MARU

Engineering. Construction. Steel.

Maru Metall

Maru Metall

Maru Metall – a company that specializes in the design and production of steel structures, was founded in 1996.

During its years of operation, the company has developed successfully, obtained many kinds of certificates and introduced an ISO 9001 quality management system. The company is a full-service business, which is based on two primary capabilities:

1. The provision of full-service production and supply of steel structures, including design, manufacture and delivery to the end-user.

2. Cooperation with the other companies in the MARU group: Maru Ehitus (general building contracting, project management, design services, and the installation of structures), and Galv-Est (hot-dip galvanizing).

Maru Metall's production can be divided in three:

1. Mechanical structures, including steel frames and structures for large-dimensional machines and conveyors.

2. Structural elements, including various supporting structures (trusses, posts, beams) and other constructional elements (crane tracks, frames, platforms).

3. Multifunctional container solutions.

The company has continually improved its production plant in Ardu, where there is a total of 10 000 m^2 of indoor production space. Maru Metall's marketing, estimating and design departments are located in the capital city, Tallinn.

During its years of operation, Maru Metall has become the leading producers of steel structures in Estonia, as well as a respectable and reliable partner for companies in other European countries. We have the capacity to produce 800 tons of steel structures per month and 9 600 tons per year. Therefore, we can also be a partner in the execution of large-scale projects. Our continual growth provides the clients with a guarantee that we can maintain a balance between product quality and productivity. Maru Metall's experienced design and estimating team has knowledge from various industrial fields. We are ready to advise our clients in order to guarantee competitive prices and bids that provide the right solutions.

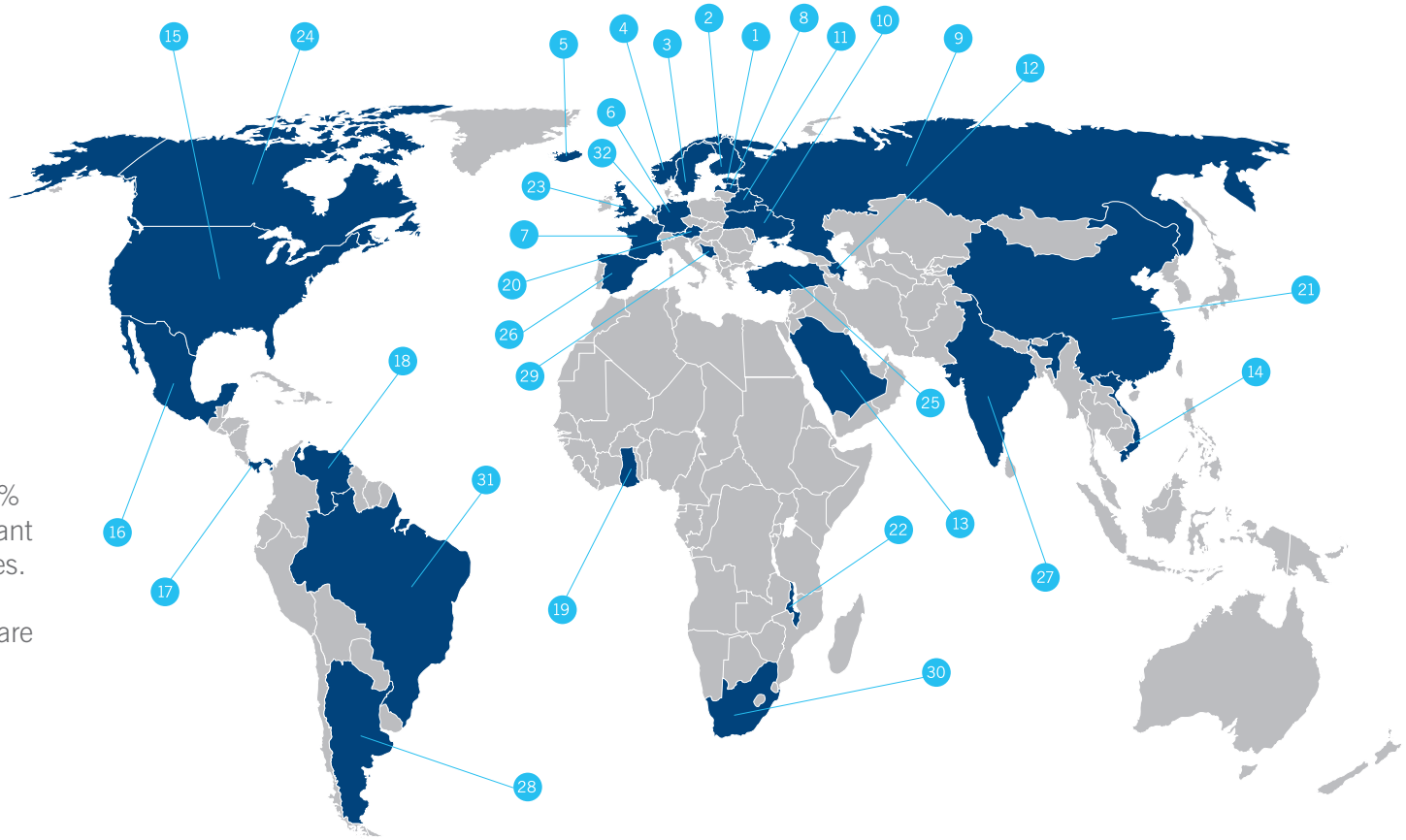
We are members of the Estonian Constructional Steelwork Association, Estonian Defense Industry Union and the Estonian Chamber of Commerce and Industry.

