

Comprehensive solutions
for industrial engineering



RESEARCH AND PRODUCTION ENTERPRISE

TECHVAGONMASH



Special process equipment for transport machine
building enterprises



Research and production enterprise «Techvagonmash» has a forty-year experience of design and manufacturing of special process equipment for enterprises of transport machine building.

Our company is a legal successor of VNIPTIvagon (All-union scientific research design-technological institute of railwaycar building) – head technological organization on design of transport machine building enterprises.

The main areas of the company's activity are:

- ▶ comprehensive design and equipping of transport machine building enterprises;
- ▶ design and manufacturing of special process equipment for railroad cars manufacture;
- ▶ process equipment for railroad cars repair;
- ▶ robot-operated welding units;
- ▶ shotblasting equipment;
- ▶ paint booths;
- ▶ filter-ventilating equipment.



Independent audit, performed by the representatives of Quality Austria – a world leader in the sphere of quality management systems certification confirmed the compliance of the Research and Production Enterprise «Techvagonmash» quality management system to the requirements of international standard ISO 9001:2008.



Research and Production Enterprise Techvagonmash is certified for compliance to the following requirements of international standards:

- ISO 3834-2:2005 – «Quality requirements for fusion welding of metallic materials -- Part 2: Comprehensive quality requirements»;
- EN 1090-1:2009+A1:2011 – «Execution of steel structures and aluminium structures. Requirements for conformity assessment of structural components».



TURNKEY PROJECTS

Vast experience, technological and manufacturing abilities allow us implementing turnkey projects in the following areas:

- Vessels manufacturing;
- Manufacturing of towed vehicles and attached implements for commercial transport;
- Rail social transport manufacturing;
- Freight cars manufacturing.



Our competitive advantage is that the company renders a full package of services: from designing stage to supervised installation and commissioning stage including manufacturing of special process equipment.

01

PRE-DESIGN WORKS

Pre-design works allow to assess the feasibility of the project in certain conditions, evaluate the cost and the terms of the work performance, and discover the problems which may occur in the process of project implementation.

02

PROCESS ENGINEERING PART OF THE DESIGN

When developing the process design, the issues of main equipment choice are determined as well as process engineering, labor intensity calculation, flow process chart, functional and organizational structures development.

03

EQUIPMENT DESIGN

All the developments and designing of the output products are carried in automated way using up-to-date CAD-systems.

04

PROCESS EQUIPMENT MANUFACTURING

The company has its own production facilities which allows manufacturing high-quality, high-tech equipment.

05

SUPERVISED INSTALLATION AND COMMISSIONING

- installation and commissioning;
- designer supervision;
- training of the Customer's specialists;
- adjusting of engineering processes and output of a product trial lot.

06

PERSONNEL TRAINING

Customer's personnel are trained to operate the equipment, carry out its setting, diagnostics and servicing.

07

PROVING OUT OF TECHNOLOGY

Techvagonmash in cooperation with the Customer carries out the technology proving out and trial consignment production.

08

SERVICING

We provide the full range of aftersales services, immediate delivery of spare parts, and remote diagnostics of equipment (through data set).

