



SMT SCHARF AG



FOREWORD

Dear readers,

As a German manufacturer of special machinery, headquartered in Hamm, North Rhine-Westphalia, we have been developing transport equipment for mining and tunnel construction sites for over 75 years. Whether China, Russia or South Africa - we are present in the important mining regions of the world with a wide range of products and services. Our rail systems, which are used primarily in hard coal mines and in the underground mining of gold, platinum and other ores, are world leaders. With suitable transport and logistics systems, we contribute to ensuring that manpower, equipment and material reach their destination safely. Our captivated railway systems transport a payload of 48 tonnes on lines with gradients of up to 30 degrees. At the same time, SMT Scharf is also setting new standards in underground mining for rubber-tyred vehicles with electric drives.

We invite you to immerse yourself in the world of a special machine builder for underground mining and learn more about its areas of activity underground.

Kind regards,

The Managing Board team

Hans Joachim Theiß

Wolfgang Embert

FOCUS ON TRANSPORTATION SOLUTIONS FOR OUR CUSTOMERS IN MINING AND TUNNEL CONSTRUCTION

As an integrated system supplier, SMT Scharf has been offering transport solutions for underground mining personnel, equipment and materials for more than 75 years. We are a German specialist engineering company at home in our core customers' domestic markets. Our products and services are world-class. We are the global market and technology leader in rail systems and chairlifts for underground mining. Our captivated railway systems as well as our other high-performance vehicles are deployed all over the world, primarily in hard coal mines as well as in mines for gold, platinum and other metals.

The technical performance data for our core product, the monorail, are unmatched worldwide. This rail system – which hangs from a single track and is deployed in both coal mines and hard rock mines – is easy to install and can transport loads of up to 48 tonnes on gradients of up to 35 degrees. Trained personnel can set up as such a track network quickly and inexpensively.

The SMT Scharf Group is active with subsidiaries in the world's leading mining nations, including China, Russia, Poland and South Africa. Since last year, we have also been expanding our activities in the South American market with a new sales office, and can now respond locally to our customers' needs.