ARDU PRODUCTION FACILITY

Export

Maru Metall has long-term experience in the export of steel structures. Export comprises 80% of our production. The company's most important export clients are located in the Nordic countries. However, we deliver our production to clients throughout Europe, and some special projects are shipped even farther.

We are ready for international cooperation and prepared to ship our production anywhere, depending on the client's location.



1. Estonia
2. Finland
3. Sweden
4. Norway
5. Iceland
6. Germany
7. France
8. Latvia
9. Russia
10. Ukraine
11. Belarus
12. Azerbaijan
13. Saudi-Arabia
14. Vietnam
15. USA
16. Mexico
17. Panama
18. Venezuela
19. Ghana
20. Austria
21. China
22. Malawi
23. United Kingdom
24. Canada
25. Turkey
26. Spain
27. India
28. Argentina
29. Bosnia and Herzegovina
30. The Republic of South Africa
31. Brazil
32. Netherlands

Design

As a supplementary service in our production chain, we provide our clients with design services and the preparation of product drawings for steel structures.

When designing steel structures, we are ready to start at the initial design stage, in order to take into account all the particularities of the production process and guarantee the client the best result. Our long-term experience in designing structures and our knowledge of production processes are a guarantee for the client, because they allow us to provide fast and proven solutions for all types of structures.

Our design department prepares all drawings using the latest software, including Tekla Structures. We use the following design software for developing our solutions:

- STAAD.Pro – structural engineering software

- Tekla Structures – Building Information Modeling (BIM) software

Tekla 3D modeling allows for effective cooperation between the various partners in a project. Our team manages the project documentation using a digital project bank, which guarantees that the necessary information will reach all the concerned parties digitally – the client, the team and the equipment manufacturing the product. Such interactive connection functions as an integrated team regardless of the team members' geographic location.

Production

Maru Metall's production plant is located on 6.5 ha in Ardu, with a total of 10 000 m^2 of indoor production space. The most modern computer-controlled equipment is used at the company's production unit. Maru Metall employs a highly qualified workforce – CNC operators, welders and painters – in order to guarantee that the steel structures conform to the EN 9010 standards.

Maru Metall has made extensive investments in production equipment, the work environment, and technology. Our objective is to have our manufacturing process produce high productivity, with the required precision and low costs. In the course of the expansion and renovation that was carried out in 2009, the technological production process was totally updated, which guarantees smooth production from the beginning to the end of the process. The entire manufacturing space is covered by a large number of cranes with 5- and 10-ton lifting capacity.

Our quality control system allows the production process to be monitored in order determine the exact criteria for each project. This increases production efficiency and precision, as well as guarantees the correct order of deliveries. We also provide our clients with complete documentation with each delivery.