PRODUCT RANGE

SHOT BLASTING AND PRESERVATION LINES FOR METAL-ROLL



Shot blasting and preservation line for metal-roll



Shotblasting chamber for cleaning of metal-roll



Spray chamber

SHOT BLASTING EQUIPMENT



AUTOMATED STORAGE SYSTEMS FOR METAL-ROLL

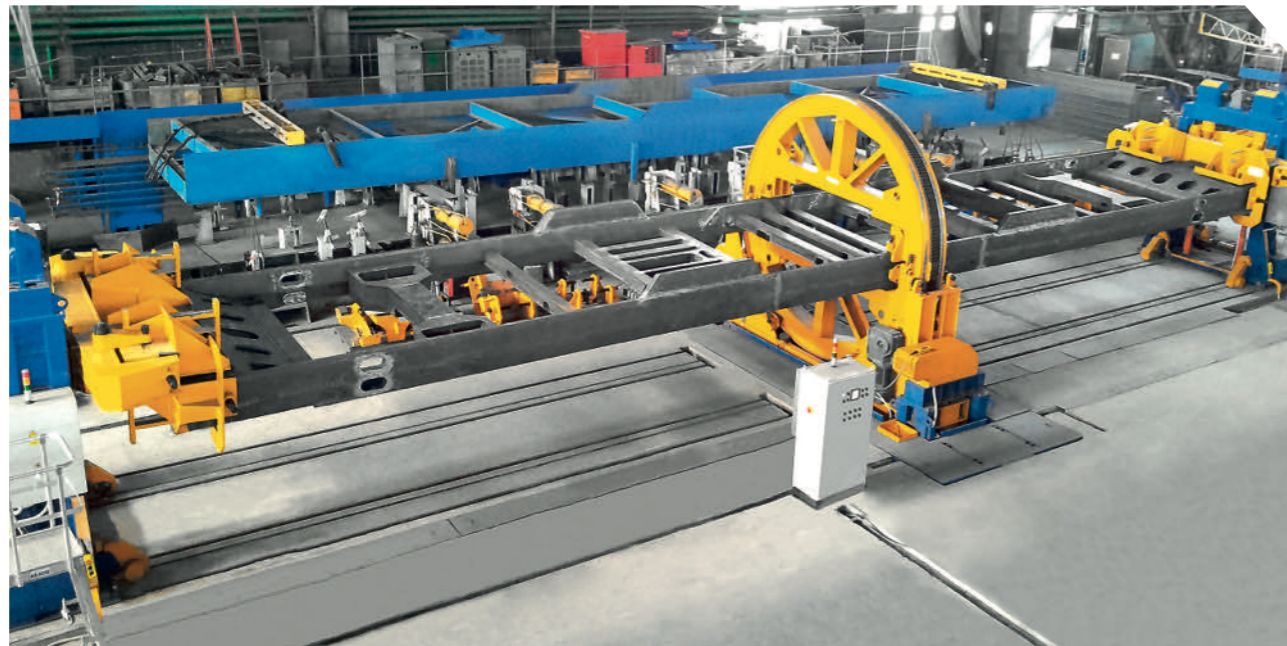


Automated storage system for section material



Automated storage system for sheet products

ROTATORS WITH VERTICAL LIFT



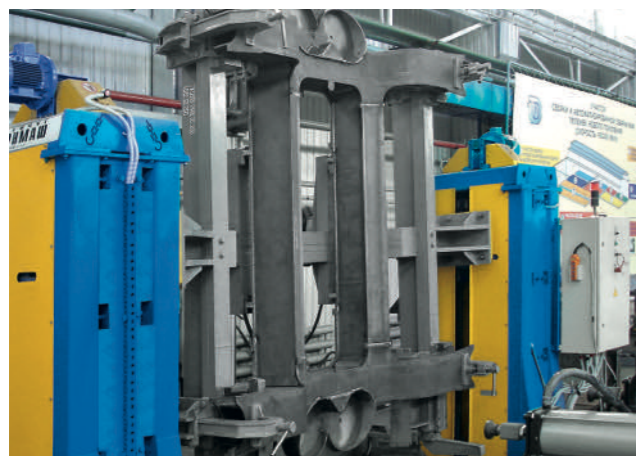
Rotator with vertical lift for electric locomotive underframes welding, load carrying capacity 40 t



Rotator with vertical lift, load carrying capacity 15 t



Rotator stand for double-deck passenger cars underframes welding, load carrying capacity 10 t



