monopolaire</b></p> <p>N° 120. 5 ampères. Fr. 0.44 N° 121. 10 — — Fr. 0.78 N° 122. Bipolaire, 5 — — Fr. 0.80 N° 123. — 10 — — Fr. 1.40</p>	<p><b>Coupe-circuit bipolaire précision</b></p> <p>N° 124. 5 ampères. Fr. 1.05 N° 125. 10 — — Fr. 1.80</p>	<p><b>Coupe-circuit bipolaire précision</b></p> <p>N° 126. 5 ampères. Fr. 1.20 N° 127. 10 — — Fr. 1.80</p>	<p><b>Coupe-circuit bipolaire précision</b></p> <p>N° 128. 20 ampères. Fr. 1.80</p>
--	--	--	---

Coupe-circuit à lamelles calibrées et à cartouches.

Ces coupe-circuit assurent un contact parfait aux deux extrémités de la lamelle, qui ne s'échauffe jamais. Cette lamelle est constituée par une lame de fibre sur laquelle est collée une feuille de métal fusible; la fusion s'opère au milieu de la lamelle, où la section est réduite. Cette disposition est la meilleure pour obtenir un remplacement prompt et facile de la pièce fusible. Dans les numéros 1273, 1273 bis et 1277, la lamelle est remplacée par une cartouche en amiante; les douilles en laiton des extrémités assurent une prise de contact parfaite, à l'abri de l'échauffement.

<p><b>Coupe-circuit précision monopolaire à lamelle</b></p> <p>N° 120. 5 ampères. Fr. 0.60 N° 121. 10 ampères. Fr. 0.85</p>	<p><b>Lamelle</b></p> <p>N° 1271. 5 amp. la dose. Fr. 0.40 N° 1272. 10 amp. la dose. Fr. 0.75</p>	<p><b>Coupe-circuit précision monopolaire à cartouche</b></p> <p>N° 1273. 20 ampères. Fr. 1.25</p>	<p><b>Cartouche</b></p> <p>N° 1271. 5 ampères. Fr. 0.35 N° 1272. 10 ampères. Fr. 0.60</p>	<p><b>Coupe-circuit précision bipolaire à lamelles</b></p> <p>N° 1273. 5 ampères. Fr. 1.40 N° 1274. 10 ampères. Fr. 1.65</p>	<p><b>Coupe-circuit bipolaire à cartouches</b></p> <p>N° 1275. 20 ampères. Fr. 2.10</p>
---	---	--	---	--	---

Pour une audition parfaite ...

... utilisez toujours les  
**PILES MAZDA**  
"l'écoute au prix le plus bas"

For an optimal listening experience...  
always use  
MAZDA BATTERIES  
"tune into the lowest prices"



## RECHARGING THE WORLD

It was at the end of the Second World War that Carbone Lorraine became involved in the creation of a major battery industry to make up for the shortfall in French production, before setting out to conquer international markets. In 1948, the company

joined forces with French company Thomson-Houston (CFTH) to found Compagnie Industrielle des Piles Électriques (CIPEL). The dry-cell batteries for telephony, telegraphy and clocks and wet-cell batteries for rail and wireless telegraphy made early in the century were followed by

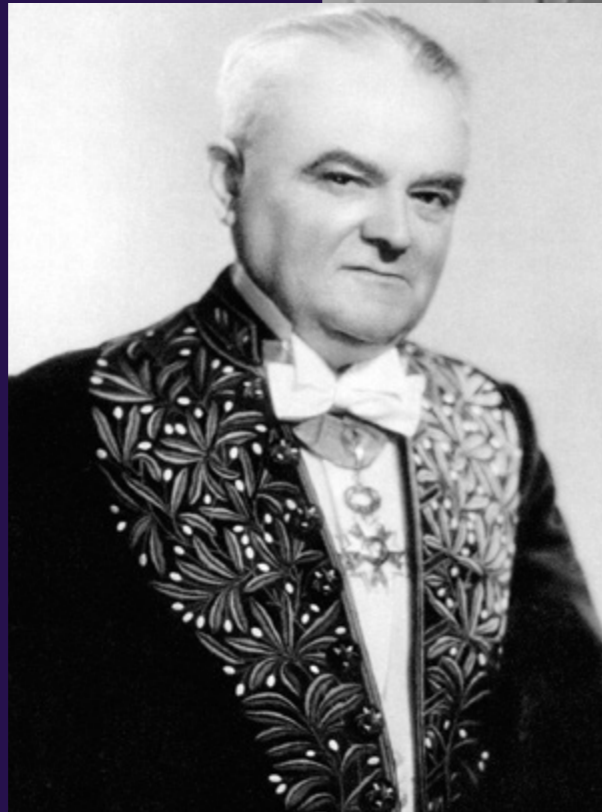
industrial batteries and pocket batteries under the Mazda brand. Together, the two partners rolled out production capacities sized to meet the needs of traditional process industry markets. Starting in the 1970s, a shift in technological focus was made to support the growth of

the renewable energy industry (wind and solar) and power electronics. As transportation and energy production embrace cleaner processes, Mersen continues to be active on every front, particularly energy storage, a key enabler in the new tech trend toward a more "electric" world. ■