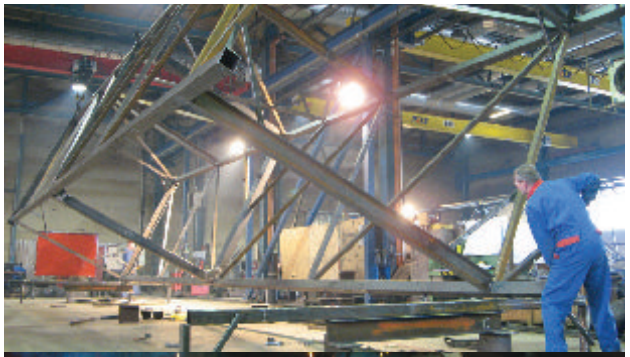
MATERIALS WAREHOUSING

Keeping in mind the needs of large projects, logistics are carefully considered and and that allows us to organize Just in Time purchases.

PREPARATION

In the preparation plant that was opened in 2009 components are produced using CNC production machinery. We achieve the greatest efficiency in the sawing and boring of beams and square hollow sections.

Production



WELDING

Large and three-dimensional steel structures are produced in a 4 100 m^2 space. Certified welders and our welding processes warrant a EN ISO 3834-2 certificate.

SURFACE FINISHING

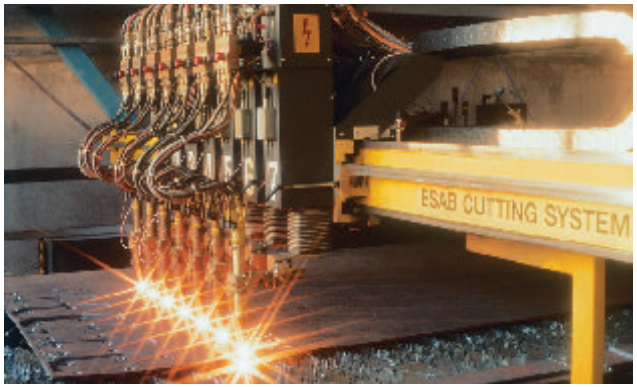
The quality of the surface finishing of supporting structures is important to the production process. The cleaning and painting of surfaces take place at the end of the production process, where the structures do not leave a controlled environment.

PACKAGING AND TRANSPORT

The final inspection, labeling and packaging takes place after the product is painted. We have 12 000 m^2 of warehouse space for finished production. For transporting, we use our own motor transport or the services of cooperation partners.

Production Machines

Profile Bending Machine with NC control
Radius min 1 500 mm and blanks up to 160 × 160 mm



CNC OXY-FUEL Cutting Bench
7 torches;
cutting material thickness up to 300 mm;
working table 2 500 × 14 000 mm;

CNC Plasma Cutting Bench
Cutting material up to 12 mm;
working table 2 000 × 6 000 mm

Shot Blasting Bench
Details up to 500 × 520 × 18 000 mm

CNC Profile Saw and Drill Line
5 drill holders for each axis;
drilling on 3 axis;
stamping on 4 axis;
bandsaw max working range 750 × 500 mm;
drilling bench working range 650 × 415 mm

CNC Sheet Drilling Bench
Material thickness up to 40 mm;
working table 1 000 × 2 000 mm;
max hole 40 mm;
3 drilling heads

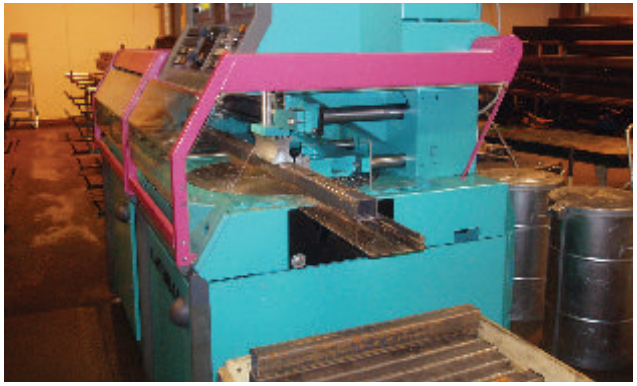
Production Machines

CNC Bending Bench
Bending force up to 200 T;
material thickness up to 10 mm;
bendable detail lenght up to 3 500 mm