Rotator with vertical lift, load carrying capacity 4,5 t



Rotator with vertical lift for passenger cars roofs welding

EQUIPMENT FOR CAR UNDERFRAME ASSEMBLY AND WELDING



Overhead rotator



Rotator for underframe welding



Gondola car underframes assembly and welding stand



Locomotive frames assembly



Multipurpose jig for assembly and welding of passenger car underframes

STAND FOR AUTOMATIC WELDING OF CENTER SILL WITH I-BEAM



ROBOTIC CENTER FOR CENTER SILL LONGITUDINAL SEAM WELDING



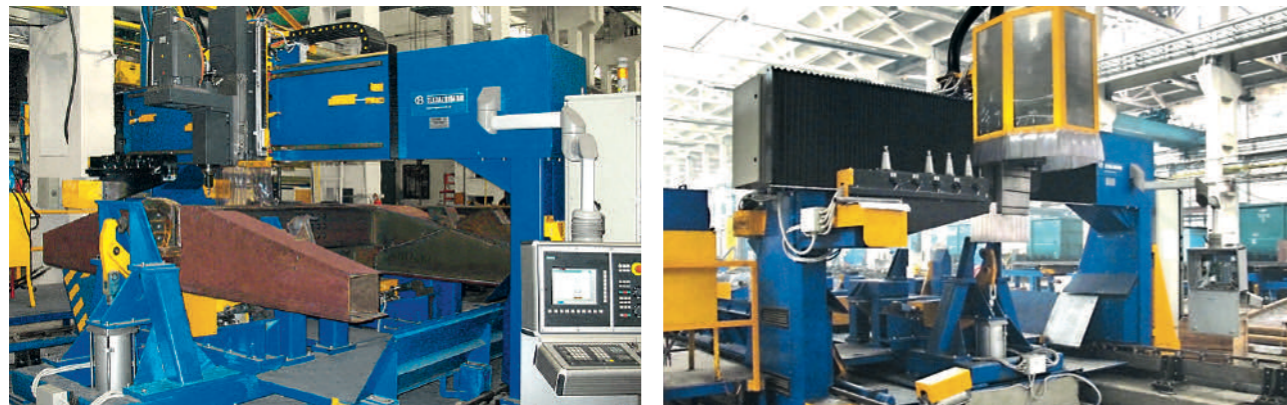
CENTER SILL ASSEMBLY STAND



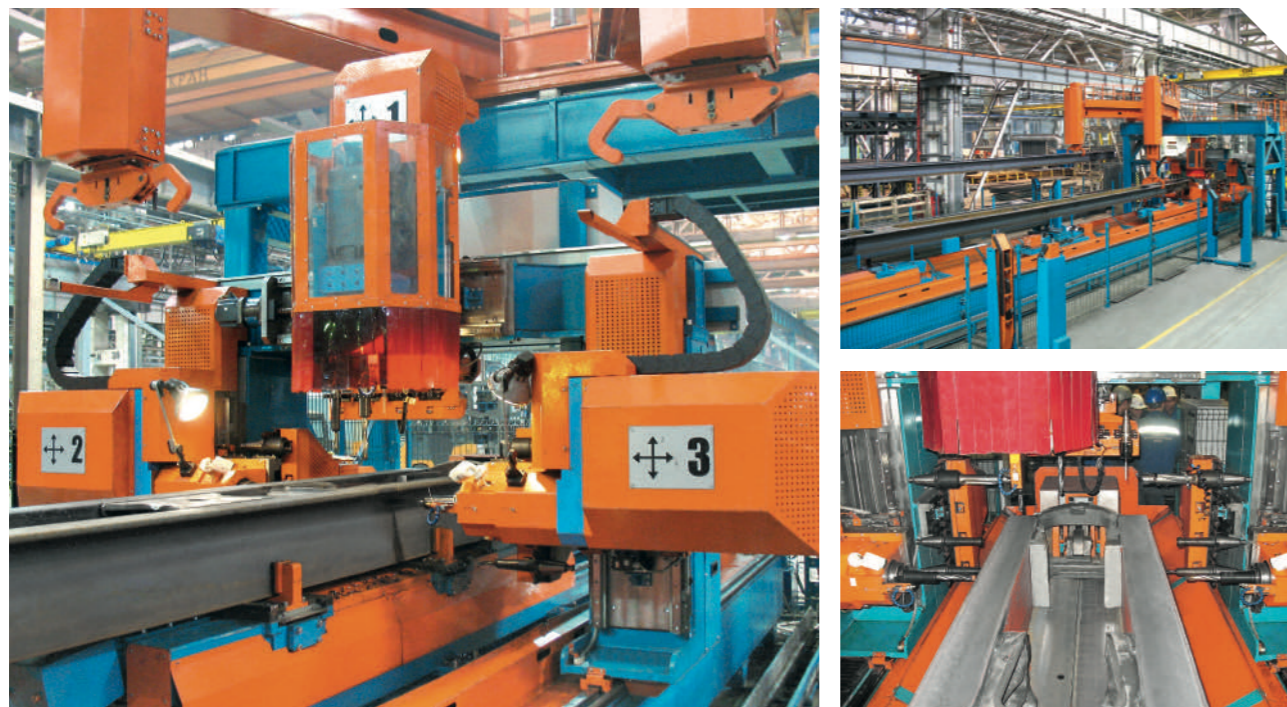
LINE FOR BODY SIDE FRAMES MANUFACTURING



CAR UNDERFRAMES DRILLING AND RIVETING LINE



AUTOMATED LINE FOR CENTER SILL DRILLING



STANDS FOR ASSEMBLY AND WELDING OF CAR CROSSBEARERS



Bolsters assembly and welding line



Front beams assembly stand



Intermediate beams assembly and welding line

LINE FOR ROBOTIC WELDING OF CAR CROSSBEARERS



EQUIPMENT FOR ASSEMBLY AND WELDING OF SIDE WALLS

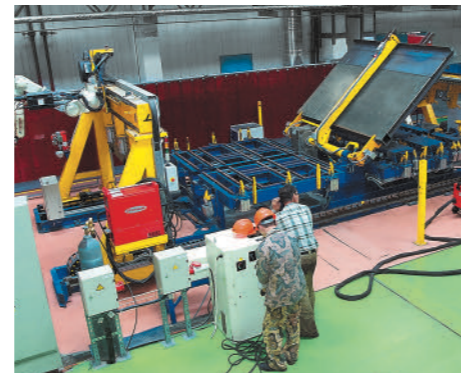


Gondola car side walls assembly and welding line



Jig-rotator for passenger car side walls assembly and welding

EQUIPMENT FOR ASSEMBLY AND ROBOTIC WELDING OF END WALLS



EQUIPMENT FOR BODY ASSEMBLY AND WELDING



Gondola car body assembly and welding stand



Rotator for body welding



Multipurpose stand for hopper cars bodies assembly

EQUIPMENT FOR CAR ROOF ASSEMBLY AND WELDING