## A MERSEN GUIDE TO PRODUCTIVITY

### Focus on productivity and efficiency

It was following his trip to the United States in 1946 that Charles Malégarie, then Managing Director of Carbone Lorraine, laid the foundations of his approach to productivity. His study of the models adopted by major industrialists across the Atlantic prompted him to organize independent departments simultaneously in charge of marketing, monitoring and production for each product. His goal was to avoid overcomplicating things and to put every man in the right place with a view to gaining in flexibility and responsiveness. ■



### Mersen's commitment to operational excellence

Early in the 2010s, faced with major upheavals in some of its key sectors, Mersen opted to revisit its entire organization to make it more efficient and adaptable to market changes. In 2014, the Group began rolling out its "Transform" industrial optimization plan, creating centers of excellence

combining certain activities, reorganizing manufacturing capacities in Europe, Asia and the United States, and exiting certain sites and markets deemed insufficiently profitable. A decade later, Mersen has made operational excellence its motto, and its two major business segments – Advanced Materials and Electrical Power – have become benchmarks for manufacturers worldwide. ■



# Inside Mersen

WHAT WERE THE KEY EVENTS FOR MERSEN IN 2021? IT WAS A YEAR MARKED BY A SIGNIFICANT INCREASE IN PRODUCTION CAPACITY IN EUROPE AND ASIA, AND INCREASINGLY AMBITIOUS CSR OBJECTIVES.

## SPEARHEADING SOCIAL INNOVATION

Although some pioneering social initiatives, such as the first mutual insurance company (1904), paid vacation, company restaurants (1925) and daycare facilities (1931), date back to the early 20<sup>th</sup> century, most labor market changes have taken

place since the end of the Second World War. In France, employees are involved in running the company, and are vested with responsibilities in the management of welfare arrangements thanks to the creation of works councils,

including a Central Works Council overseen by elected representatives. The Group's management has endorsed a number of requests, from the payment of a special bonus shared among all employees in 1946 to the creation of a fund for retired operators and

clerical staff, and the construction of workers' housing estates near French factories.

Today, Mersen is pursuing its social commitment throughout the world, with ambitious objectives set in its CSR roadmap. ■

Matching the needs of industry **p.24**  
 CSR: new objectives to go the extra mile **p.26**  
 Mersen, world expert in electrical specialties and advanced materials for high-tech industries **p.30**

**HUNGARY**  
**Fusetech joins the Mersen fold**

Already a 50% owner of Fusetech, Mersen bought out the Hager group's shares in 2021. Mersen will now make this fuse specialist, whose Hungarian plant in Kaposvar currently employs around 300 people, an integral part of its business. This €4 million investment gave the Group a particularly efficient 6,000-square-meter site for the production of future product lines meeting European standards (IEC).



# Matching the needs of industry

Already operating out of more than 50 manufacturing sites and 18 R&D centers in 35 countries, Mersen is successfully pursuing a strategy aimed at strengthening its production capacities for each of its two segments, with a view to helping its customers meet their technological challenges today and tomorrow.



Construction work is in full swing in Cheonan, South Korea.

**SOUTH KOREA**  
**A move to Cheonan on the horizon**

Mersen's new South Korean plant in Cheonan is set to start operations in the second half of 2022. The site, which specializes in the production of ion implantation electrodes and silicon pulling furnace equipment for the semiconductor market, is poised to grow from 75 to 110 employees and to increase the Group's production capacity for Southeast Asia – with sales projected to expand by nearly 75% over five years. The plant will also ensure more optimal management of environmental aspects.

**CHINA**  
**Operations transferred for optimized production**

Mersen finalized the transfer of its Yueqing fuse and fuse holder production and its Guangzhou surge protection device operations to its Changxing site in 2021. Safer, more modern and better located, the new state-of-the-art manufacturing facility will be a source of production and organizational synergies, and will support the growth of several of the Group's key business sectors, including solar power storage and electric vehicles.

Inauguration of the Kunshan site, near Shanghai (China).