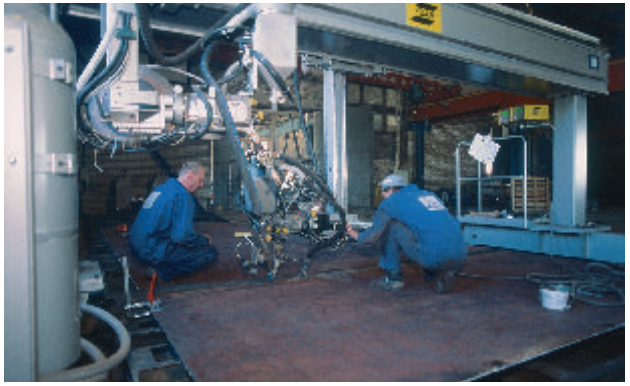
CNC Punch Press Angles and Flat Bars
Material up to 150 × 150 mm;
max thickness 12 mm;
max hole 40 mm;
6 punch holders

CNC Guillotine ALIKO
Material thickness up to 12 mm;
max cutting length up to 3 000 mm

4 Bendsaws
Material up to 800 × 750 mm



Circular Saw with NC control
Detail diameter up to 120 mm;
max detail length up to 11,7 m



Submerged Arc Welding ESAB 1250A
For the production of welded beams:
width up to 4 000 mm;
height up to 1 400 mm;
length up to 33 000 mm

References

Wide-span Constructions

DATA

1. Roof Structure for the Multifunctional Arena Riga (Riga, Latvia)
   410 tons of steel, 72-meter span
2. Steel Structures for the Saku Arena (Tallinn, Estonia)
   362 tons of steel, 68-meter span

DESCRIPTION

Maru Metall has produced steel structures for various wide-span buildings. Maru Metall manufactured the steel structures for two of the largest sports and entertainment arenas in the Baltic countries. The main arches of the Riga Arena, a multifunctional arena that was built for the Ice Hockey World Championship in 2006, span 72 meters. The entire roof structure weighs almost 500 tons. The design, production and assembly of complicated wide-span steel structures are an interesting challenge for our team.

1

2

References

Sport Facilities

1

2

DATA

1. Steel structures of the Reydarfird Football Arena (Iceland)
   298 tons of steel, 78-meter span
2. Roofs of the grandstands at the Lilleküla Football Stadium (Tallinn, Estonia)
   600 tons of steel

DESCRIPTION

When constructing sports facilities, steel structures enable suitable solutions to be found under very different conditions. This is proven by the various cantilevered structures that were used for the roofs of the grandstands at the Lilleküla Football Stadium, which different from ordinary steel frames, and the two football arenas built in Iceland, with cladding and supporting structures that had to withstand greater than normal wind loads and the harsh Icelandic climate.

References

Industrial Buildings

DATA

Client: Eesti Energia Tehnoloogiatööstus
Location: Auvere, Ida-Virumaa, Estonia
Completion date: 2011
Dimensions: 5,000 tons of steel, 70-meter span, 15,000 m^2 of gratings

DESCRIPTION

Enefit-280 Oil Plant is by far the largest project in the history of Maru Metall due to the tonnage of its steel structures and quantity of gratings. It also serves as a perfect example to demonstrate the excellent teamwork skills of different subsidiaries within the Maru Group. Steel construction was produced by us- Maru Metall, design work was done in cooperation with German engineering company, general contractor Outotec GmbH, and the designers of Maru Metall and Maru Ehitus, the erection work was conducted by Maru THM. Work that was completed within the estimated timeline showed the proficiency of excellent teamwork between the various facilities of the Maru Group and also provided a great experience to all.

References

Industrial Buildings

DATA

1. Väo CHP Plant (Väo, Estonia)
   360 tons of steel
2. Kyröskoski CHP Plant (Kyröskoski, Finland)
   470 tons of steel
3. IRU WTC Plant (Iru, Estonia)
   850 tons of steel

DESCRIPTION

Steel is suitable for the construction of industrial buildings because of its practicality and rapid construction. By building with steel, it is easy to take the needs of future production into account. When designing industrial buildings, it is very important to adapt the frame of the building to the client's equipment. Since Maru Metall also provides designs for metal structures and the preparation of product drawings as a supplementary service, we can have no problem coping with complicated technological projects.