Assembly and welding stand for passenger car roof sheathing



Boxcar roof assembly and welding stand



Multipurpose stand for metro coach roof assembly

JACKS



Mobile jacks for locomotives



Mobile jacks

TRAMS MANUFACTURING EQUIPMENT

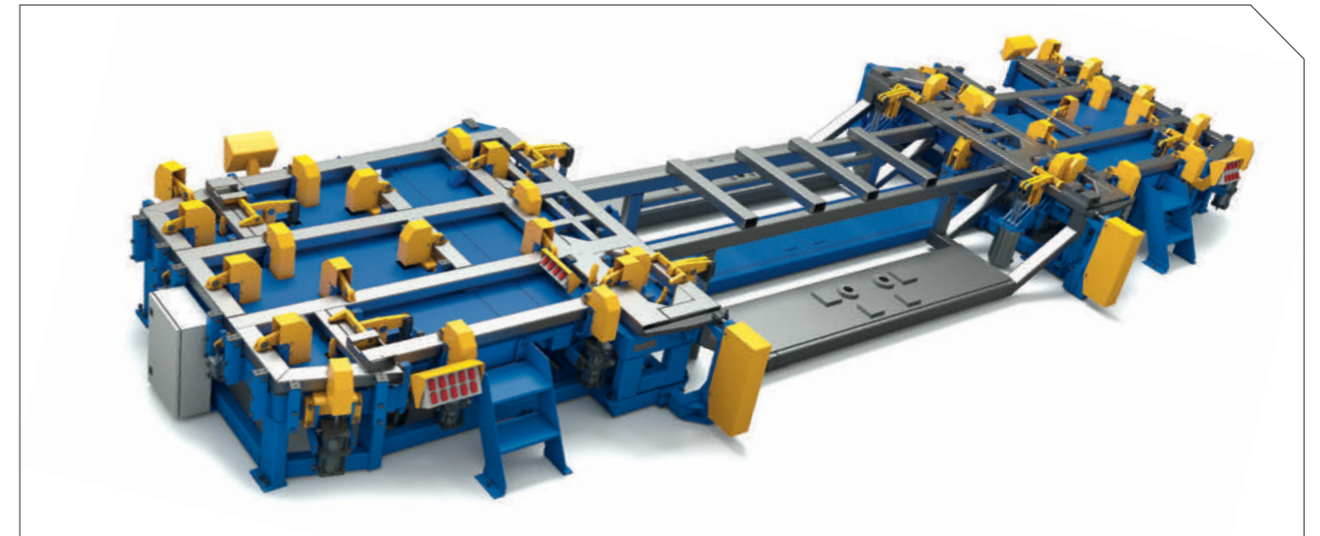


Robotic center for tram roof welding

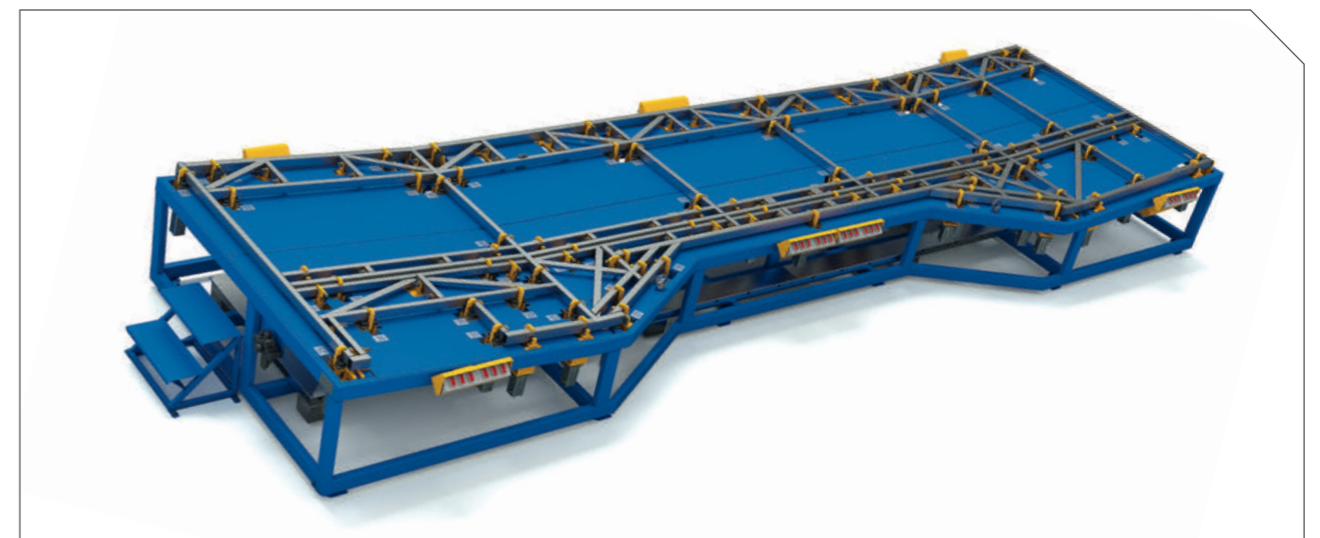
TRAMS MANUFACTURING EQUIPMENT



Tram sections joint frames welding and drilling stand



Multipurpose stand for assembly of front and rear frames



Multipurpose stand for sidewalls assembly

AUTOMATED LINE FOR CENTER SILL I-BEAM AND BOTTOM CORD MANUFACTURE



EQUIPMENT FOR TANKS AND VESSELS MANUFACTURE



Tank assembly and welding line

Head-to-shell assembly stand

EQUIPMENT FOR GONDOLA CAR HATCH COVERS MANUFACTURE



Integrated mechanized line for assembly and welding of gondola car hatch covers



Stand for recess-making



Heads measuring and selection stand



Sheet assembly and welding line



Tank head assembly and welding, edges trimming stand

EQUIPMENT FOR TANKS AND VESSELS MANUFACTURE



Hydrotest stand

WHEELS PAINTING LINE



EQUIPMENT FOR TANKS AND VESSELS MANUFACTURE



Shells welding stand



Carrying rollers with different load capacity

AXLES PAINTING LINE



EQUIPMENT FOR RAILROAD CARS BRAKE SYSTEM MANUFACTURE



Rod tension test stand



Head-to-shell assembly stand



Stand for automatic head-to-shell welding