Less than 100 kilometers away, west of Shanghai, the teams at the Kunshan site also moved to a brand new site in 2021. Dedicated to isostatic graphite machining and processing for the semiconductor industry, the plant spans 11,500 square meters. It has been optimized to support the growth of the Group's longstanding customers internationally and the rise of this industry in China – for which Mersen's ion implantation electrodes are in particularly strong demand. That should be plenty to keep the site's hundred or so employees busy!



**Ethics and compliance culture**

Luc Themelin, CEO;  
Thomas Farkas, Group Vice President, Strategy & Development;  
Thomas Baumgartner, CFO.

## CSR: new objectives to go the extra mile

Building on the success of its first roadmap between 2018 and 2021, Mersen is working to further reduce the social and environmental impact of its operations through a focus on four priorities.

### Are growth and innovation compatible with environmental stewardship and the fight against global warming?

For years, Mersen has been showing that they are indeed, rolling out an ambitious CSR strategy that permeates all of its business lines and projects in several particularly promising industrial sectors. The Group has adopted a roadmap setting ambitious, realistic objectives for 2025 – capitalizing on the outcomes already obtained since 2018.

The Group has reduced the intensity of its greenhouse gas emissions, embraced responsible purchasing, adopted a circular economy approach, sought to improve health and safety at work, and actively combated discrimination. It now aims to cement its →

### A director responsible for CSR issues



“Social and societal responsibility is an integral part of Mersen’s culture.

The appointment of a director responsible for CSR issues reflects the Group’s determination to pursue an ambitious and structured policy and to make sustainable development a key part of its strategy.

We see CSR not only as one of the company’s responsibilities toward its stakeholders, but also as a source of performance. These are the foundations of the new roadmap, which

also incorporates new regulations and tools such as the EU taxonomy. Mersen has successfully forged genuine consistency between its strategic choices, its performance management and its CSR objectives. This is a great strength that the company will be able to draw on in the long term.”

Magali Joëssel, representative of Bpifrance Investissement on Mersen’s Board of Directors.


### The four pillars of Mersen’s new CSR roadmap

1. Being a responsible partner for all stakeholders, thanks to responsible purchasing and supply management.
2. Limiting our environmental footprint, by reducing the intensity of greenhouse gas emissions, optimizing waste recycling and limiting water consumption.
3. Developing human capital, by supporting all career paths, promoting equal opportunity and diversity, and guaranteeing health and safety in the workplace.
4. Advocating a demanding ethics and compliance culture, ranging from anti-corruption to human rights.

