



ESCON

JSC Plant ESCON



**Chelyabinsk region
Yuzhnouralsk**



Product Sales Geography



ESCON



The plant is located in the very center of the country, on the border of Europe and Asia, which enables easy supply of products to any point of Russia with minimal haul distance.

Reference List



ESCON

Project Site	Product	Year of supply	Customer
HV line section 750 kV «Leningradskaya – Belozerskaya»	Metal supports 750 kV HVL	2016-2017	PJSC "Federal Grid Company of Unified Energy System"
Moscow Refinery, JSC	Construction metal structures	2016-2017	PJSC Gazprom Neft
"Russian Electric Motors" plant	Construction metal structures	2016-2017	Transneft PJSC
Extension of Pipeline System "Eastern Siberia – Pacific Ocean"	Metal supports 220 kV HVL	2016-2017	Transneft PJSC
Section of 220 kV HV line "Ermak-Slavyanskaya", passage across the Taz river	Metal supports of suspension type, 500 kV	2016	PJSC "Federal Grid Company of Unified Energy System"
"Lakhta Center" in Saint Petersburg	Construction metal structures	2016	PJSC Gazprom Neft
Special passage "Balakovo" 220 kV HVL accross the Volga river	Metal tube long-span supports, type AT-105, AT-96, AT-87ports	2016	PJSC "Federal Grid Company of Unified Energy System"
Novoport oil-and-gas condensate pool	Construction metal structures	2016	PJSC Gazprom Neft
220 kV HVL Substation "Yaroslavskaya" - Substation "Tveritskaya" - Substation "Tutaev"	Metal supports 220 kV HVL	2016	PJSC "Federal Grid Company of Unified Energy System"
110 kV HVL Construction of special economic production industrial zone "Moglino" in Pskov	Metal supports 110 kV HVL	2016	PJSC "IDGC of North-West"
Oil trunk pipeline "Kuyumba-Tayshet" (Facility Russian code - МНКТ 05-ИП-102-00053) 217.3 km part - 368 km section. 10 kV power line along the pipeline route	Metal supports 10 kV HVL	2015	PJSC AK Transneft
Oil trunk pipeline "Kuyumba-Tayshet" (Facility Russian code – МНКТ 05-ИП-102-00006). Trunk line underwater crossing over the Angara river	Metal tube long-span supports, type AT-105, AT-96, AT-87ports	2015	PJSC AK Transneft
Oil trunk pipeline "Kuyumba-Tayshet" (Facility Russian code – МНКТ 05-ИП-102-00051) 8 km - 96.6 km section. 10 kV power line along the pipeline route	Metal supports 10 kV HVL	2015	PJSC AK Transneft
Oil trunk pipeline "Kuyumba-Tayshet" 8 km - 96.6 km section. Linear part of pipelines	Construction metal structures	2015	PJSC AK Transneft

Reference List



ESCON

Project Site	Product	Year of supply	Customer
Oil trunk pipeline "Kuyumba-Tayshet" External power supply Chief oil pumping station No.1, No.2 and No.3 110 kV HVL Priangarskaya - Kayumba	Metal supports 110 kV HVL	2015	PJSC AK Transneft
Power line for facility "External power supply "Oil trunk pipeline "Kuyumba-Tayshet"	Metal supports	2015	PJSC AK Transneft
HVL-110 kV (dimensions of HVL-220 kV) "Biysk CHP plant - Substation 110 kV Biryuzovaya Katun"	Metal supports 220 kV HVL	2014-2015	PJSC "IDGC of Siberia"
500 Substation Elabuga	Metal supports	2014	PJSC "Grid Company"
500 kV Substation "Tikhoretskaya"	Metal supports	2013	PJSC "Federal Grid Company of Unified Energy System"
"220 kV HVL Udmurdsкая - Svoboda"	Metal supports 220 kV HVL	2013	"Spetsstroy of Russia"
Transportation system "Zapolyarye - oil pumping station Purpeh (oil pipeline)	Metal supports, light poles, portals	2013	PJSC AK Transneft
110 kV HVL construction in Sukhodol	Metal supports 110 kV HVL, light poles, portals	2013	PJSC Oil Company "Rosneft"
500 kV substation construction "Tikhoretskaya"	Metal supports, light poles, portals	2013	PJSC "BashRes"
GRES-2 construction in Yuzhnouralsk for OJSC "OGK-3"	Metal structures	2012-2014	PJSC "Inter RAO - Electric Power Plants"
Mogocha substation, 220 kV approach lines	Metal supports, light poles, portals	2012	PJSC "Federal Grid Company of Unified Energy System"
Cable line No.1 of 220 kV Novovoronezhskaya APP-2- New and cable line No.2 of 220 kV Novovoronezhskaya APP-2- New	Metal supports 220 kV HVL	2012	PJSC "Federal Grid Company of Unified Energy System"