SMT Scharf shunting trolley
in use underground

SPECIALIST ENGINEERING COMPANY WITH A GLOBAL PRESENCE



SMT Scharf HQ



SMT Scharf subsidiaries



Joint ventures



Active sales territories



New sales region

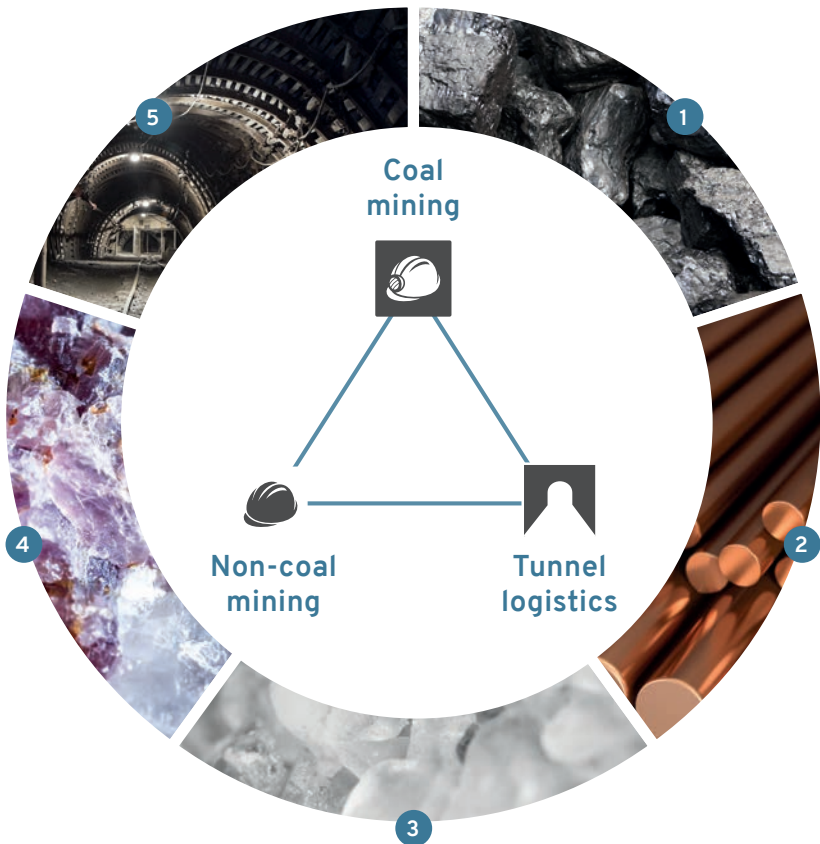


RDH Scharf CoE
rubber-tyred vehicles



STABLE FOUNDATION AND STRATEGIC FARSIGHTEDNESS

The three segments of SMT Scharf AG



1 coal 2 copper 3 salt 4 lithium 5 hard rock in a tunnel



SCHARF
SOLARIZATION FOR PAINTING, SOLARIZATION

New SMT Scharf diesel trolley
ready for delivery at the test site

AT HOME IN MANY MARKETS

Coal mining

SMT Scharf continues to sell most of its products to operators of underground hard coal mines worldwide. In longwall mining, materials are mined in horizontal walls of considerable length – SMT Scharf's rail transport systems are most frequently deployed here. SMT Scharf has significantly internationalised itself over the past years and focused on major producer countries worldwide. The energy demand of large emerging economies will still need to be covered by coal for the foreseeable future. Mine operators will continue to require our products over the coming decades as a consequence. Around 95 percent of our revenue today is generated from foreign markets.

The most important European market at present is Poland, which is regarded as particularly attractive given its above-average economic growth on a European comparison, combined with a high longwall share for SMT Scharf. Besides this, the most important markets for our rail systems and services are Russia, where the largest number of installed rail systems is located, and China, which offers the greatest future sales potential due to its enormous size. South Africa offers a bridgehead to sub-Saharan Africa. We are market leader for chairlifts in hard rock mining in South Africa, and anticipate growth in our business with rubber-tyred vehicles.





Coal will remain an important
energy source for the foreseeable future

AT HOME IN MANY MARKETS

Non-coal mining

The production of metals such as gold, platinum, copper, nickel and other raw materials such as salts is aggregated within our „Non-coal mining“ segment, where we also deliver exclusively to underground mine operators. As easily tapped deposits in the hard rock mining area are becoming increasingly exhausted, a growing market exists for SMT Scharf products that are deployed underground. In contrast to coal mines, however, no expensive explosion protection is required in the mining of metals, thereby enabling electric locomotives to more easily replace diesel locomotives. Hard rock mining is varied and distributed globally: the world's largest platinum deposits are situated in South Africa. Russia is regarded as a leading producer country of nickel. Many copper mines are situated in South America's Andean states and in Australia. We identify a number of opportunities to expand the business with mine operators beyond coal to form a second business pillar: we are partly tapping new geographic markets that are less relevant in coal mining, and reducing dependency on coal mine operators' investment cycles. We aim to grow organically in this area.





Raw materials such as lithium enjoy high demand from new trends such as electromobility

AT HOME IN MANY MARKETS

Tunnel logistics

SMT Scharf is working on expanding its business with tunnel logistics for large-scale construction sites to form a second business pillar and on offering demand-based solutions based on SMT Scharf technology in this market. Through combining our core competencies, together with our partner we can tap a further business area lying outside our core positioning in mining.

We also aim to further stabilise our sales growth over the coming years and reduce our exposure to business cycles by expanding the tunnel segment. While mine operators – as our customers in both our other segments – depend on the megacycles of raw materials prices, infrastructure demand involving subway tunnels, for example, is independent of such cycles. Here, demand is more strongly driven by global demographic trends and the increasing density of conurbations requiring appropriate solutions. At the same time, many industrialised nations have a great need to renew their infrastructure in order to optimise it.





