WE KEEP YOUR STOCK ROLLING
We at Bochumer Verein Verkehrstechnik GmbH (abbr.: BVV) pursue one goal: All our products and services are designed to meet the needs of our customers and, in doing so, ensure safe rail travel. – We keep your stock rolling.

STATE-OF-THE-ART PRODUCTION TECHNOLOGY

We are concentrating the production of blanks and unfinished parts from our own company and from Bahntechnik Brand-Erbisdorf GmbH, including machining activities, under one roof.

EXPERTISE

We develop and test new products in our own accredited facilities on the basis of customer specifications, the professional requirements of technical standards, as well as scientific knowledge.

INSPECTION AND TESTING

We ensure that, by inspecting and testing all component assemblies in conformity with the relevant standards, safety-critical rolling stock components are of a constantly high quality.

CUSTOMER SATISFACTION

We gear our design, production and service activities to providing customer satisfaction and safety in rail travel.

TRADITIONALLY MINDED

The RAFIL® brand name is a registered trademark with a commitment to quality, acquired by Bochumer Verein Verkehrstechnik GmbH.
OUR CORPORATE HISTORY
IN BOCHUM
1842: Establishment of Gussstahlfabrik Mayer & Kühne
1854: Renamed to Bochumer Verein für Bergbau und Gußstahlfabrikation AG
1859: Railway disk wheels and wheelsets
1932: Double-corrugated lightweight wheel centres
1954: Type BO 54 resilient wheel
1988: Establishment of Vereinigte Schmiedewerke GmbH (Schmiedewerke Krupp-Klöckner GmbH plus downstream processing activities of Thyssen Henrichshütte AG)
1991: Takeover of shares in Radsatzfabrik Ilsenburg GmbH

OUR CORPORATE HISTORY
IN ILSENBURG
1871: „Fürstlicher Hüttenbetrieb“
1928: Start of wheelset manufacture
1943: Klöckner Werke, Osnabrück branch
1946: Seizure of facilities, transformation into Radsatzfabrik Ilsenburg/Harz as part of Soviet-run Transmasch AG (fulfilment of reparation demands)
1952: Nationalisation into a state-owned company
1990: Takeover by Deutsche Waggonbau AG
1991: Takeover by Vereinigte Schmiedewerke GmbH
2013: Merger with Bochumer Verein Verkehrstechnik GmbH

EXPERTISE IN STEEL
OUR RANGE OF PRODUCTS AND SERVICES
We are a world leader in the manufacture of railway rolling stock materials and components for use in local and long-distance passenger and goods transport. We design, develop, test and produce complete wheelset systems and individual wheelset parts to customer specifications including, as a speciality, lightweight low-noise and resilient wheels, as well as single-piece forged axles in a broad variety of designs for low-floor trams. Our in-house developed, low-wear materials are solutions tailor-made to meet modern rail traffic requirements and, for decades, have been proving their worth around the world in everyday service.

We offer a comprehensive range of services covering:

- Maintenance
- Stress measurements
- Consulting
- Documentation (e.g. maintenance specifications)
- Measuring wheelsets
- Diagnostics
- Acoustic testing
- On-site training
- Materials testing
- Spare parts

We provide these services for our customers competently and reliably.

Our products come with a guarantee of broad-ranging safety, high availability and excellent cost effectiveness.
LIGHTWEIGHT, SILENT AND LOW-WEAR
SOLID WHEELS

Solid and tyred wheels from Bochum, designed and developed as well as forged, heat-treated and machined in our own workshops, are premium products made using the latest and most efficient technology.

RESILIENT, LOW-NOISE WHEEL SYSTEMS

Our resilient wheel systems have been proving their worth in everyday service and guaranteeing maximum availability to operators since the 1950s. The wheel tyres are made from in-house developed, low-wear materials and, as such, feature significantly in our greatly successful problem solutions. Our super resilient type wheels Bo 01, LoRa and TDAN are particularly suited to the challenges of local traffic routes.
OUR MARKET

As a leading international manufacturer of railway rolling stock material, we are a major contributor with our wheelset systems and services to prestigious projects on all five continents.

Our wheelset systems are used on mainline rail networks in
- high-speed trains,
- long-distance trains,
- locomotives and regional railcars,
- goods wagons and special-purpose rolling stock, as well as
- heavy haul operations,

and on local traffic networks in
- underground trains,
- light rail systems and tramways,
- metro systems, and
- suburban and regional trains.

Our customers include important rolling stock manufacturers and private wagon owners such as
- ALSTOM Transport
- China CNR Corporation Limited
- Kirow Ardelt
- Skoda Transportation a.s.
- TRANSWAGGON GmbH
- Bombardier Transportation
- China CSR Corporation Limited
- Siemens Transportation Systems
- Stadler Rail AG
- VTG AG.

We also supply spare parts to the major group of railway rolling stock operators and manufacturers, including mainline rail network operator Deutsche Bahn AG, other important European state railways and private railway companies and wagon owners, as well as local public operators of rail passenger services such as light rail, tramway and underground railway systems.

