

INDUSTRIAL CONSTRUCTION | METALLURGICAL INDUSTRY



BENEFIT FROM OUR EXPERIENCE



About CONCORD GROUP

CONCORD GROUP is an industrial construction holding specializing in implementation of investment projects in metallurgical and coke making industries, power generation and road facilities.

Currently the Holding includes 11 specialized construction companies, operating under the single brand of CONCORD GROUP.

Years of experience combined with vast expertise and innovative approach enable us to offer effective solutions in execution of turnkey projects.

We guarantee accurate and timely work execution, reliability and quality according to international standards. Completed facilities and the processing equipment are certified according to internationally recognized quality control systems.

CONCORD GROUP is capable of solving complex engineering and construction tasks mainly with its own internal resources.

CONCORD GROUP's track record includes large-scale successful projects accomplished worldwide.

Among our clients are some of the world's largest steel makers and energy providers. CONCORD GROUP holds leading positions in implementation of iron & steel projects in the Ukrainian market.

We are focused on building long-term relationship with our customers that continues throughout the service life of the facility and beyond. Representative offices of CONCORD GROUP in various countries let us provide prompt maintenance service to all of our clients.



CONCORD GROUP Management System has been developed in order to provide foundation for growth of the Holding. The System is focused on integration and cooperation along with philosophy of sustainable development in each particular sector.

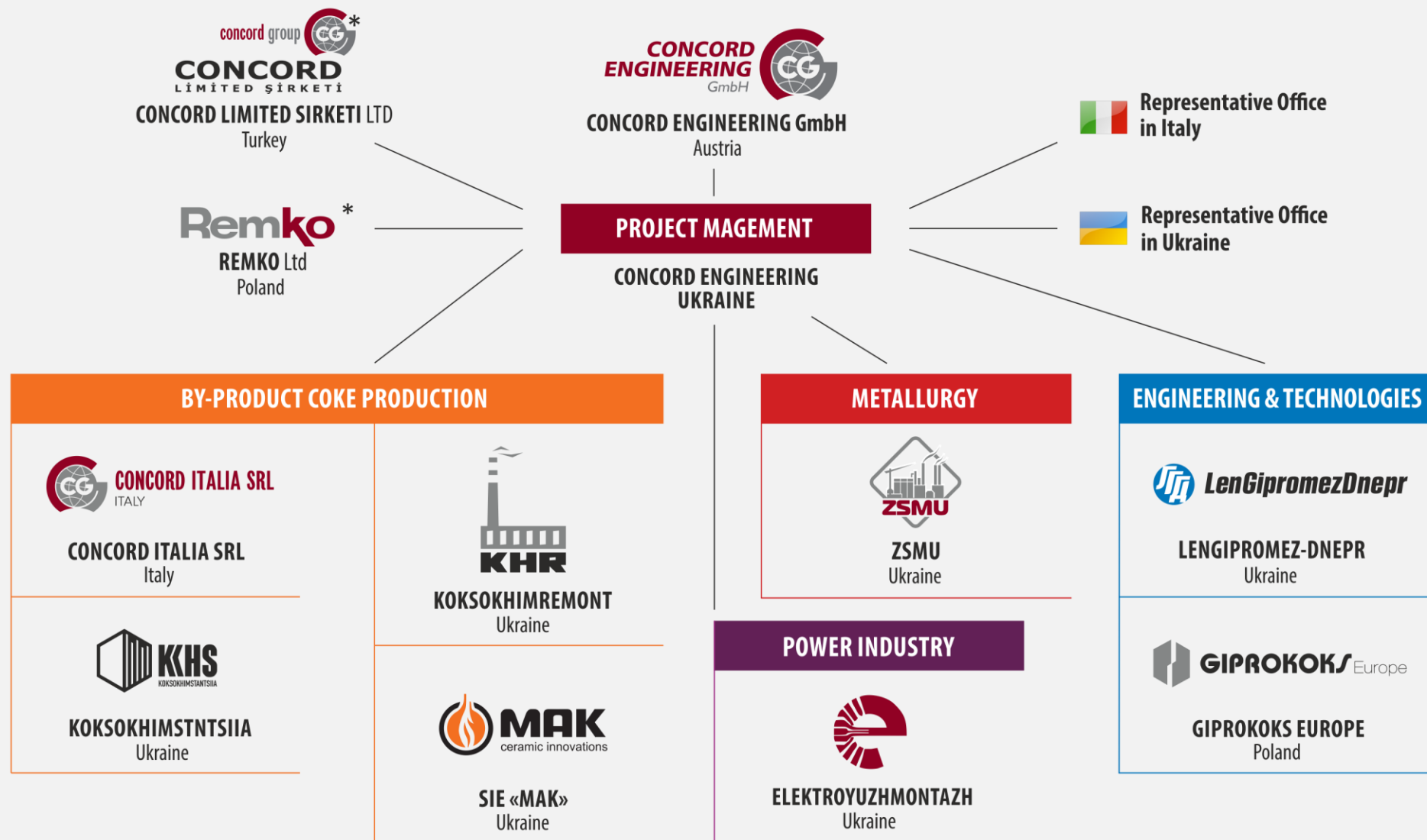
Since its foundation CONCORD GROUP has been socially-oriented in its activity and has been encouraging social values progress, unity, civil liability and social interests.

