Energy to innovate

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



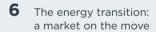
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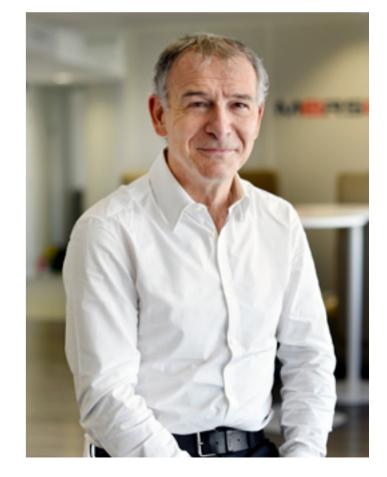
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"Our financial strength is an asset for meeting the challenges of the environmental transition"

LUC THEMELIN, CEO

t's quite unusual to talk about financial results and the environment at the same time. The two are rarely linked in people's minds. But we at Mersen believe they are. In fact, we believe our financial strength is an asset that will allow us to be a responsible player over the long term, capable of meeting the many challenges of the environmental transition. For many years now, our Group has been positioning itself in sustainable development markets, to the extent that they now account for 56% of our sales. And our new record results in 2023. with €1.2 billion in sales, an operating margin before non-recurring items of 11.3% and a sharp rise in operating cash flow, are largely due to



the momentum of these growth markets. Today, with this milestone reached in 2023, we are on track with our 2027 roadmap, which aims to reach sales of €1.7 billion.

Exponential growth in demand

As you can read in this issue's feature on the energy transition, the world today is faced with many intersecting and conflicting challenges and issues. From the acceleration of extreme weather events to global tensions over energy

supply, the issues of strategic independence and renewable energy development are on everyone's mind. At the same time, the continuing growth of the world's population, which is approaching 7 billion, and the rapid development of many countries will create even greater needs. In other words, we're going to have to produce more energy, but energy that is greener. And to achieve this, there's only one solution: investment. Investment to

help manufacturers,

"For over 130 years, we have been deploying the technical and human resources needed to fulfill our ambitions and stay one step ahead in all our markets."

automakers and energy suppliers maintain their growth and respond to this increase in demand. And that's where our financial strength is of paramount importance.

Investing for the future

Mersen has a long history in capital expenditure. For over 130 years, we have been deploying the technical and human resources needed to fulfill our ambitions and stay one step ahead in all our markets. After several major acquisitions over the last decade, particularly in the United States, we continue to invest heavily in expanding our sites and increasing our production capacity in order to keep pace with our industry-leading customers. Our medium-term plan includes €300 million in additional investments above our recurring level – a record amount that confirms our determination to boost our efforts to meet our customers' needs.

And, of course, we invest in people. Over the next few years, several hundred new employees will join Mersen worldwide. New backgrounds, new professions, new skills that will enhance our Group and enable us to participate more effectively in the major challenge that is the environmental transition. So yes, Mersen is proud of its profitability. It's what allows us look to the future with optimism. It gives us the means to attract the best skills and acquire the best equipment. It guarantees that we can offer our employees around the world a working environment that is conducive to their personal development. Lastly, it allows us to adapt, to grow with our customers and to support their development by providing them with the quantities and quality they need for their products. Together, we are ready to make the environmental transition a reality.



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 ENERGY TRANSITION MARKETS.

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The energy transition: a market on the move

Faced with the threat of global warming, more and more action is being taken to support the energy transition. To meet the COP21 targets, however, some crucial challenges still need to be addressed.



ow can we produce more energy while drastically reducing CO. emissions globally? This is the problem that industry manufacturers will need to solve over the next few years in order to simultaneously address the inexorable rise in the world's population (10 billion people by 2050) and the subsequent increase in energy requirements - and the critical need to cut carbon emissions on a global scale. "Contrary to what many people think, the energy transition doesn't necessarily mean producing less energy, but producing and consuming better," says Salvador Lamas, Vice President, Solutions for Power Management. "It's an underlying trend that requires action on all fronts – from production to consumption, including energy conversion, transmission and storage - and which therefore brings together a whole range of technologies and stakeholders through to the end consumer,

Double-digit growth

in pursuit of a single, common

The global energy crisis in 2022 and the rising number of extreme weather events have underscored the need to increase the production of energy from renewable

sources (wind, solar, hydro). Renewables have been growing at double-digit rates every year: so fast, in fact, that renewable electricity capacity expanded by 50% in 2023, a trend that is expected to intensify in the coming years. "The trend is global," says Philippe Meunier, Senior Manager Strategic Marketing at Mersen, "and everyone has understood the importance of capturing it, starting with China, which now leads the rollout of renewable capacity, accounting for more than half of global additions each year. Just about everywhere, proactive public policies are being implemented to reduce the share of fossil fuels and increase the use of so-called "clean" energies."