## “Seven years to reduce our greenhouse gas emissions intensity by 20%”

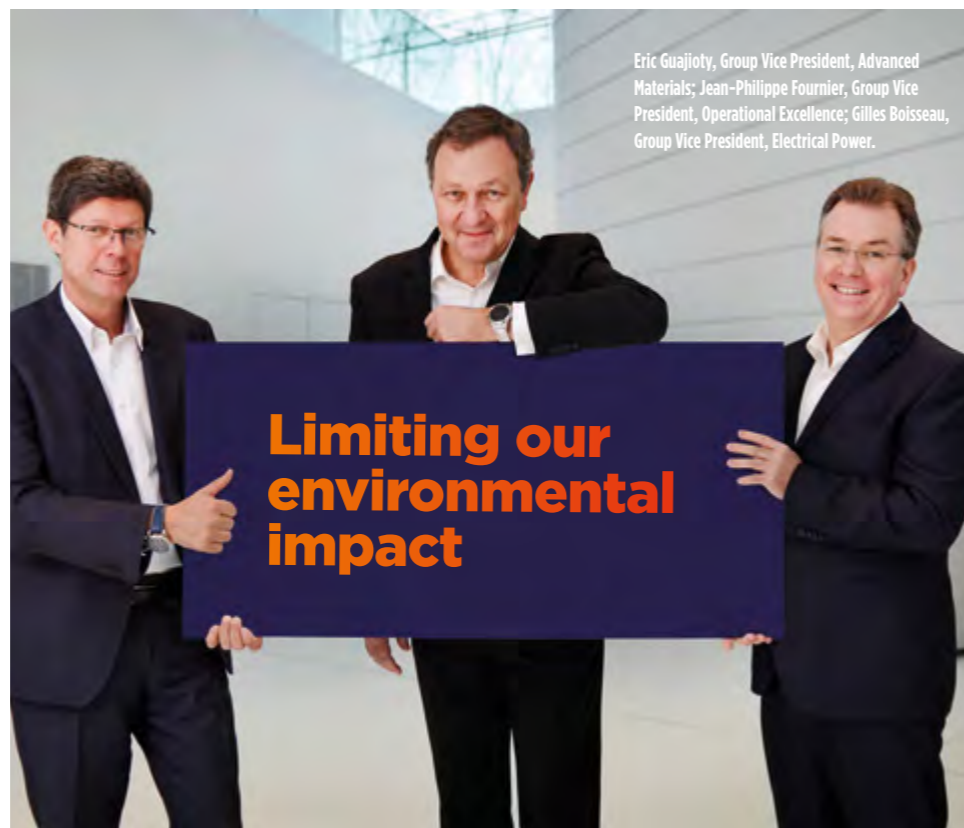
**JEAN-PHILIPPE FOURNIER**, - VICE PRESIDENT, OPERATIONAL EXCELLENCE

“We have always been keenly aware of our role in the fight against global warming. Even though the overall impact of our business is relatively limited, we are doing our part, and since 2018 have been aiming to reduce our greenhouse gas emissions intensity by 20% by 2025. Our approach consists in improving the energy efficiency (electricity and gas) of our processes and buildings, using renewably sourced energy, and self-generating solar power on site wherever possible. Our emissions intensity measured in tonnes of CO<sub>2</sub> per million euros of sales has been improving since 2018, and we are on track to meet our target.”



**56 %**  
of Mersen's sales  
are linked to sustainable development markets (solar, wind, green transportation, electronics, etc.)

→ achievements in those areas by bringing on board all of its stakeholders (customers, partners, suppliers, etc.) and empowering its teams to take ownership of each issue in order to promote them locally, in keeping with the Group's guidelines. This approach is a means for Mersen to continue charting its course toward profitable, sustainable and responsible growth. The relevance of its actions is regularly analyzed and rated by specialized bodies (MSCI, CDP, EcoVadis). And to show that this ambition is shared at all levels, the Board of Directors appointed a member dedicated to monitoring the CSR roadmap at the end of 2021 (see box p.27). This decision underscores Mersen's commitment to rising, on its own scale, to today's social, societal and environmental challenges. ■



Eric Guajioty, Group Vice President, Advanced Materials; Jean-Philippe Fournier, Group Vice President, Operational Excellence; Gilles Boisseau, Group Vice President, Electrical Power.

## Performance measured and recognized

EcoVadis, the benchmark for assessing companies' CSR and responsible purchasing performance, awarded Mersen a gold medal for its 2021 outcomes. This certification is based on a comprehensive diagnosis of the Group's actions in terms of the environment, working conditions, ethics, business practices and responsible purchasing. After a silver medal in 2020, Mersen improved its score by 6 points and ranked in the top 3% of its category.

In 2021, Mersen's rating was also upgraded to "A" by non-financial rating agency MSCI, and the Group reached the highest reporting level of the United Nations Global Compact (GC Advanced), joining just 11% of signatory companies worldwide.



Didier Muller, Group Vice President, Asia and Latin America; Christophe Bommier, CTO.

## “We have to be aware that the world is changing and that we are all part of it”

**ESTELLE LEGRAND**, GROUP VICE PRESIDENT, HUMAN RESOURCES

“In 2021, Mersen reaffirmed its employer brand around a strong positioning: Be Part of the Changing World. We are facing major technological challenges, not just to improve our competitiveness in our markets, but also to contribute to a more environmentally friendly world, and we are determined to involve all of our employees. For a Group that has built its growth on human

capital, it is not just about attracting and retaining talent: we have to give meaning to our jobs and mobilize collectively in a battle that's bigger than all of us. We are proud to be drivers of progress and to be contributing to tomorrow's world.”



Estelle Legrand, Group Vice President, Human Resources.