References

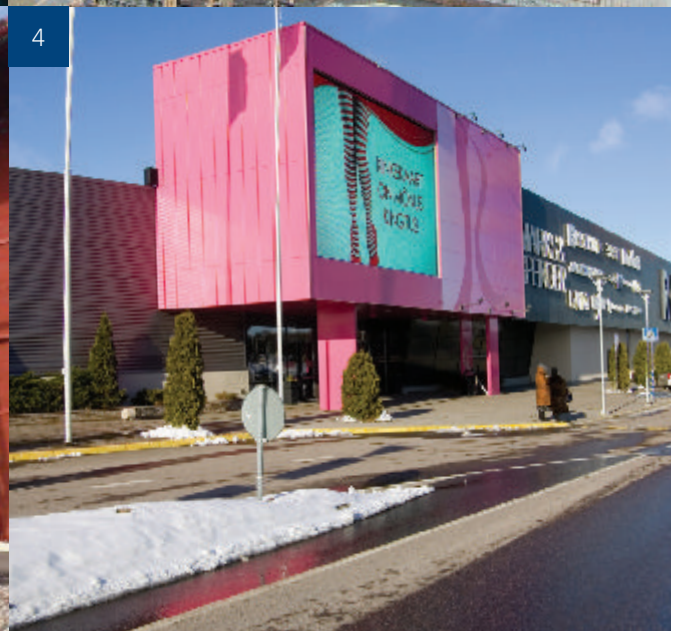
Warehouses and Production Buildings

DATA

1. Warehouse for Ruukki, a producer of metal products (Tallinn, Estonia)
   130 tons of steel
2. ASKO- Midt Norge Hall (Trondheim, Norway)
   450 tons of steel
3. Pellet Storage Hall (Sweden)
   6500 m^2
4. Rocca al Mare Shopping Center (Tallinn, Estonia)
   315 tons of steel

DESCRIPTION

Warehouses and production buildings must be practical, quick to construct and inexpensive. The advantage of a building based on a steel frame is their simple and fast installation. The possibility of producing large steel components (frames) makes the erection of steel halls as warehouses and production buildings an excellent solution. Steel structures from reliable manufacturers can be installed quickly and are financially beneficial, even when they need to be transported over great distances.

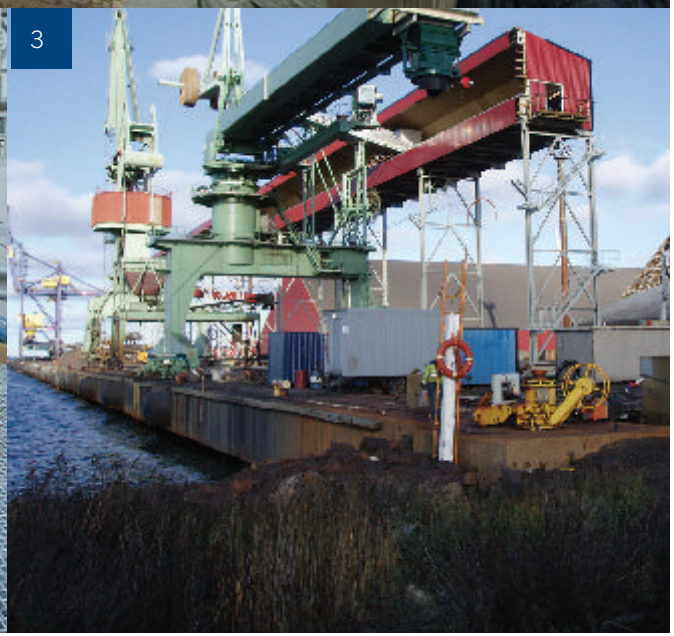


References

Port Facilities


1


2


3

DATA

1. Ramp for the pier at the Port of Heltermaa (Hiiumaa, Estonia)
   45 tons of steel
2. Ramp for the pier at the Port of Helsinki (Helsinki, Finland)
   84 tons of steel
3. Ship loading structures at the Port of Pori (Pori, Finland)
   400 tons of steel

DESCRIPTION

Off-shore structures, which have more stringent quality requirements, require greater attention at every stage of production and installation. Port facilities must withstand aggressive seawater environments. Therefore, the quality of the welded seams and surface cladding must be very good. Installation is made more difficult by large dimensions and small tolerances. In any case, repairs and repeating the work must be avoided, since this is very expensive. Maru Metall has also been successful in this field of activity.