Supporting power grid development

The complexity of the energy transition lies in the fact that it affects the entire ecosystem. A case in point is the fastgrowing electric vehicle industry, which requires both cutting-edge technology and appropriate infrastructure, while at the same time striving to keep costs down to allow as many people as possible to benefit from the EV revolution. In addition to improving production, it's therefore also necessary to minimize losses, improve transmission, increase storage



Total worldwide electricity production is expected to rise from 28,000 TW currently to **31.000 TW by 2030** and exceed 35.000 TW by 2035



The share of renewable energy in global production is set to rise to **42% by 2028**. from 29% in 2022

capacity and adapt the use of these intermittent energies in order to integrate them into the overall energy mix. As Pierric Gueguen, VP Global Strategic Marketing at Mersen, points out, "If renewable energies are to replace fossil fuels in the long term, they will have to be available when and where they are needed, despite their intermittent nature, including in isolated areas with little or no supply from the grid." The development of power grids and the building of high-voltage direct current (HVDC) lines to transmit electricity over long distances will be critical to meeting this challenge.

"In 2023, renewable electricity capacity expanded by 50%."

Mersen poised and ready to take on all technological challenges

Working for over 15 years alongside manufacturers who are making the energy transition a reality, Mersen has developed unique expertise for every need.



Wind power production is steadily increasing, thanks to the boom in onshore and offshore wind capacity. The past few years have seen a push for ever-larger turbines and farms, but the market has now entered a phase of technological stabilization, which should be accompanied by an improvement in power station performance.

Mersen supplies power generation and distribution products (brushes, brush-holders, slip-ring assemblies, signal transfer systems), as well as products for the protection of equipment (fuses, fusegears), and is recognized for its ability to provide innovative solutions to the wind power industry.

Solar power

Striving for efficiency

With production capacity reaching nearly 450 GW in 2023 and an annual growth rate of 15%-20%, the solar market continues to expand, with China accounting for more than 85% of overall manufacturing capacity. The challenge facing the industry right now is to continue developing

new technologies aimed at improving solar cell efficiency.

Mersen has promoted the emergence of this market with high-end graphite and insulation felts for producing silicon ingots. the raw material of solar cells. It leverages proven expertise in delivering high value-added solutions. and also offers a host of products for the electrical protection of solar panels.

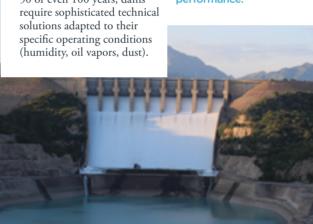


Hydropower

Regular maintenance to ensure reliability

Hydropower accounted for 37% of total renewable electricity generation at the end of 2022 and supplied up to 75% of demand in some countries like Brazil. While hydro is undoubtedly the most sustainable renewable energy source with facilities that can operate for up to 50 or even 100 years, dams require sophisticated technical solutions adapted to their specific operating conditions (humidity, oil vapors, dust).

Mersen assists industry operators throughout the life cycle of the power plants by providing them with solutions dedicated to hydroelectric generators (brushes, brushholders, slip-ring assemblies) and services to optimize facility performance.



3,372 GW of energy generated by renewable energies in 2022



Conversion and transmission

Protecting systems and minimizing losses

Operators require conversion and transmission systems that are increasingly powerful and efficient in order to distribute energy at the point of consumption and minimize losses. HVDC* is a common technology that uses overhead transmission lines or submarine cables to transmit power from various sources (solar, wind) over long distances. The systems use converters to transform

alternating current into direct current and vice versa.

Mersen's products help to optimize the efficiency of the converters (interconnection busbars cooling devices, power capacitors) and ensure the electrical protection of installations (fuses).

* High-voltage direct current.