Car brake system test stand



Shotblasting plant for cleaning of pipes inner surface



Pipes magnetic particle inspection stand



Bath for pipes testing

UTILITY VEHICLES



Transfer table



Transfer table



Transporting carriage



Transfer table



Turn-table

EQUIPMENT FOR SURFACE PREPARATION AND PAINTING



Spray and drying cabinet



Lifting platforms for operators



Spray and drying cabinet



Shotblasting chamber for cars



Shotblasting chamber for car underframes

ELEVATING SCAFFOLD



QUALITY SYSTEM

COMPANY'S POLICY IN THE SPHERE OF QUALITY ASSURANCE IS AIMED AT MEETING THE HIGHEST REQUIREMENTS OF THE CUSTOMERS, AND IT IS BASED ON OVERALL OBSERVATION OF NATIONAL AND INTERNATIONAL QUALITY STANDARDS, ON PRODUCTION CERTIFICATION AND ALL PRODUCT TYPES CERTIFICATION.

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PATENTS

Research and Production Enterprise «Techvagonmash» owns a great number of know-how, patents and engineering solutions related to constructive decisions of output and developed products.



REFERENCE LIST

Our customers are large-scale enterprises of transport machine-building, metal structures manufacture plants, power machine building enterprises.

During the last years our enterprise has developed a number of projects and has taken part in equipping of all railroad car building plants which are under construction.





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