References

Mechanical Structures

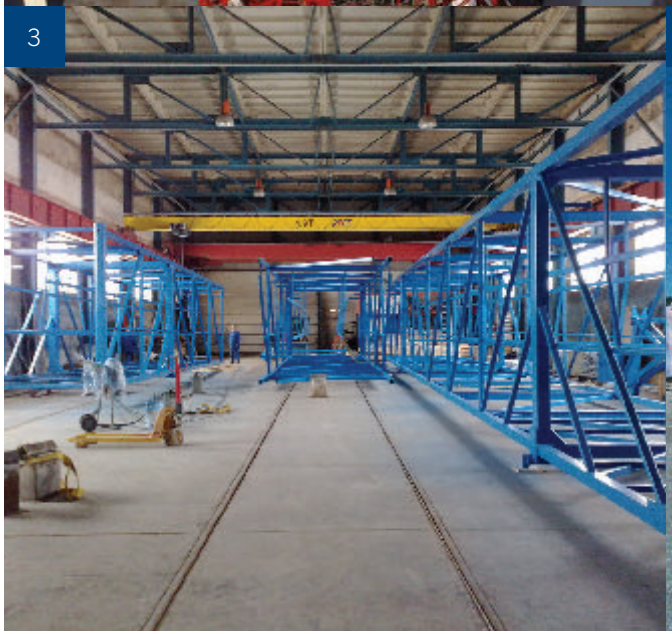
DATA

1. Steel Structures for Flash Smelting Copper Furnace (Sonera, Mexico)
   300 tons of steel
2. Pipe warehouse for oil-drilling ships for Nordcester Engineering (Norway)
3. Haahjem crushing and screening conveyor (Norway)
4. Stacker bases for Talvivaara Mining (Finland)

DESCRIPTION

We produce mining equipment and transporters, auxiliary equipment for oil rigs, machinery parts for heavy industry and other mechanical structures. We prefabricate the mechanical parts for final installation, and add value to the steel structures with pneumatics and electrical parts.
The production of mining equipment and off-shore mechanical products is a complicated field that requires great responsibility. Work interruptions caused by machinery breakdowns in mining or on oil rigs can result in great losses. Maru Metall copes successfully with stringent quality standards. We have delivered our production around the world, for instance, by producing machine parts for a sawmill in Brazil.

References



Conveyor Bridges and Galleries

DATA

1. Conveyor bridges for the Pietarisaari coal-fired power plant (Finland)
   45 tons of steel
2. Conveyor gallery and bridge structures for the Port of Pori (Finland)
   400 tons of steel
3. Andritz conveyor gallery (Vyborg, Russia)
   170 tons of steel
4. Components up to 35 meters long can be transported in one piece

DESCRIPTION

We produce and install prefabricated conveyer systems for the transport of wood and masonry products and fertilizer. These are large-scale three-dimensional structures. For instance, one section of the conveyer system at the Talvivaara nickel mining company in Finland is 2.5 km long and passes over an entire village at the height of 30 meters. The length of the conveyors at the plant total 7 km. Europe's largest wood granule plant was built by Maru Metall. We provided 650 tons of steel components for its gallery and supporting structures.

References

Special Purpose Containers, Container Systems and Camp Solutions

DATA

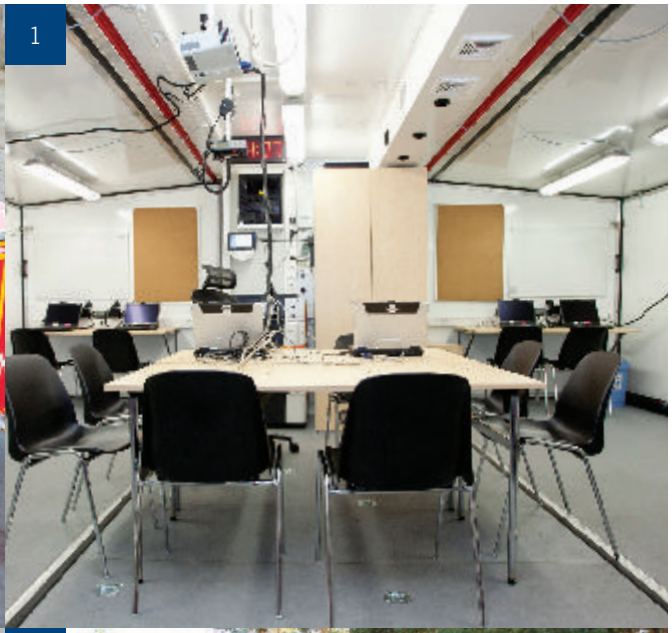
1. Resque Command Post (Estonian Rescue Service, type 3 in 1, 36m²)
2. Kitchen Container (Swedish Army, type 3 in 1, 36m²)
3. Military Container (Swedish Army, type 2 in 1, 24m²)