Storage

Making energy available when you need it

For intermittent renewable sources like solar and wind, storage solutions are critical to ensure that the energy is available at all times. The industry is focusing on lithium-ion batteries, which have the advantage of being both compact and safe, in addition to being able to efficiently manage peaks in energy demand.

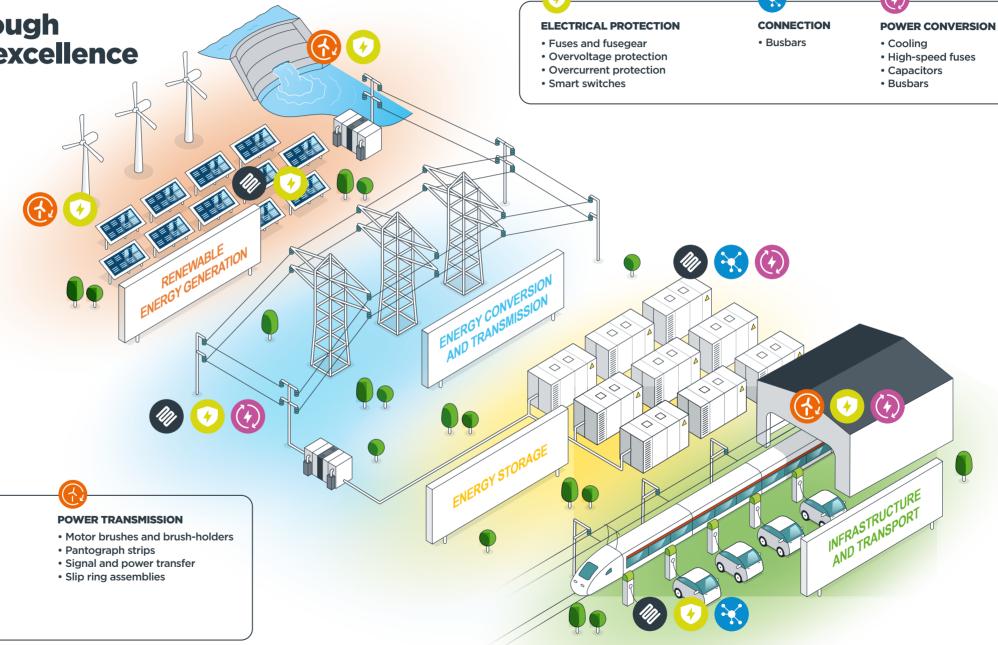
Mersen's solutions provide electrical protection of storage batteries (highspeed fuses) and improve connections between the cells or the modules (busbars).







Whether it's helping to boost renewable production capacity, minimizing losses during conversion and transmission, protecting equipment or improving storage capacity, over the years Mersen has developed unique expertise for industrial companies actively involved in the energy transition.



SOLUTIONS FOR HIGH-TEMPERATURE MANUFACTURING PROCESSES

- Graphite furnace linings
- Machined graphite parts
- Graphite and carbon components
- Graphite susceptors
- Furnace insulation

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INTERVIEW

"The electric vehicle market is being driven by global demand"

In just a few years, Mersen has emerged as a key partner to electric vehicle manufacturer suppliers, both upstream and downstream of the value chain. Philippe Griaud, Vice President, Electric Vehicles Business, and Olivier Raymond, Vice President, Global Sales and Business Development, Graphite Specialties, discuss the reasons for this success and Mersen's

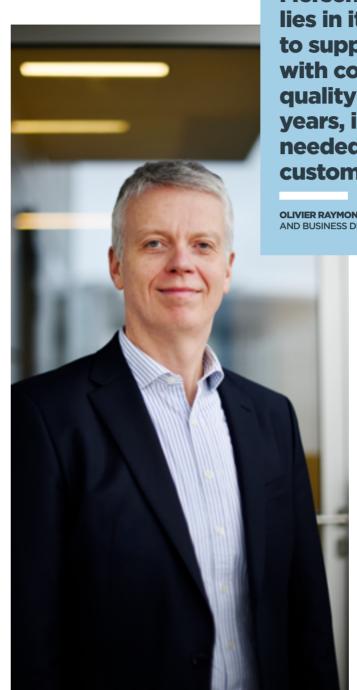
growth prospects.

Is the electric revolution fully underway in the automotive sector?