About the Plant



JSC "Energy Engineering Structures Plant" was founded in 2012 in the city of Yuzhnouralsk, Chelyabinsk region.

A unique plant specializing at production of large scale metal structures of any complexity for power generating, transport and infrastructure industries.
Capacity is 3 000 tons per month.
Guaranteed service life of metal structures is 70-80 years.

In 2015 "KONAR" Industrial Group became a strategic partner of JSC "Plant ESCON".
Today jointly with "KONAR" Industrial Group the plant is implementing a number of significant projects in various territories of the Russian Federation.

Closed Joint-Stock Company "Energy Engineering Structures Plant" has all necessary certificates and licences for production. The Company has in place the Quality Management System complying with ISO 9001 requirements. QMS compliance with the standard requirements is annually confirmed by an independent accreditation company TUV SUD.

Metal structures as produced by ESCON Plant CJSC are qualified and recommended for application at the facilities of FGC-UES PJSC, Transneft PJSC, Inter-Regional Distribution Grid Company PJSC and other electric power and oil-gas companies.

Our Products



ESCON

1. External power supply

35-750 kV Steel lattice towers

35-110 kV panel supports

Light poles, lightning conducting towers

10-500 kV Metal multi-sided towers

110-220 kV multi-sided towers with enlarged basement

Outdoor switchgear portals

Grillage

2. Communications infrastructure

Antenna supports, towers and communications towers

Double application supports

3. Metal structures for overhead system lines

Overhead system poles

Portal structure beams

4. Metal structures of road infrastructure

Road barriers

Lighting poles and supports

Metal structures for motor and pedestrian bridges



Our Products



ESCON

5. Pipeline route structures for oil and gas industry

Metal supports for 6(10) kV HVL made of roll-formed sections

6. Special metal structures

Wells of oil trunk pipeline

Metal structures of building frames

Passages

Truss frames

Secondary trusses

Pipe racks

Passageways

Interconnecting walkways

Maintenance platforms

Portable ladders

Stair marks

Barriers

Oil pipe supports

Metal stilts

Grillage



Production and Machinery



ESCON

JSC "Plant ESCON" is equipped with the state-of-the art equipment from USA, France, Finland and Austria. Process automation ensures high output and guaranteed accuracy of production.

The process is arranged according to LEAN production principle. Development of high-quality in-house design and engineering documentation, use of 3D automated design and obligatory fit-up assembly test ensure high precision of order fulfilment in the workshop as well as fast assembly on-site.

The plant comprises: production building including **galvanization shop, assembly and welding shop and fabrication shop**; administrative and amenities building; boiler station with power generators and compressors; gas distribution point; security building with controlled access; diesel substation; railway line.

Peddinghaus automated process lines complex for angle bars

Ensures performance of several process operations: cutting and drilling up to 3 holes of various diameters. Is designed for processing rolled stock of various sections.

Max dimensions of processed rolled products are from angle No. 4 (40x40x3 mm) to angle No. 20 (200x200x25 mm).

Peddinghaus automated plasma process machines for flat products

Ensures performance of several process operations: cutting and drilling of holes up to 9 various diameters, deep drawing. Max dimensions of processed rolled stock are 2500x6000 mm. Plasma cutting thickness from 3.2 mm to 75 mm.

Peddingmax universal hydraulic presses complex No.1

Hydraulic presses allow punching and cut-off of wide range of semi-products: rolled stock, angle bars, U-profile, flange beams, disc. Working door is 200x510 mm, max thickness of a sheet is 32 mm.

Peddinghaus automated line PCD 1100/3C ATC

A tandem of three spindle drill and band saw machine allows simultaneous 3-axis drilling, cutting and deep drawing.

Min dimensions of a semi-product are 50x460x1632 mm.

Max dimensions of a semi-product are 630x1100x12500 mm.



