



## Production

**On-site service** 

Non-destructive testing

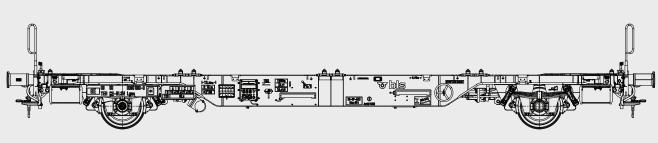
Storage

Revisions

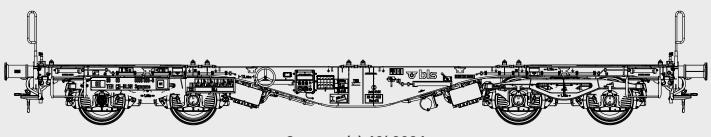


## Production of freigh<mark>t wagons</mark>

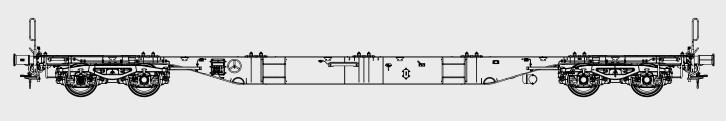
In collaboration with our Swiss partners, we initiated the development of three types of freight container wagons – bogie wagons Sgns(s) 60', Sgmmns(s) 40', and 2-axle wagons Lgns 40'. During 2023 and 2024, prototype production and testing of these wagons were successfully completed, and we obtained TSI certificates for their production. The approval process with ERA is expected to be finalized by the end of 2024.



Lgns 40' 2024



Sgmmns (s) 40' 2024

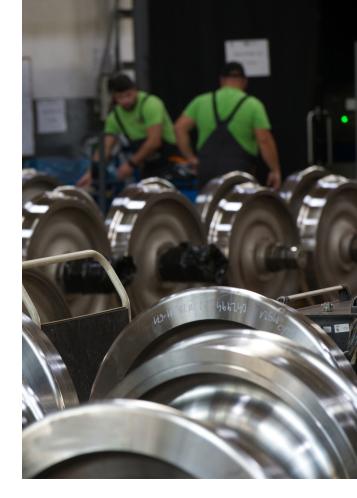


Sgns (s) 60' 2024

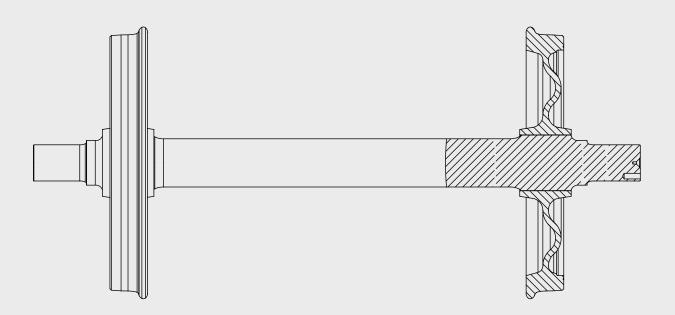
# Production of wheelsets

The approved production process focuses on the manufacturing of new wheelsets for freight wagons using new components.

The components used are provided with complete technical documentation and are supplied by approved manufacturers. With modern technical equipment and experienced personnel, we ensure a production process at our facility that achieves the required quality and customer satisfaction.



Approved wheelset design types: LTS 25t and LTS 23.5t/22.5t



#### **On-site services**

Replacement of wheelsets and bogies with wagon lifting on-site

Replacement of traction and buffer gear

Replacement of brake equipment (brake distributors, relay valves, load sensors, adjusters, etc.)

Replacement of brake shoes

Replacement and repair of steps, handrails, and other safety components

Replacement of drain and safety valves on tank wagons

Repair of wagon superstructures through welding and straightening

Brake testing according to UIC 543-1

Repair of damaged markings and paintwork

Additional lubrication of structural components of freight wagons

Cleaning wagons of transported substrate

Safety inspections

Inspection of freight wagons according to the AVV contract

Inspection and repair of wagons based on the client's individual requirements

Issuance of documentation for individual repairs

Provision of spare parts and assemblies

## **On-site service**

for rail vehicles

#### Our equipment

4 fully equipped service vehicles

Truck with a hydraulic arm capable of transporting six wheelsets

Coupling and lifting device Hegenscheidt for wagons and locomotives

Stationary brake test equipment PDR5

## As part of our wheelset service, we offer an all-in-one service:

#### Storage

Repair of wheelsets according to SÚNV, KVs5B-2010, and VPI regulations

Transportation of wheelsets to the replacement site using a truck with a hydraulic arm

Wheelset replacement using the Hegensheidt lifting device

## **Non-destructive testing**

NDT is a technique used to assess the integrity of railway components and infrastructure without damaging the tested material.