Philippe Griaud: The shift from internal combustion engines to electric vehicles is driving a transformation, the likes of which the industry hasn't seen for decades. Under pressure from changing regulations, the major automakers have all joined the fray over the last few years, resulting in strong growth. This growth is expected to continue for quite some time, with global sales projected to rise from 14% today (20% in Europe) to 40% or 45% in 2030. But beyond all the media hype and the windfall effect, the real question is how fast will the transition go. Olivier Raymond: It's also important to distinguish between all-electric vehicles, hybrids and plug-in hybrids that can be charged using a wall outlet and also run in full electric mode. The market isn't yet fully mature and is moving forward in fits and starts, which means that we need to anticipate developments in the short and medium term.

Are all-electric vehicles the future for Mersen?

OR: If our aim is to move towards the model with the lowest carbon emissions, hybrid vehicles can only be transitional technologies. So, yes, in the long term, all-electric will become the norm. But there are still some challenges to overcome, such as improving vehicle performance – and especially battery performance – making the vehicles more widely available and developing adequate charging infrastructure.



Mersen's strength
lies in its ability
to supply products
with consistent
quality over several
years, in the quantities
needed by our
customers."

OLIVIER RAYMOND, VICE PRESIDENT, GLOBAL SALES AND BUSINESS DEVELOPMENT. GRAPHITE SPECIALTIES

PG: It's a market where development depends on a wide range of stakeholders, not only manufacturers and energy suppliers, but also charging station installers and local authorities. For the shift to take place, the entire ecosystem needs to be up and running.

One of Mersen's distinctive features is that it's present both upstream and downstream of the value chain.

OR: Absolutely. Upstream, we supply isostatic graphite equipment and purified carbon insulation felts for the furnaces used in manufacturing silicon carbide (SiC) wafers. These wafers serve as a base for the active elements contained in power semiconductors, which are used in converters that transform alternating current into direct current and vice versa. Our solutions are essential for the manufacture of SiC crystals at very high temperatures (2,400°C).

PG: Downstream, we have two standout product lines, particularly busbars, which are used in batteries and can be found in various electric vehicle modules. We have also developed a specific range of fuses for 400V and 800V batteries that appeal to many customers, including automakers, battery producers and power interconnector manufacturers.

What do customers want from Mersen?

OR: Our unique expertise, built up throughout our history. For decades we have been producing isostatic graphite that is among the best in the world and helping manufacturers →

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to produce wafers. These are highly complex processes that are difficult to control, where having products with lot-to-lot stability over several years is crucial so that they can be used almost in "plug and play" fashion. Tech leaders like Wolfspeed, onsemi, SiCrystal and SICC trust us because we can offer them this quality and stability, in addition to providing them with the quantities they need.

PG: Another of our strengths is being able to deliver tailormade solutions. If we take busbars, for example, each model is co-developed with the customer in order to produce a customized battery module. That's one of the reasons why we were recently chosen by ACC, the joint venture between Stellantis, TotalEnergies/Saft and Mercedes-Benz, to support vehicle development at Peugeot, DS, Opel and Fiat. The goal is to deliver more than 10 million busbars over a seven-year period, with production starting in the middle of this year.

You address two rather different segments: how can you create synergies between the two?

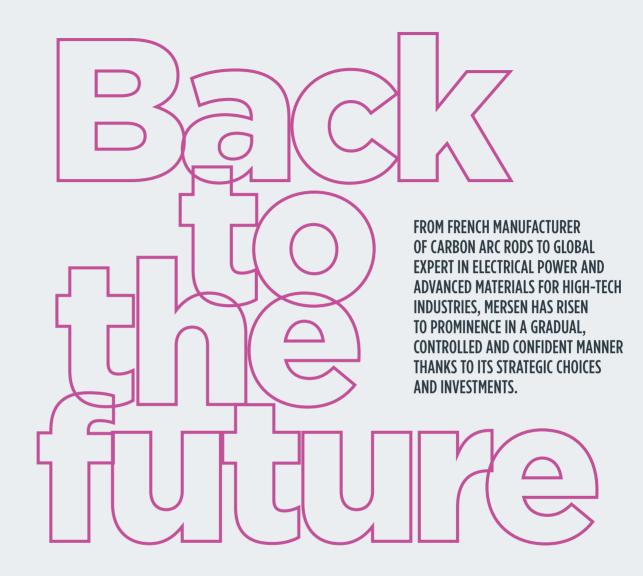
OR: Synergies are less about products and technologies than about market vision and development. We're working on two branches of the same sector that aren't disconnected: if manufacturers make certain technical or technological choices, there are bound to be consequences further up the chain.