As a service provider and certified specialised workshop for railway rolling stock maintenance, we offer all customers IS 3 level maintenance for driven and non-driven wheelsets. This includes the disassembly, inspection and re-assembly of their bearing systems, or their replacement. We stock wheelsets and related spares used by well-known private wagon owners.
OUR QUALITY

The challenges involved in modern rail travel require manufacturers to constantly monitor and optimise individual process steps when designing, developing and making their products, so as to demonstrate a high standard of quality. Our uppermost goals are the satisfaction of our customers and compliance with all safety and quality requirements. We use state-of-the-art production technologies and only stringently tested materials. We have a first-rate, qualified workforce whom we train regularly, thus consistently ensuring the advancement of our special expertise and the sharing of know-how. We also apply the latest in simulation techniques.

Our products are characterised by their unvarying quality, high level of availability, cost effectiveness and durability throughout their period of service.

QUALITY MANAGEMENT

Use of our products around the globe requires working together with a very wide range of qualification and certification agencies.

Our integrated quality management system (IMS) is certified to DIN EN ISO 9001 and DIN EN ISO 14001 and is upgraded and optimised on a regular basis. We meet IRIS (International Railway Industry Standard) requirements and are certified for the development, manufacture, sale, maintenance and repair of railway rolling stock. We have had an energy management system certified to DIN EN ISO 50001 in place since 2012.

We have been a Q1 supplier certified by German national rail service operator Deutsche Bahn AG for many years. We also have approvals from many other European and international railway companies, such as SBB, ÖBB, NS, NSB, SNCB, PKP and AAR.

We have, moreover, various process qualifications, such as for molybdenum coating, bond shrinking, shrinking-on, and welding of railway vehicle components to DIN 6700-2.

Germany’s Federal Railway Authority (EBA) has certified us for specialist appraisals required in the maintenance and repair of wheelsets and wheelset bearings.

Because of our standing as an A-supplier or preferred supplier for important customers, we are permanently committed to optimising our QM system and the skills of our workforce. Constant improvements with regard to quality and production costs enable us to offer customers competitive prices and to operate profitably, so that we, as a supplier, remain a reliable partner over the long term.

We also look to influence our suppliers along the same lines, and conduct audits.
RESEARCH AND DEVELOPMENT

Through continual evaluation of scientific and technological knowledge and through our own research work in the fields of wheelsets and materials development, Bochumer Verein Verkehrstechnik GmbH has for many years contributed to, and co-shaped, international developments in railway rolling stock manufacture, especially where wheel-on-rail contact is concerned.

Our quality assurance offices in Bochum and Ilsenburg, which are DAP-accredited at regular intervals, are equipped to stress-test our own products as a means of demonstrating material properties and fatigue strength, and that the products meet all the safety requirements.

BOCHUM LOCATION

The Materials Test Centre of Bochumer Verein Verkehrstechnik GmbH is accredited to DIN EN ISO/IEC 17025 for destructive testing and metallographic analysis of metallic materials.

The test centre acts, as required in the standard, as an independent, neutral and autonomous organisation and specialises, because of its many years of experience, in the testing of materials utilised in the railway sector. Its customers include national and international transport companies. Besides DIN EN ISO/IEC 17025, it meets all the requirements laid down in current standards DIN ISO 9001, DIN 14001, IRIS, AAR etc.

ILSENBURG LOCATION

The test laboratory of Bochumer Verein Verkehrstechnik GmbH is accredited to DIN EN ISO/IEC 17025 and its facilities equipped for static and dynamic testing of railway-specific components. It has two resonance-excited rotating bending test stands for wheelset components such as wheelset axles and wheels, as well as a Static Test Frame for deformation and stress measurement under high static loads and for testing special constructions. Its main function is to demonstrate the strength of wheelset axles and solid wheels in accordance with standards EN 13979-1, EN 1103/13104, EN 13260/13261 and 13262. Services are offered as part of manufacturer-related product qualification. A corresponding management system is in place for independent, expert and coherent execution of all test work.

Note:
The information contained in this brochure does not constitute any assurance of properties in regard to products and services. All measurements are subject to individual contractual provisions.

Photos:
Title: Company photos, company photos BOGESTRA, Siemens Transportation Systems
Page 2, 3, 4, 6, 7: Company photos
Page 5: Photos vehicles – Bombardier Transportation, Siemens Transportations Systems, Stadler Rail, company photos BOGESTRA
Back: Company photos, Bombardier Transportation
Business units of the GMH Group:

- Raw Materials Recycling
- Steel Production
- Forging Technology
- Steel Processing
- Railway Systems
- Castings Steel/Iron
- Plant Engineering
- Services

Bochumer Verein Verkehrstechnik GmbH
Bochum Works
(Head office):
Alleestraße 70
44793 Bochum
Germany
Tel. +49 (0) 234 6891-0
Fax +49 (0) 234 6891-580
www.bochumer-verein.de

Ilsenburg Works
Alte Schmiedestraße 3-4
38871 Ilsenburg
Germany
Tel. +49 (0) 39452 93-0
Fax +49 (0) 39452 93-205