# Mersen, world expert in electrical specialties and advanced materials for high-tech industries

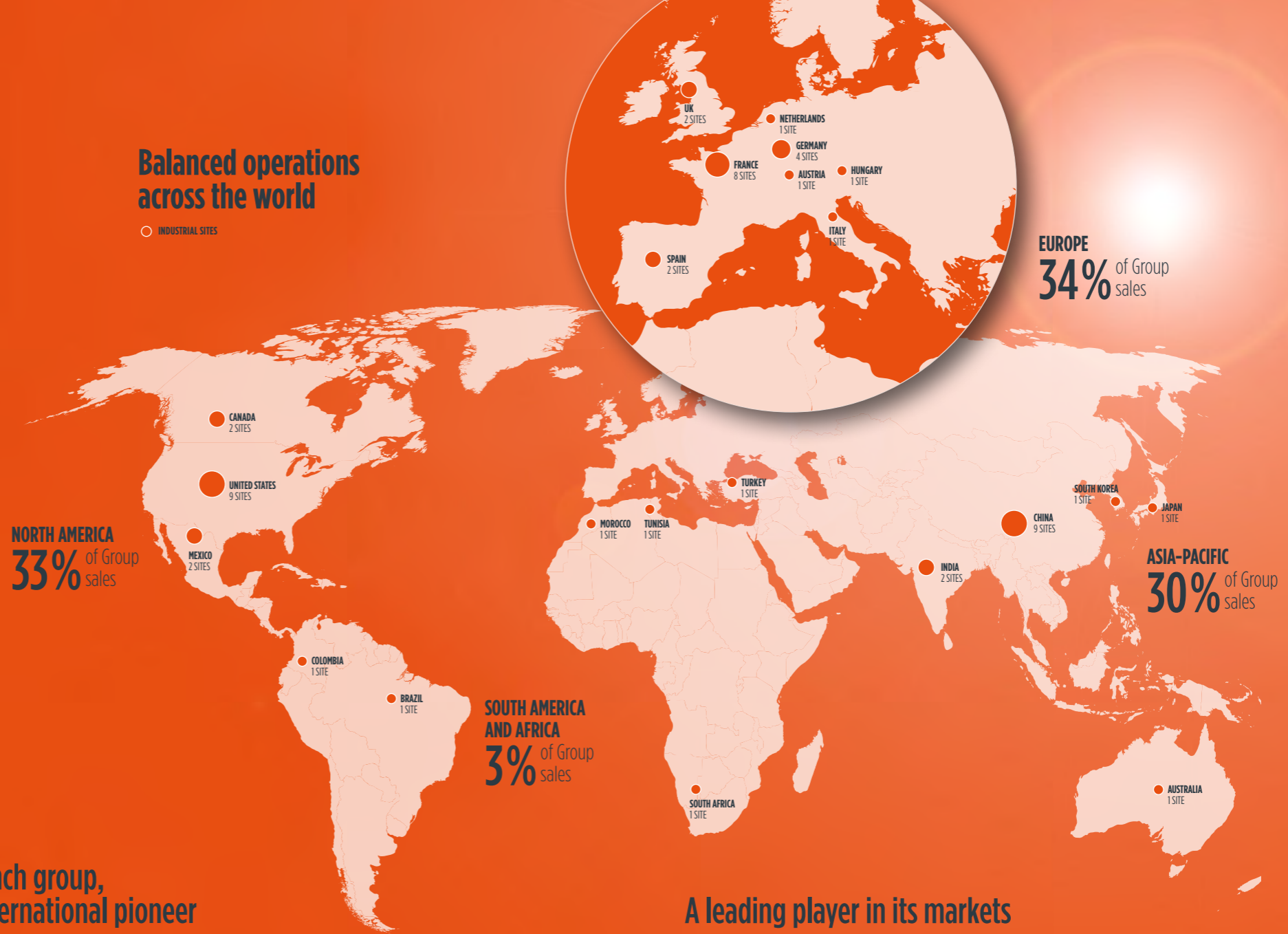
## Key numbers

-  **6,970** employees
-  **35** countries
-  **53** sites worldwide
-  **18** R&D centers
- €923M** in sales in 2021



## Balanced operations across the world

○ INDUSTRIAL SITES



## A French group, an international pioneer

ACTIVE FOR:

- |   |   |  |
|---|---|--|
|  <b>132 years</b> in France            |  <b>83 years</b> in Brazil |  <b>22 years</b> in China |
|  <b>126 years</b> in Germany           |  <b>41 years</b> in Japan  |  |
|  <b>116 years</b> in the United States |  <b>25 years</b> in India  |  |

## A leading player in its markets

- |  |  |
|--|--|
| <b>#1 worldwide</b>  | <b>#2 worldwide</b>                                |
| – Anti-corrosion equipment                                 | – High-temperature isostatic graphite applications |
| – Brushes and brush-holders for industrial electric motors | – Industrial fuses                                 |
| – Passive components for power electronics                 |  |





# BE PART OF THE CHANGING WORLD

MERSEN, A GENUINELY INDUSTRIAL & HUMAN CULTURE

All over the world, Mersen is successfully growing. To get your fill of innovation, technology and pioneering spirit, check out our YouTube, Facebook and LinkedIn pages. You'll be able to learn about the Group's history, see presentations of innovative solutions, hear the views of managers and see what life is like for our teams in the 35 countries where the Group has operations. Immerse yourself in our processes, read about our news, our commitments, our actions and our job offers.

**Stay tuned!**

[mersen.com](http://mersen.com)   

Tour Trinity  
1 bis place de La Défense  
F-92400 Courbevoie