So having a Mersen business unit whose core business is electric vehicles and with which we discuss on a regular basis helps us to anticipate change and to adapt. Agility has always been one of our assets.

PG: The automotive sector is extremely demanding and efforts to create solutions aligned with customer expectations contribute to the development of Mersen's technical expertise. For example, we have developed new high-speed manufacturing processes for busbars that have enabled us to divide production times by ten, while at the same time improving product robustness.

"The revolution is underway, but the real question is how fast will the transition go."

PHILIPPE GRIAUD, VICE PRESIDENT, ELECTRIC VEHICLES BUSINESS



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1913:

Gennevilliers, the first steps of a future giant

The crown jewel of the Group's innovation process, the Gennevilliers site is constantly changing to support research efforts and new production lines.

Aerial view of the Le Carbone Lorraine plant in Gennevilliers 1950s-1960s.

The Le Carbone Lorraine plant in Gennevilliers,1948

Continuous baking furnaces.

Top view of the construction project at the Le Carbone manufacturing site in Gennevilliers and a watercolor of one of the buildings

A few years after it was created, Le Carbone chose a sevenhectare site in Gennevilliers (France) as the location for its new plant. The company invested in brand-new

furnaces, making it one of the world's best equipped plants for manufacturing carbon arc rods. Over time, the site has expanded and evolved to become a key element of

Mersen's manufacturing base, where scores of innovative products are designed. Henceforth specialized in graphite solutions for high-tech applications, the

Gennevilliers site will continue to drive the Group's growth in the years ahead, with new production lines dedicated to the manufacture of silicon carbide (p-SiC°) substrates.



1990s: an ability to anticipate market change

In the 80s and early 90s, Mersen decided to invest in several sites in Europe and the United States to better assist local manufacturers in leading-edge industries.

BAY CITY

(USA)

Acquired in 1990, the Bay City plant engages in graphite machining and purification activities and silicon carbide (SiC) coating capabilities for the semiconductor industry. These materials are highly acclaimed by participants in the energy transition, and the Group has decided to expand the site to meet demand from major players like Wolfspeed.



SAINT-BONNET-DE-MURE (FRANCE)

Acquired in 1985, the Saint-Bonnet-de-Mure site has enabled Mersen to become a world leader in electrical protection. Lying at the heart of an agreement between Mersen and ACC – the joint venture between Stellantis, Mercedes-Benz and TotalEnergies – the site continues to occupy a central position. Over the next few years, the Group will invest in new busbar production lines for the "new generation" batteries that will equip Europe's future electric vehicles.



ST MARYS

(USA)

In 1991, Mersen acquired the Stackpole plant in St Marys, where it decided to transfer its manufacturing operations of isostatic graphite for high temperatures. Today, Mersen continues to invest in St Marys to further enhance its production capacity.



ENTERING THE 21ST CENTURY: bigger, further and more sustainable

GREENVILLE

(USA)

In 2006, Mersen acquired the Greenville site, specialized in the supply, machining and finishing of graphite parts. These components are used in furnaces for high-temperature industrial processes, which are essential for manufacturing silicon carbide (SiC) semiconductors. In response to increasing demand, the Group built a new 4,000 sq.m machine shop where new machinery will be installed under a lean manufacturing approach to streamline production flows.



2000

Mersen gives itself the resources to reach its ambitions, with significant investments in sustainable development markets.



2008

HOLYTOWN (SCOTLAND)

In 2008, the Group acquired a plant in Holytown that produces rigid insulation felts for very high temperature furnaces. By setting up operations in Scotland, the Group has strengthened its manufacturing capacities in Europe. Today, Mersen continues to support its global growth by investing in several buoyant segments, including SiC semiconductors and solar energy.





COLUMBIA

(USA)

The Columbia site acquired in 2019 covers several high-growth specialty markets and occupies a key place in the Group's global strategy. Mersen has invested heavily in the facility with the installation of three separate product lines: one for isostatic graphite, one for extruded graphite and one for insulation felts. Further investments are planned in the short and medium term to increase baking and graphitizing capacity.