DESCRIPTION

The production of custom-ordered multifunctional container solutions is a rapidly growing field of activity for Maru Metall. We cooperate with various partners from different regions of the world, from Africa, America, Asia and Europe. For example in European Union we have long-term cooperation with partners from Norway.

The containers are designed, produced and furnished according to the client's needs in our two production units in Estonia.

The containers are primarily intended for use by the Ministry of Defence, Rescue Services and NATO. They are used mostly for medical, rescue, military, industrial purposes and for refugees, as well as in the social sphere. Among other things, we have rebuild standard containers into soundproof rehearsal rooms for youth bands in the course of a social project.



Architectural Glass Installations in Steel Frames

DATA

1. Bank of Estonia gallery (Tallinn, Estonia)
   10 tons of steel
2. Tallinn Airport extension (Tallinn, Estonia)
   465 tons of steel

DESCRIPTION

Structures with diverse and interesting architecture are built with the help of steel and glass solutions that symbolize modernity and openness. The overall impression is one of airiness, and since the frame does not take much room, the loss of useful space is minimal.

The extension of the Tallinn Airport was a project that entailed great responsibility, and attracted a lot of public attention. Maru Metall designed, produced and installed a roof structure weighing 465 tons that required a complicate technical solution. The international project was completed without disrupting air traffic or the passengers.

The Bank of Estonia gallery required great precision in the joining of steel pipes that met at different angles.

References

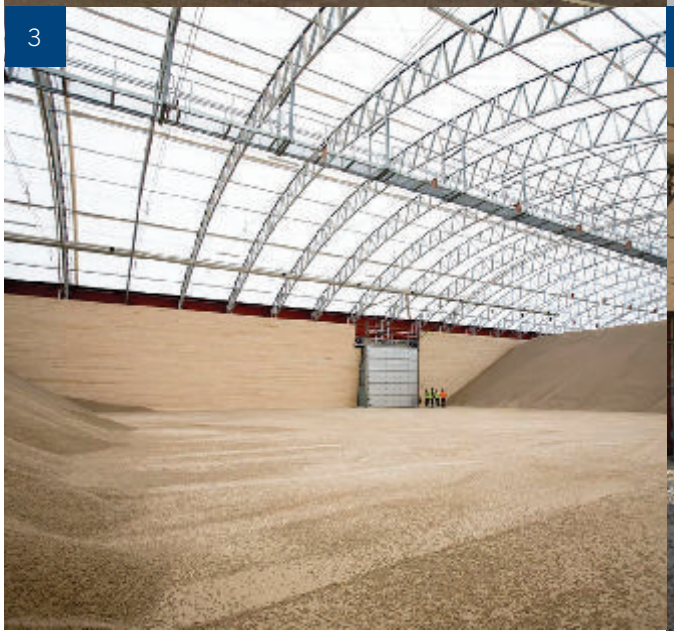
PVC Halls

DATA

1. Fullgate PVC Hall (Estonia)
   Dimensions: 40×95×7 meters
2. Brenstol PVC Hall (Estonia)
   Dimensions: 35×56×5 meters
3. Pellet storage hall (Sweden)
   Dimensions: 20×80×6 meters
4. Swedish Air Force Helicopter Hangar (Sweden)
   Dimensions: 32×21×7 meters

DESCRIPTION

PVC halls, which are easy to erect and move, are used to store bulk and other goods in ports and terminals. They are also used as storehouses, exhibition, sales and production halls, plane and helicopter hangars, etc. The halls have wide spans, up to 45 meter wide, and their length can exceed 100 meters, and accommodate over 20 000 tons of bulk goods. Installation without a foundation makes the project less expensive, speeds up installation, and allows the hall to be used temporarily as a building and then removed.