Mission and Values

CONCORD GROUP maintains corporate vision and fundamental values, strives for mutually beneficial cooperation with our clients and partners providing highest quality, just and fair management:

- Continuous management system improvement and enforcement of compliance with the International standard requirement ISO 9001.
- Analysis of current and potential customers' needs, aiming at exceeding their expectations.
- Permanent quality improvement and enhancement of service competitive position, production process improvement, applying latest BAT.
- Establishment and development of mutually beneficial and long-term partnership with stakeholders.
- Continuous training for personnel and its involvement into production management process.
- Personnel motivation for pursuing current and strategic goals.
- Unconditional compliance with applicable legislative requirements, international agreements, sectorial and corporate documents as well as national legislation of the countries CONCORD GROUP operates in.

Structure



* REMKO Ltd. and CONCORD LIMITED SİRKETİ Ltd. are under the management of Concord Group.

Our Customers

Bulgaria

Kremikovtzi AD Metallurgical Plant

Hungary

ISD Dunafer Metallurgical Plant

Germany

Beck u. Kaltheuner GmbH & Co. KG

Republic of the Union of Myanmar

Cast-iron plant

Russia

Intercos-IV | Plant of Cutout Components and Steel Service Center

Kosaya Gora Iron Works

Lebedinsk MPP

MECHEL | Chelyabinsk Pipe Rolling Plant

Mikhaylovsk MPP

NLMK | Novolipetsk Steel Mill

OUTOTEK | Saint Petersburg

Pervouralsk New Pipe Plant

Vyksa Smelter

Yzhorsk Tube Plant

Ukraine

Alchevsk Iron & Steel Works

ArcelorMittal Kryviy Rih

Artyomovsk Non-ferrous Metal Processing Works

Dneprovskiy Integrated Iron & Steel Works

Donetsk Metal Rolling Plant

Donetsksteel

Electrostal

EVRAZ-DMZ

INTERPIPE | Dneprostal Metallurgical Plant

Kramatorsk Metal Works

KRAMFER | Kramatorsk Ferroalloy Plant

MECHEL | Donetsk Electrometallurgical Plant

METINVEST | Azovstal Iron & Steel Works

METINVEST | Enakiev Iron & Steel Works

METINVEST | Ilyich Iron and Steel Works of Mariupol

METINVEST | Mariupol Repair and Engineering Works

METINVEST | ZAPORIZHSTAL Zaporizhzhia Metallurgical Plant

Motor Sich

INDUSTRIAL CONSTRUCTION

Metallurgical Industry

In 2011 CONCORD GROUP expanded its scope of activity and created specialized branch in construction, modernization, repair and service maintenance of metallurgical plants.