Urbanisation and infrastructure development
are driving tunnel construction worldwide

ATTRACTIVE GROWTH OPPORTUNITIES IN UNDERGROUND MINING



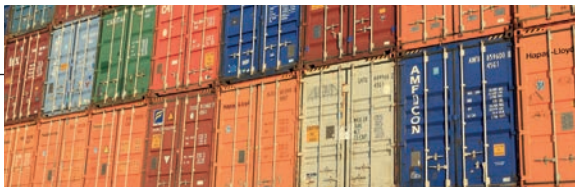
Energy revolution

The sustainability issue is becoming increasingly important and, with it, achieving the Paris climate targets. Demand for renewable energies is set to expand fivefold by 2040, according to calculations. This will necessarily entail rising demand for lithium, cobalt and rare earth metals, which will lend a further impetus to mining.



Urban planning trends

Increasing urbanisation requires an expansion of infrastructure networks. More than 30 megacities are currently under construction worldwide. Demand for transport and traffic routes entails not only expanding infrastructure within megacities but also their connections with each other. Tunnel projects are becoming increasingly important in this context. In China and India alone, 65 subway construction projects are currently being planned and implemented.



Global economic growth

The world's economy continues to grow, albeit at a somewhat slower pace recently. This also increases demand for energy worldwide. An expansion of around one third is expected by 2030. For this reason, coal will remain an important energy source for the foreseeable future. At the same time, economic growth boosts the production of raw materials. The market value of diesel and electric underground construction vehicles will amount to USD 33 billion by 2023, according to market estimates.



Electromobility

Rising demand for electric vehicles in road traffic is another driver for the mining of economically strategic raw materials such as lithium, cobalt and rare earth metals. Demand for electric vehicles is also increasing in underground mining. In addition to lower emissions, this leads to 15% lower maintenance and repair costs on average compared with vehicles powered by internal combustion engines.

MODULAR PRODUCT RANGE FOR CUSTOMISED TRANSPORT SOLUTIONS

Customised transport solutions

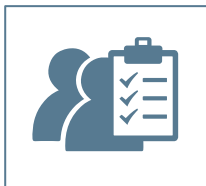
As a specialist engineer, SMT Scharf develops transport solutions extending beyond its core product range, thereby meeting its customers' individual needs. In complex requirements and tasks – including special machines – we benefit from our many years of experience and high development expertise. Our international development teams listen constantly to what our customers have to say, and provide mining companies with on-site consulting. Our goal remains to meet customer requirements holistically through our range of products and services and to consistently leverage potentials by developing individual transport options for underground mining.

Customised transport solutions



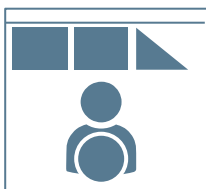
Core competencies

SMT Scharf develops individual transport solutions for its customers, meeting the special requirements of underground mining, such as the requisite explosion protection.



Customer requirements

SMT Scharf's customers require individual transport logistics for their mines. SMT Scharf is present in the most important mining regions and supplies customised solutions.



Product and service offering

With its comprehensive product and service offering, SMT Scharf supports its customers in machine maintenance.



Electric monorail

The EMTS (Electric Monorail Transportation System) was specially developed for the transportation of people and materials in ore mining not at risk of coal mine gas. The EMTS offers a load capacity of up to 30 tonnes and a climbing capacity of up to 30 degrees.



Diesel trolley

SMT Scharf has specially designed monorail hanging railways with diesel-hydraulic drives in order to transport people and materials in branched rail networks with varying gradients. The diesel trolley enables mining companies to tackle difficult transportation tasks underground.