These methods ensure the safety and reliability of railway systems. At LOKO TRANS Slovakia, we consider NDT a fundamental pillar of operational quality and safety.



#### **Technical equipment**

MZZD-2500-R

For the inspection of solid wheelsets, enabling testing with or without monoblocks

MAS 1500 HD Plus Designed for inspecting smaller components up to a length of 1500 mm

OLYMPUS Ultrasonic Equipment Specialized technical equipment for UT (Ultrasonic Testing) inspections

#### Methods

Ultrasonic Testing (UT) Utilizes ultrasonic waves to detect internal material anomalies

Magnetic Particle Testing (MT) Applies a magnetic field to the material – defects alter the magnetic field, allowing their identification

#### Liquid Penetrant Testing (PT)

Uses a penetrant liquid that seeps into surface cracks, making defects visible after applying a developer

#### Visual Testing (VT)

A fundamental method employing visual inspection to identify surface irregularities

#### **Certifications and Authorizations**

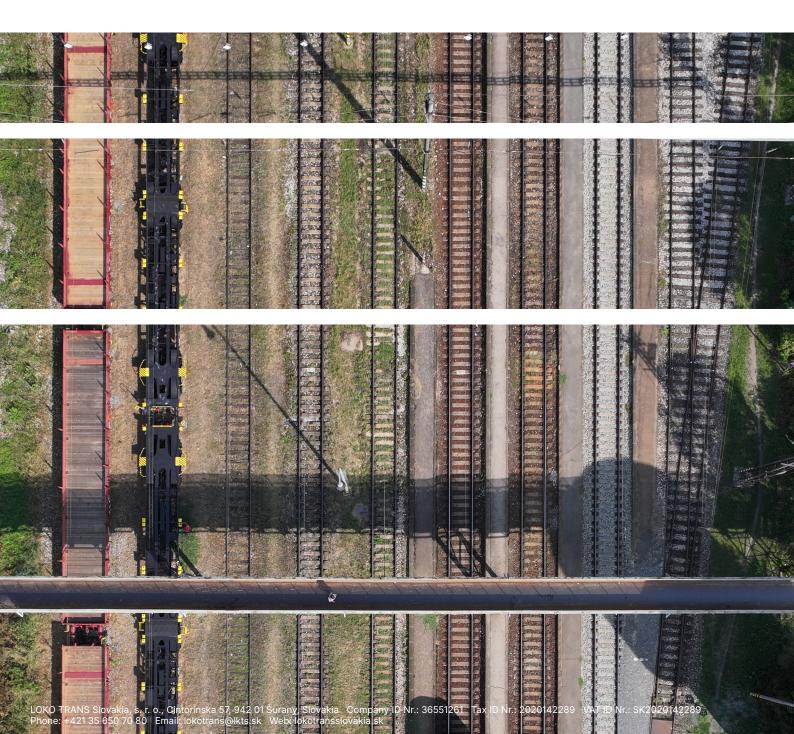
Technicians are certified according to EN ISO 9712 and UIC 960, accredited by COO NSD Bratislava and České dráhy, a.s.

The company holds authorization from the Transport Authority in Bratislava and HDS KV Prague

Successfully completed VPI certification for the NDT RAILWAY certification scheme by W.S. CERT

### Wagon storage and routine wagon repairs

The company LOKO TRANS Slovakia, s.r.o. operates and utilizes the SPaP siding in Komárno, where we provide tracks for both short-term and long-term wagon storage for our business partners. The siding includes tracks that we also use for performing routine wagon repairs, exclusively carried out by the mobile on-site service of LOKO TRANS Slovakia, s.r.o. On the siding, we provide transportation with our own locomotive, offering services such as shunting, positioning, and removing wagons between the SPaP siding and the Komárno railway station, as well as handling regular train operations.

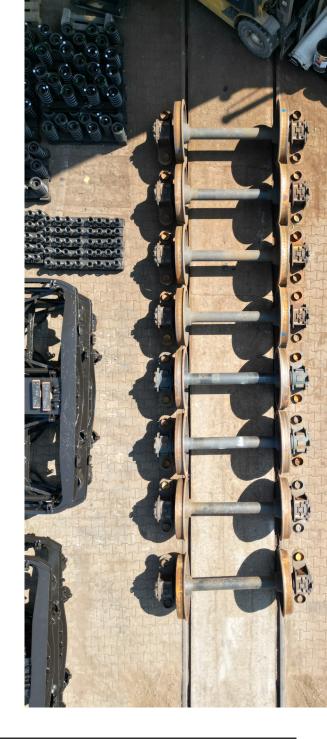


## Wheelset revisions

The operational production process focuses on assessing the condition, conducting revision inspections, and repairing freight wagons and wheelsets to meet the requirements of external customers. With modern technical equipment, skilled personnel, and years of experience, we strive to achieve quality and customer satisfaction. The repair process for freight wagons and wheelsets is tailored to the customer's requirements, and maintenance is performed according to the requested regulations.