This business unit consists of specialized construction, repair and service companies with required experience, qualification and resources for construction of blast furnaces of various volumes in order to produce high quality cast iron with minimal expenses.

Long experience as well as high-skilled personnel of CONCORD GROUP allows it to execute over 100 types of jobs including heating and melting furnaces construction and repair, rolling mill upgrading, performance of thermal generating units and equipment repair prior to general start-up and adjustment work.

Availability of in-house production assets and engineering research center helps us execute turnkey projects including development process of production forms and records for construction, reconstruction, repair work, structures and equipment production and installation while providing quality control of completed works.



The whole variety of design, construction and technological solutions for repair work and metallurgical productive maintenance offered by the Holding, complies with strict requirements in terms of functionality, reliability, economic efficiency and environmental protection.

The Holding implemented projects in metallurgical plants reconstruction in Russia, Hungary, Bulgaria, Algeria and other countries. The biggest metallurgical plants of Ukraine are our clients too.

CONCORD GROUP staff has all the necessary work permits for highly dangerous, technically complex and exceptional facilities.

CONCORD GROUP implemented control quality management as well as occupational health and safety management systems.

Holding activity includes wide scope of services covering the whole construction cycle:

- Feasibility studies of investment projects.
- Design & Engineering
- Construction arrangement and management.
- Construction, revamping and upgrading turnkey projects for running plants.
- Repair and restoration work at operating facilities.
- Packaged supply of structures, machinery and equipment; inspection and installation.
- Estimation, quality control and refractory materials and cooling system supply.
- Commissioning of facilities.
- Consulting and technical support.



Range of Services

Increasing level of competitive environment and high requirements for product quality and production standards is the driving force for modernization. It is all the more important for metallurgical enterprises due to powerful equipment operating continuously in complex conditions.

CONCORD GROUP is qualified in overhaul project implementation as well as metallurgical units upgrading all the way through production chain, namely: sintering plant, blast furnace, rolling mill.

CONCORD GROUP activity covers the whole complex of products, services, research and developments in steel-melting process enhancement as well as in production cost reduction while increasing product quality.

Implementation of reconstruction and modernization projects for the current production as a single set gives both economic and environmental effects.



Construction and Assembly Works

- Preparatory works.
- Excavation works.
- Piling works. Grouting.
- Construction of concrete and reinforced concrete structures.
- Masonry structure installation work.
- Installation of precast concrete and reinforced concrete units.
- Manufacture, repair and installation of structural steels.
- Metallurgical industry equipment installation.
- Establishment of external utility system, namely: water supply system, high- and low- pressure gas supply system, waste water disposal system, ventilation system, warm- and hot-water supply system, industrial pipeline.
- Establishment of external power supply network with voltage up to 35 kW, cable lines and transformer substations with voltage up for 35 kW, electric lighting.
- Protection of constructions, equipment and utility, including water isolation, heat insulation, anticorrosive coating and fire protection system.
- Roof, finish and face work.
- Start-up and adjustment work.
- Work execution project and estimate documents development.



Repair and Construction services for the Enterprises of Metallurgical Complex

- Reconstruction and repair of thermal generating units and equipment such as blast and open-hearth furnaces, blast heaters, converters, rolling mills with heating units.
- Engineering guidance and expert advice on blowing of blast furnace.
- Manufacture and repair of equipment and pipe line.
- Blast furnace refractory lining repair and replacement.
- Repair or replacement of blast furnace charging devices of all systems.
- Hot-metal cast below tap-hole before dead banking.
- Disassembly of blast furnace bottom and hearth with its cleanup.
- Refractory and carbon brickwork in the hearth and blast furnace bottom.
- Casthouse mechanism repair or replacement.
- Repair of casting machine and slag granulation machine.
- Overhaul repairs or replacement of blast heater with steel structure, refractory brickwork and equipment as a single package.
- Rolling plant overhaul repairs with repairs or replacement of metalwork, equipment and pipe line.
- Repair or complete replacement refractory lining of reheating furnace and soaking-heat furnace.