Shunting trolley

The SCHARMAN RK-D-25-XX shunting trolley equipped with a diesel engine meets special underground safety standards. Equipped with friction wheels, it has a climbing capability of up to 25 degrees and features a simple control system.



Rubber-tyred electric vehicles

SMT Scharf's product range includes rubber-tyred vehicles with electric drives for drilling and anchoring or for loading and transporting heavy loads in underground mining. Battery-powered, emission-free vehicles are an increasing trend in mining.



Rubber-tyred vehicles

The Group's diverse product range includes RDH's rubber-tyred vehicles for underground mining. These include jumbo drilling rigs, load-haul-dump machines (LHDs), scissor lifts, low loaders and underground trucks.



Light electric mining vehicles

SMT Scharf offers light electric vehicles for underground mining. These are characterised by high energy efficiency, emission-free operation and significantly reduced heat radiation. This helps the mine operator to reduce underground ventilation costs.



Cable management system

SMT Scharf's cable and hose handling system is suspended from a sliding rail and permits fast longwall advancing and retreating. The system can be adapted to different cable and hose diameters as well as lengths to suit the individual application requirements.



Chairlift

For the African market, SMT Scharf has developed chairlift systems for safe passenger transport over long distances with horizontal and vertical curves. Depending on transport speed and chair distance, up to 900 individuals can be transported per hour.



Tunnelling vehicles

SMT Scharf monorails are ideally suited for the inspection and maintenance of infrastructures in deep tunnels. Each battery-powered vehicle can carry three people and an additional 300 kilograms of payload. Installed video cameras also make it possible to guide the train unmanned to the deployment site.

WELL EQUIPPED FOR THE FUTURE

Raw materials prices remained stable at an elevated level in 2018. In addition to the future market drivers already referred to, prevailing market conditions lead us to identify signals that suggest that the sector is entering a positive phase in its cycle. The market remains challenging, however. Our leading market position, strategic positioning and our innovative strength enable us to gain market shares as part of our growth strategy. Even with weaker demand for new plants, we see ourselves as well positioned to be profitable with our business. We are helped by our strong service and maintenance business in this context.

Through internal strategic measures as well as through takeovers and partnerships, we are moving ourselves into a position to benefit from growth opportunities in mining to an above-average extent. In the past fiscal year, the Managing Board made crucial preparations to promote the positive development of business:

In February 2018, SMT Scharf acquired Canadian mining specialist RDH Mining. The acquisition has strengthened our market position as an integrated systems provider in the underground logistics area and expanded our range of competencies. With its portfolio of rubber-tyred diesel and electric vehicles for non-coal and salt mining as well as tunnel construction sites, RDH possesses outstanding product expertise in this niche. RDH is one of the world's leading suppliers of battery-powered vehicles with lithium-ion technology for underground mining.



The integration of the mining specialist into the SMT Scharf Group is progressing according to plan. The financial integration was completed with the company's inclusion in the consolidation scope in the second quarter of 2018. The sale of RDH products has started successfully and enables us to respond even more individually to our customers' needs. We have also started the technical integration of RDH as a further area of activity. The first measures to this end were already initiated in October 2018 and will be continued during the current fiscal year.



VISION:

Expanded product range in underground logistics

Organic growth

We will further expand our second business pillar in the non-coal-mining area, tap new geographic markets and increasingly extend our product range. In the coming years, tunnel logistics will also be established as a third business area.

External growth

In the future too, we will remain actively on the lookout for opportunities to gain access to competences in adjacent business areas – also beyond our core positioning. Basically, both acquisitions and further strategic partnerships are possible in this context.

Operational excellence

We aim to become even better in operational terms. We identify potential in the interaction of our international locations, in managing the value chain across all functions such as purchasing, development and assembly, as well as through the targeted analysis of specific markets and customer requirements.

Core competences

- Stable core business with sound margins and growth opportunities
- Evolved expertise in machine engineering with maximal customer focus
- Management expertise in the mining industry

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