

PROCESS INDUSTRIES MINING

SOLUTIONS FOR

- **POWER AND SIGNAL TRANSFER**
- **SAFETY & RELIABILITY OF ELECTRICAL POWER**



MERSEN

MERSEN



Global Leader in Solutions for Rotating Machines

● Mersen is a leading manufacturer of power and signal transfer solutions, as well as safety and reliability of electrical power solutions, for the surface and underground mining industry. Mersen provides the mining players with a broad range of high performance solutions such as carbon brushes, brush-holders, slip ring assemblies, pantograph strips, high power switches and services.

Mersen operates in 5 continents and employs about 7,000 people around the world. Our global experience allows us to develop close relationships with our customers.

OEM and Aftermarket Supplier

● As an integrated supplier, we provide major OEMs with performance products and engineering support. In the Americas, Mersen is the exclusive supplier of carbon brushes to P&H. Ever present with our sophisticated problem solving approach, we offer quality replacement products and services to the mining industry.

R&D, Quality and Safety

● Mersen is committed to an ongoing R&D development program resulting in numerous innovations: product improvements, development of new materials and products... The Mersen teams are dedicated to the safest possible use of our products.

Mining Industry Experts

● Our experts have been present in the field for many years assisting the mining industry in satisfying the demanding needs of equipment performance. Since carbon brushes and commutators are the first components to be impacted in case of DC machines incorrect running, Mersen teams have developed tools and know-how to diagnose and optimize the performance of your equipment. Depending on the application and environment, our specialists will propose required solutions:

- Proven brush grades with adapted impregnations
- Brush-holders and pressure systems upgrades and replacements

Achieve more with Mersen:

- Reduce your maintenance costs
- Increase your equipment availability
- Protect your equipment



SOLUTIONS & SERVICES FOR THE MINING INDUSTRY

SERVICES

- Motor & maintenance services
- Training
- Tools & measuring devices

POWER INTERCONNECTION (Copper extraction)