## The maintenance levels are carried out according to regulations and the defined scope:

Regulation KVs5-B-2010 SÚNV version 4.1 VPI-EMG 04 VPI-EMG 01 Maintenance Level DO, DO1, D1, D2, D3, D4, D5 ZSSKC revízia, revízia + ISO, IL, IS2, IS3 ISO, IL, IS2, IS3



To ensure and achieve high quality in our operations, we utilize modern technical equipment, CNC machining tools, devices, and measuring instruments

Honor BNC 40120 Lathe Machining of axles (repair of bearing journal, monoblock seat, support ring seat, and shaft)

VL 100C Lathe Machining of wheel hubs (monoblocks)

RAFAMET UBF 112N Lathe Machining of wheelsets (monoblocks) VB 02 400t Press Dismantling of wheelsets

TTK-SAF Blasting Equipment Cleaning and removal of impurities from wheelsets

VERTA Painting and Drying Booth Surface treatment of wheelsets (painting and drying)

MZZD-2500-R NDT Equipment For the inspection of solid wheelsets, enables testing with or without monoblocks

Equipment for Assembly and Disassembly Installation and removal of bearing chambers, bearings, and bearing rings.



## Freight wagon











## **Reception and incoming inspection**

Each wagon arriving at our facility is thoroughly registered and assigned to the maintenance tracking system. Our technicians perform an initial inspection of the wagon to identify any visible damage or wear. This inspection includes checking the wheelsets, axles, bogies, wagon superstructures, and brake components.

## **Disassembly and detailed diagnostics**

The wagon is disassembled into individual components, enabling a detailed inspection of each part. We utilize advanced diagnostic tools and methods to assess the condition of every component. This includes non-destructive testing, ultrasonic inspections, visual checks, and other specialized techniques.

### **Repair and replacement of components**

After identifying damaged or worn parts, our experts perform the necessary repairs. This may include welding, grinding, reconditioning, and other specialized repairs, such as fixing couplers, brake components, weighing springs and leaf springs, or repairing bogies. If some parts cannot be repaired, they are replaced with new ones according to the manufacturer's specifications.

## Assembly and finalization

After repairing and replacing components, all parts are reassembled. Our technicians ensure that all parts are properly installed, thoroughly inspected, and function flawlessly. The wagon undergoes surface treatment according to the technological procedure and is then fully assembled and sent for final inspection to ensure all repairs meet the highest standards. This includes checking the functionality of brakes, suspension, and other critical systems.

### **Final Review and Submission**

Our technicians conduct a final inspection, which includes checking all completed work and verifying that all components function correctly. We prepare detailed documentation of all repairs and modifications, which is provided to the customer for their records.

After successfully completing all inspections, the wagon is ready for handover to the customer. We inform the customer about all the work performed and provide recommendations for future maintenance.

## **Certificates**

ISO 9001:2016

ISO 45001:2019

DIN EN 15085-2 CL1 - Šurany

Certificate of Entity in Charge of Maintenance (ECM)

#### **Certificate of Supplier Qualification**

Repairs of Nbo, Nbt, repairs of mechanical damage, revision repairs (Rev), and technical inspections of Eas-11., 52., 53., 54. freight wagon series owned by the ČD Group, in compliance with the internal directive of ČD Cargo, a.s. KVs 5-B-2010 and approved technological procedures.

Authorization to perform repairs, reconstructions, revisions, and tests on designated lifting technical equipment

Declaration of Authorized Certification Body No. 705 in the field of welding process certification for the ČD Group (ČD Regulation V95/5)

EC Type Examination Certificate for Wheelset LTS 25t

EC Type Examination Certificate for Wheelset LTS 23.5t

EC Type Examination Certificate for Wheelset LTS 23.5t / 22.5t ISO 14001:2016

NDT Certificate - VPI

STN EN ISO 3834 part 2 Steel welded structures, railway vehicles

#### **Certificate of Maintenance Functions**

#### Certificate of Professional Competence

Production, reconstruction, and repairs of railway vehicles for ZSSK CARGO

Authorization for welding railway vehicles

Authorization for non-destructive testing of railway vehicles

Authorization for defectoscopic testing

EC Type Examination Certificate - Sgns

**VPI** Certificate

Authorization for performing technical inspections of railway vehicles

#### Authorization

for installation, repairs, maintenance, reconstructions, revisions, and testing of designated pressure technical equipment