Refractory Material and Cooling System

Comprehensive Insights in Refractory Material:

- Integrated blast furnace solutions.
- Proven methods of brickwork and total calculation and estimation of necessary refractory quality and quantity.
- Refractory quality control system.

Refractory material and cooling system selection for every particular BF zone is the key factor to ensure successful, economical and safe blast furnace smelting.

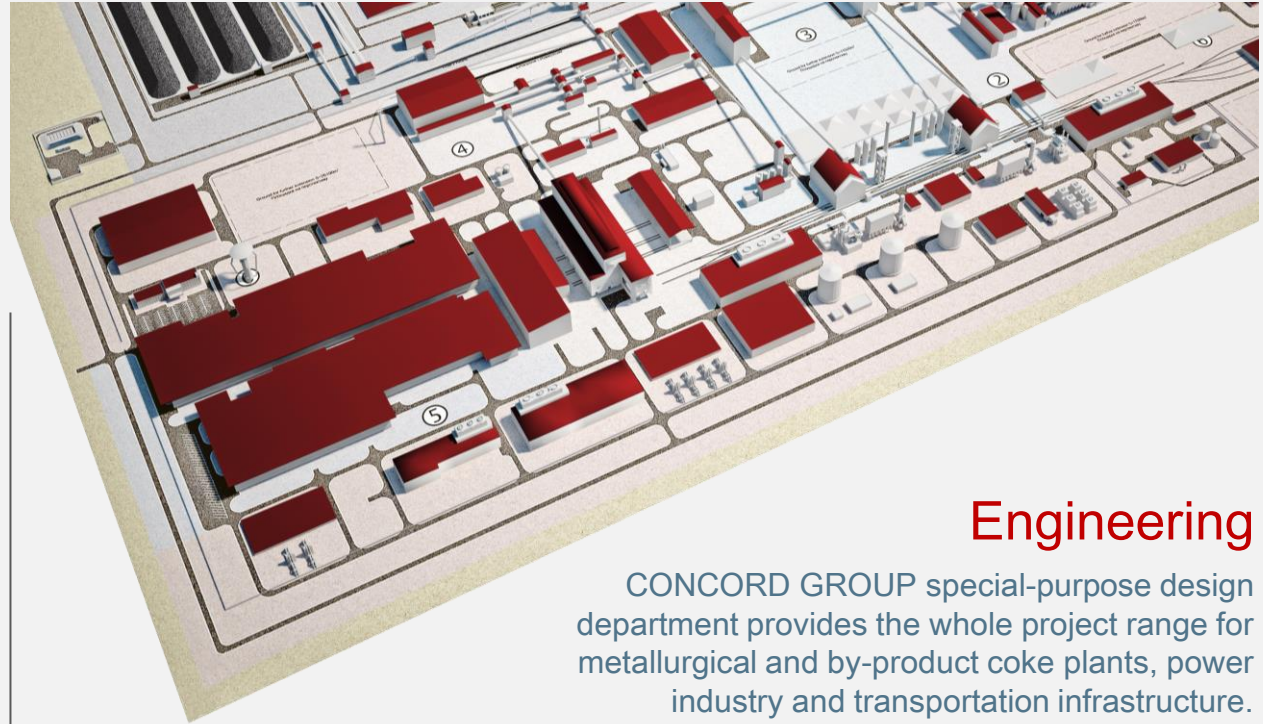
In order to make refractory selection most efficient, the CONCORD GROUP experts examine the thermal units when those are in operation, during overhaul repair and relining as well. Every refractory solution is customized for every particular zone.

CONCORD GROUP methods and development, thorough inspection and quality control at site allow to create linings for extended campaigns with reduced maintenance cost.