IN 2023, THE GROUP UNDERWENT A MAJOR TRANSFORMATION. FROM INVESTMENTS TO RECRUITMENT AND PARTNERSHIPS, EVERYTHING IS IN PLACE TO DRIVE AMBITIOUS GROWTH BETWEEN NOW AND 2027.

A transformation led by growth **p.24**Mersen on the road to success **p.28**Mersen, world expert in electrical power and advanced materials for high-tech industries **p.30**



After reaching the €1 billion sales milestone in 2022, Mersen unveiled a growth plan to achieve €1.7 billion by 2027. With this ambition, the Group is taking on a new dimension that involves deep organizational change.

Thomas Baumgartner, CFO

"Financial and non-financial results that are more than encouraging"

"2023 was a year of profitable growth for Mersen. With record sales of €1.2 billion, we're on track to achieve our goal of €1.7 billion in sales by 2027. In addition

to these financial results, our financial structure was further strengthened by the capital increase in May. This provides us with greater flexibility to seize opportunities and hire people who will help drive our growth. This performance wouldn't be complete without our significant strides in non-financial areas. For example, we reduced our CO₂ emission intensity by 26% compared with 2022. We also aligned more than 21% of our activities with the green taxonomy, compared with 14% last year. Lastly, we continued

to enrich our human capital, with advances in death and disability coverage, pay equity, hiring of people with disabilities, incentive plans and more.

Taking advantage of these positive changes, we aligned our CSR roadmap with our strategic plan."



Estelle Legrand, Group Vice President, Human Resources

"We need to capitalize on our existing expertise and incorporate new skills" "To support its growth strategy, Mersen plans to hire more than 700 employees between now and 2027. We're going to need to integrate new talent, and sometimes also new skills and professions, into our existing teams, which is a real managerial challenge that we're taking very seriously and have been anticipating for some time.

Apart from welcoming new hires, for us it's a matter of embracing growth while remaining true to our corporate values, which means helping each employee to find their place in the new organization that is taking shape.

Our managers will play a key role, leading teams that are more diverse, with people from different sectors, such

as the automotive industry. We will help them develop the skills that have become essential in today's world. In the same way, we will empower all employees to fully participate in this new stage in Mersen's life by encouraging them to take initiative and by creating individual development plans to help them achieve their full potential with us.

Finally, we need to anticipate the handover of some of our experts who will be retiring over the next few years and whose know-how is vital to our company. Mersen's history has always been one of passing on knowledge: it's from our past that we draw the strength to change the present and prepare the future."

An enhanced partnership with Wolfspeed in the **United States**

Mersen has signed a fivevear contract worth nearly USD 400 million with Wolfspeed, world leader in silicon carbide (SiC) technologies. The Group will supply hightech materials. particularly graphite, needed to manufacture SiC semiconductors. With this agreement,

Mersen supports Wolfspeed's development in the field of electric mobility and industrial energy efficiency. The Group will invest USD 120 million over three years and is expected to create up to 200 new iobs in the United States.



Pushing the boundaries of space observation

Mersen has supplied Airbus Defence & Space with silicon carbide mirrors and structural parts for the large telescope used in the European Space Agency's (ESA) Euclid mission. Renowned for its light weight and stability, SiC enabled the telescope to collect exceptionally precise, high-resolution images in 2023.

Mersen on the road to success

New contracts, new investments: 2023 was another successful year for Mersen, which continues to gain a foothold in sustainable markets.

ACC chooses Mersen busbars

Automotive Cells Company (ACC), the joint venture created by Stellantis, TotalEnergies/Saft and Mercedes-Benz, has chosen Mersen to manufacture "new generation" batteries for Europe's electric vehicles. The Group will supply smart, laminated interconnection busbars that will be manufactured at the Saint-Bonnetde-Mure plant. Mersen will invest in automated lines to ensure high-volume production.



ACC gigafactory in Douvrin.



New fuse lines dedicated to electric vehicles

In the Shanghai district of Songiiang, Mersen inaugurated in 2023 a new production facility of fuses for the electric vehicle market. The first two production lines of 500V fuses are already in operation, and will soon be followed by a third line of 500V fuses for the protection of auxiliary systems. Thanks to these automated

lines, Mersen will be able to produce large quantities of products that meet the quality and control standards of the automotive sector.