References

Composite Posts and Beams, Welded Beams

DATA

Apartment / commercial building on Aia Street
(Tallinn, Estonia)
320 tons of steel

DESCRIPTION

Composite structures are a combination of steel and reinforced concrete, which combine the best properties of both materials. The steel components, which are produced under controlled conditions at the factory, are filled with a concrete mixture at the building site. The composite structures with good fire resistance are suitable for the construction of multistory production and office buildings.

References

Bridges and Towers

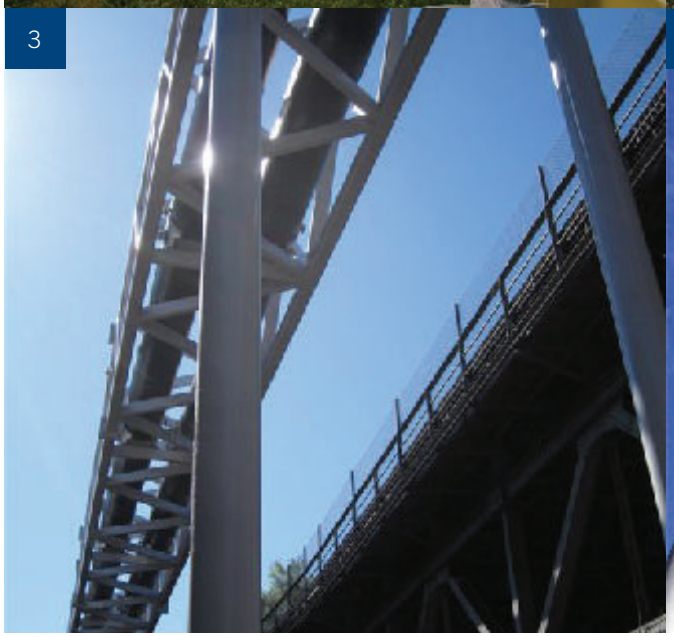
DATA

1. Rocca Al Mare Beach Promenade (Tallinn, Estonia)
   175 tons of steel
2. Venstøpbakken Pedestrian Bridge (Norway)
   36 m long
3. Truss Bridge on the Alna river (Oslo, Norway)
   42 tons of steel
4. Mobile Communications Mast (Ghana)
   108 tons of steel

DESCRIPTION

We produce bridge components and beams for pedestrian bridges, promenades, car bridges and technological bridges. The bridge structures are produced at the production plant under controlled conditions, which ensures good weatherproofing. Steel bridges that are installed in large sections can be erected on-site in a short time, and therefore, the disruptions to traffic can be kept to a minimum. The Rocca al Mare beach promenade, which is 400 meters long, was completed in only one month.

We produced masts and towers, up to 70 meters tall on separate foundations for various purposes. The masts and towers are used for mobile communications and electricity, and as technological towers for factories and advertising towers. We were mass producing thirty-meter-high mobile communication masts, which we delivered to Africa.



Management System and Associations

QUALITY ASSURANCE

The management system at Maru Metall encompasses the production of steel structures and subcontracting jobs, and is based on the requirements of EVS-EN ISO 9001:2008 standards. This is proven by the certificate issued by Bureau Veritas Quality International. In addition, the welding processes have been certified according to EN ISO 3834-2 and manufacturing of the steel structures according to EN 1090-1.

We have right to

CE

mark our products

In order to guarantee high-quality production services to our clients, we adhere to the following principles:

THE CLIENT'S WISHES

The fulfillment of our clients' requests in order to guarantee satisfaction directs the activities of the entire company and is the primary goal in planning our operations. Flexibility, reliability and competitiveness are the three traits of our company.

PROFESSIONALISM

In order to guarantee high-quality production, we consider it important to continually improve the skills and knowledge of our staff.

MODERN TECHNOLOGY

We are proud of our modern production equipment and the various technological possibilities that help us to produce high-quality products and comply with our clients' wishes.

ENVIRONMENTAL FRIENDLINESS

We pay great attention to the responsible use of natural resources and to providing a safe and pleasant work environment.

RECOGNITIONS AND MEMBERSHIPS

AS Maru Metall is a member of the following:
- Estonian Chamber of Commerce and Industry
- Estonian Defense Industry Union
- Estonian Constructional Steelwork Association









Shaping Imaginations.

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