Production and Machinery



ESCON

Sheet bending machine by Colly BOMBLED

Max length of a processed semi-product is 12000 mm.

Min thickness of rolled products is 15 mm. Max thickness of rolled products is 0.5 mm.

Max bending diameter is up to 1500 mm

Endmilling machines. Working door is 1400x1600 mm.

Machine complex for producing welded flange beams

Analogs acc.to GOST 26020-83: from 20K1 to 45K5; from 30Ш1 to 70Ш5; from 50Б1 to 100Б4; from 30ДШ1 to 50ДШ1.

Analogs acc.to STO ASChM 20-93: from 20K1 to 40K5; from 30Ш1 to 100Ш4; from 40Б1 to 70Б2.

- GZ-4000 gas cutting gantry
- HG-1800 gantry for assembly of flange beams
- MZG-2x1000 gantry machine for arc welding
- JZ-40A gantry for flatter flange beam
- UZ-15 automated edge former (with 3-D manipulator)

Assembly and Welding operations

When producing welded metal structures at the Plant "ESCON" special attention is paid to the quality of weld joints. **Only NAKS certified materials, procedures and equipment are used for welding operations.**

Welding semi-automated equipment by KEMPPI

Synergetic welding modes with adjusted control.

Automated complex for preparing welding mixture

allows controlling welding mixture composition.

Blasting machine for flat and profile rolled products

The machine is used to remove rust, scale, burn-on, old paint.

Permissible dimensions of flat rolled product: width 2500 mm, length up to 12000 mm.

Permissible dimensions of profile rolled product: width up to 1200 mm, height up to 500 mm, length up to 12000 mm.

Flattening machine for plates 6-25*1600

The machine is used to flatten plates by means of cold rolling method.

Permissible plate thickness is 6-25 mm. Permissible plate length is up to 12000 mm.

Auxiliary equipment complex. Accuracy of geometric dimensions is achieved through using universal assembly fixtures and testing benches.



Production and Machinery



ESCON

For protecting metal structures surface from external impact advanced technologies are used at JSC "Plant ESCON": hot dip galvanization and painting.

Hot dip galvanization line (by KOERNER, Austria) with the biggest zinc bath in Russia has a capacity of automatic galvanization of **40 000 t** per year and ensures perfect quality of zinc coating after first dipping.

- Internal dimensions of galvanization bath are 13000x2300x3000 mm allow applying protective coating for a wide range of products;

- Possible coating thickness is from 80 to 250 micron;

- Design average capacity of the line is 10 t/h;

- Output capacity is **40 000 tons of galvanized metal structures per year.**

High quality aesthetic and durable zinc coating is achieved through using alloys from leading world manufactures in zinc melt.

In order to ensure additional protection of zinc-plated surfaces,

ESCON plant applies eco-friendly technology of nano-passivation with liquid concentrate based on complex polymers.

Such technology application allows protecting metal structures surface from environmental impact and white rust formation. When metal structures after nano-passivation are subjected to a corrosion test in a salt-spray chamber as per ISO 9227, they can stand for more than 100 hours.

Paint coating

The plant has developed a unique method of paint application to a galvanized surface. The equipment ensures set process parameters and allows even application of various coatings ensuring their high adhesion.



Our Suppliers Geography



ESCON

Suppliers: PJSC "Severstal" (Vologda region, Cherepovets), OJSC "EVRAZ NTMK" (Sverdlovsk region, Nizhniy Tagil), OJSC "MMK" (Chelyabinsk region, Magnitogorsk), PJSC "Mechel" (Chelyabinsk region, Chelyabinsk), OJSC "CHELPIPE" (Chelyabinsk region, Chelyabinsk), OJSC "Chelyabinsk Zinc Plant" (Chelyabinsk).



Quality management systems complying with **ISO 9001 requirements** are implemented at suppliers' plants that allows high quality rolled stock in production of JSC "Plant ESCON".

All rolled metal entering the production undergoes full range of laboratory testing.

Direct cooperation with metallurgical plants makes it possible for us to form a reserve stock of rolled metal and fulfil orders on a tight schedule.



ESCON

Invitation for cooperation!

2b, Sovetskaya st., Yuzhnouralsk, 457040,
Chelyabinsk region, Russia.

Tel./fax: +7 (35134) 94-200 / +7 (35134) 94-321

website: эскон.рф

e-mail: info@zavod-escon.ru