The new-generation RER running with Mersen

A long-standing partner of Alstom. Mersen is involved in the launch of the RER NG, the newgeneration train that will soon run on the RER D and E commuter rail lines in the Greater Paris area. The Group supplies fuses. laminated busbars and cooling systems for

the converters that power the traction motors. It has also provided pantograph strips, designed and manufactured in the Hauts de France region. to deliver power to the train via the catenary. In addition, Mersen will provide replacement parts in the years to come.

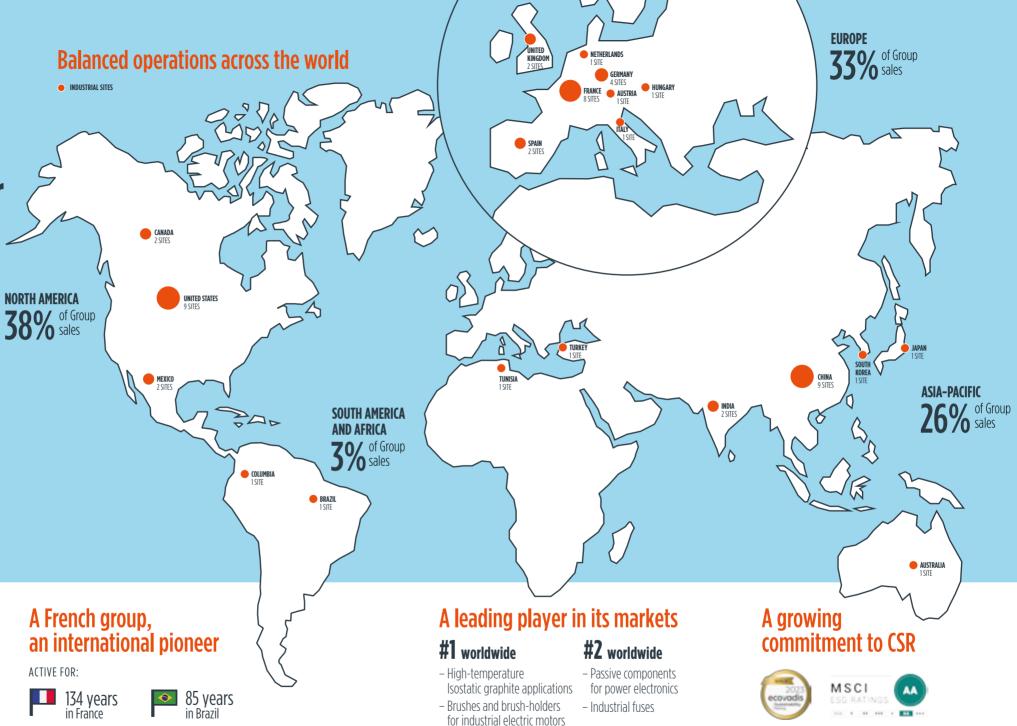


Mersen highlights from 2023

Great Place to Work: The Chinese and Indian sites. Mersen's head office in Paris and the Service Center in Germany all obtained "Great Place to Work" certification in 2023. The label rewards companies deemed to be a good workplace based on employee answers to survey questions.

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



Anti-corrosion equipment

43 years

128 years

in Germany

The essentials

7.530 employees

33 countries

51 sites worldwide

18 R&D centers

1,211 M€ in sales in 2023



Mersen has embarked on an extraordinary human and scientific endeavor alongside Jean-Louis Etienne and his crew. The expedition, designed to provide a better understanding of our planet, will offer new insight into the impact our oceans have on Earth's climate and thus give us new keys to support the energy transition for the sake of our planet. The Polar POD is an international oceanographic station. Mersen is a proud partner of the program, which is coordinated by the French National Center for Scientific Research (CNRS) in partnership with the French National Space Agency (CNES) and the French Research Institute for Exploitation of the Sea (IFREMER). It focuses on four areas of research: air/ocean exchange, Southern Ocean monitoring, biodiversity survey and human impacts. Find out more about this incredible project: polarpod.fr/en

POLAR**POD**

Mersey

OFFICIAL PARTNER