- Switches

OFF HIGHWAY VEHICLES WITH PANTOGRAPHS



Current Collection

DRAGLINES



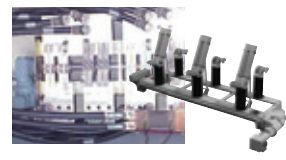
Carbon brushes



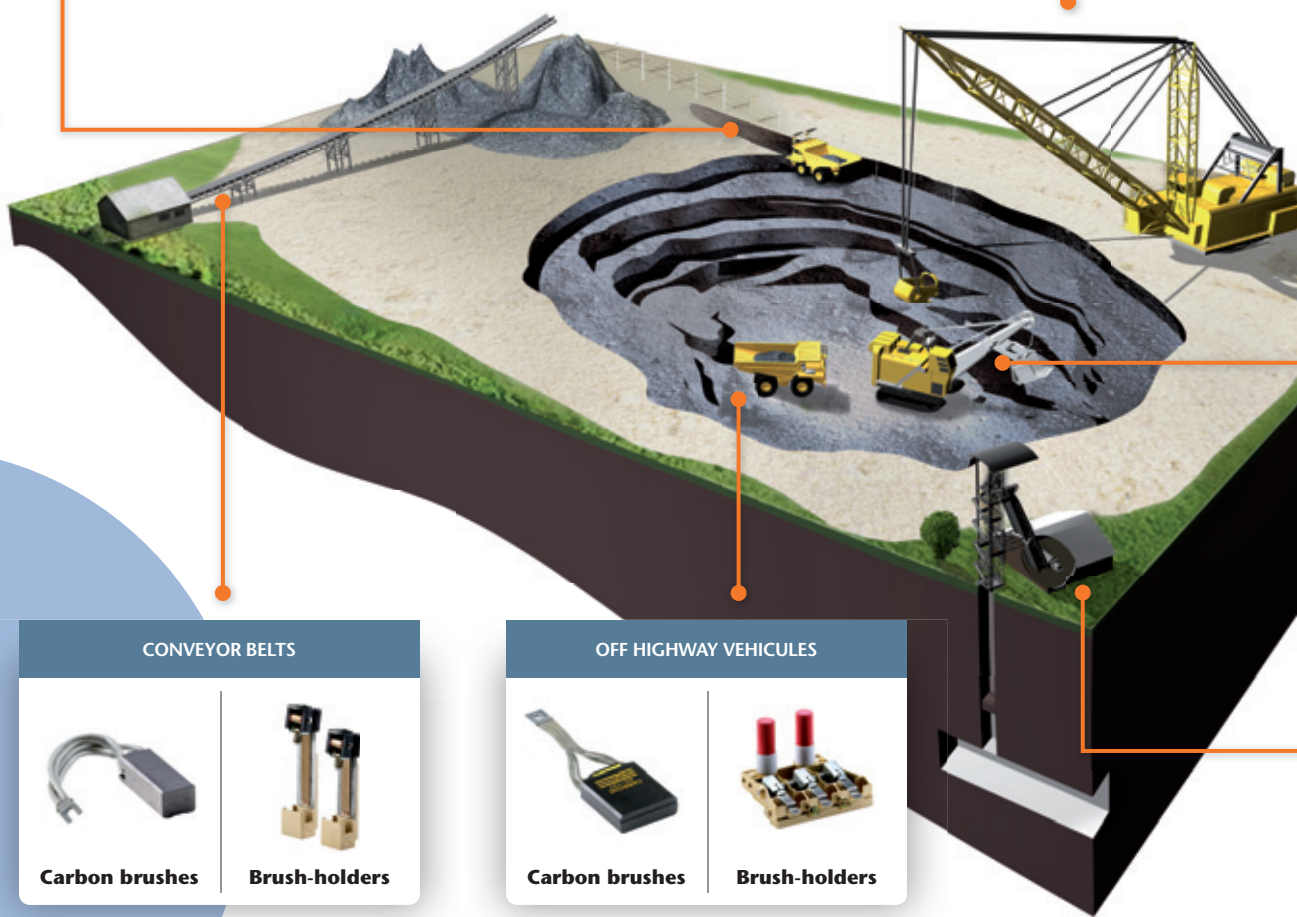
Brush-holders



Pressure systems



High power switches



CONVEYOR BELTS



Carbon brushes



Brush-holders

OFF HIGHWAY VEHICLES



Carbon brushes



Brush-holders



CARBON BRUSHES

Mersen manufactures its own carbon and graphite (France, USA, India) for the production of carbon brushes.

Our carbon brushes :

- Maintain a stable film formation
- Have excellent commutating ability for minimal sparking
- Provide extended equipment life

BRUSH-HOLDERS

In electric machines, brush-holders are another key component. Their function is to ensure proper brush stability and contact. Mersen has developed specific know-how and versatile production facilities throughout the world. We can supply brush-holders and pressure systems for any major OEM.

SLIP RING ASSEMBLIES

Slip ring assemblies are electromechanical components for the transfer of power and signals from a stationary to a rotating object. With significant manufacturing experience, Mersen produces slip ring assemblies from a wide range of materials:

- Copper
- Bronze
- Stainless Steel
- Brass...

PANTOGRAPH STRIPS

To reduce fuel consumption and improve the efficiency of OHVs, some mines are equipped with catenaries supplying mining trucks with electricity. The sliding contact between the catenary and the truck pantograph is achieved by an impregnated graphite strip.

Mersen is a leading manufacturer of graphite solutions producing pantograph strips meeting mining requirements.

SWITCHES

- DC and AC switches
- High current / Low voltage applications
- High voltage / Low current applications
- After sales services

SHOVELS



Carbon brushes



Brush-holders



High power switches

HOIST MOTORS



Carbon brushes



Brush-holders

HIGH QUALITY ENGINEERED SOLUTIONS

● Our solutions are based on over 100 years of experience gained in the field. Working in different countries, applications and environments, we know what works and how to improve performance. That is why we provide our customers with a wide range of solutions, each adapted to a specific need. Our strengths are our experience, our knowledge and our ability to design solutions with the attention to detail in every step of the manufacturing process.

● Our solutions for the mining industry are carefully selected from high quality materials and are manufactured on cutting-edge equipment (CNC machines, broaching machines, computer aided measuring instruments, high precision microscopes...). They benefit from high precision assembling and respect industrial international standards (IEC, NEMA, ASTM, SAE, DIN...).

● We test our solutions for optimum performance in a variety of load and environmental conditions, helping our customers to reduce their maintenance costs. We have the knowledge to optimize or reengineer existing solutions to provide the appropriate solution.



Aside from providing electrical solutions for motors and generators as well as solutions for the safety and reliability of electrical power, Mersen also provides a comprehensive range of anticorrosion and process equipment for mining hydrometallurgy.

Our markets:

- **Energy:** • Wind • Hydro • Photovoltaic • Nuclear Power • Conventional Thermal Power • Oil & Gas
- **Transportation:** • Railways • Aerospace & Aeronautics • Ports & Marine • Electrical Vehicles
- **Electronics:** • Polysilicon • Power Electronics • Semiconductors • Compound Semiconductors • Optical Fiber Production
- **Chemicals & Pharmaceuticals:** • Organic Chemicals • Inorganic Chemicals • Fine Chemicals & Pharmaceuticals
- **Process industries:** • Metallurgy • Mining • Oil & Gas • Cement • Pulp & Paper • Rubber & Plastic
 - Water & Wastewater Treatment • Assembly Manufacturing • Mould Industry • Glass Industry • Sintering
 - Furnace Industry
- **Other Markets:** • Commercial • Residential • Data Communication • Elevators • Forklifts





MERSEN
Expertise, our source of energy

A GLOBAL PLAYER

Global expert in materials and solutions for extreme environments as well as in the safety and reliability of electrical equipment, Mersen designs innovative solutions to address its clients' specific

needs to enable them to optimize their manufacturing process in sectors such as energy, transportation, electronics, chemical, pharmaceutical and process industries.

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