Comprehensive insights for blast heater systems, gas cleaning system, cast houses, hot metal and slag cleaning system got recommended at the facilities put into operation all over the world.

CONCORD GROUP offers the ultimate technological concepts and executes the whole engineering work cycle:

- Current production analysis and providing recommendations on its improvement as well as up-to-date technologies implementation.
- Integrated design documents development for enterprise construction, reconstruction, extension and technical re-equipment of operating enterprises.
- Inline automation system development for the technological process.
- Environmental impact assessment.
- Research and development.
- Construction design supervision.
- Control and analysis of estimated capacity implementation.
- Providing a wide range of engineering services.



Engineering

CONCORD GROUP special-purpose design department provides the whole project range for metallurgical and by-product coke plants, power industry and transportation infrastructure.

Knowledge of current construction technologies and the accumulated experience help optimize the projects while at the primary development stage, carry out their audit, cut the construction time and expenses.

CONCORD GROUP experts supervise project execution from the very beginning up to its final completion. Close cooperation with contractors accelerates complex issues solution and reduces error probability.

CONCORD GROUP experts have all the necessary permits and certificates allowing them to design industrial facilities (such as shops, warehouses, storage bunkers etc.), infrastructural facilities (such as highways, bridges, overpasses), equipment (such as coke and metallurgical machinery and equipment, cranes, conveyor belt system etc.), and civil construction as well (such as office centers, apartment buildings, multifunctional centers etc.).

There are more than 100 units of mobile equipment available at CONCORD GROUP and lots of those are rare and unique in Ukraine:

- Dump trucks with a load-carrying capacity from 5 to 16 t.
- Wheel type excavators with bucket capacity up to 0.5 m³.
- Crawler excavators with bucket capacity up to 1 m³.
- Truck cranes with lifting capacity from 14 to 30 t.
- Building cranes with lifting capacity from 25 to 100 t.
- Loaders with bucket capacity up to 1.85 m³.
- Bulldozers, concrete lorries with capacity from 5.25 to 7.5 m³.
- Tractors, special-purpose transfer platforms etc.



Auxiliary Equipment Park

Our own construction and auxiliary equipment park ensures operational continuity and decreases costs.

All the equipment is supported by highly-skilled operating staff and is able to be in operation on three-shift bases.

Substantial equipment park is a guarantee of work done on time with high quality, compliance with environmental standards and effective resource management.



INDUSTRIAL CONSTRUCTION
Metallurgical Industry
Main Projects 2005-2017



Customer

METINVEST | ZAPORIZHSTAL
Cold-rolling Mill No.1.



Schedule

2013-2014



Scope of work

Revamping of annealing unit.



Rebuilding of annealing unit with installing 18 bell furnaces and a hydrogen generator by EBNER (Austria).

Scope included civil works, erection of equipment and gas-supply system, piping, electrical installation, commissioning.

Slitting line by DANIELI FROEHLING (Germany) was installed and commissioned.





Customer

METINVEST | ZAPORIZHSTAL
Cold-rolling Mill No.1.



Schedule

2013-2014



Scope of work

Pickling division reconstruction.

New line of hydrochloric acid pickling
and hydrochloric regeneration unit
construction.



Full scope of construction and assembly works was performed for continuous pickling unit No.4 (NTA-4), along with hydrochloric regeneration unit, reverse osmosis system and butt-welding machine installation.

1608.3 tons of equipment was erected, namely:

- 1346.4 tons of machinery (coil downender, recoiler, shears, pickle-line processor etc.);
- 60.6 tons of equipment and hydraulic system, pneumatic drive and centralized lubricating systems;
- 201.3 tons of equipment and pipe line for chemical sheet treatment.

Equipment was supplied by SIEMENS VAI (Austria).

Commissioning was carried out.





Customer

METINVEST | ZAPORIZHSTAL
Oxygen-compressor Shop.



Schedule

2016



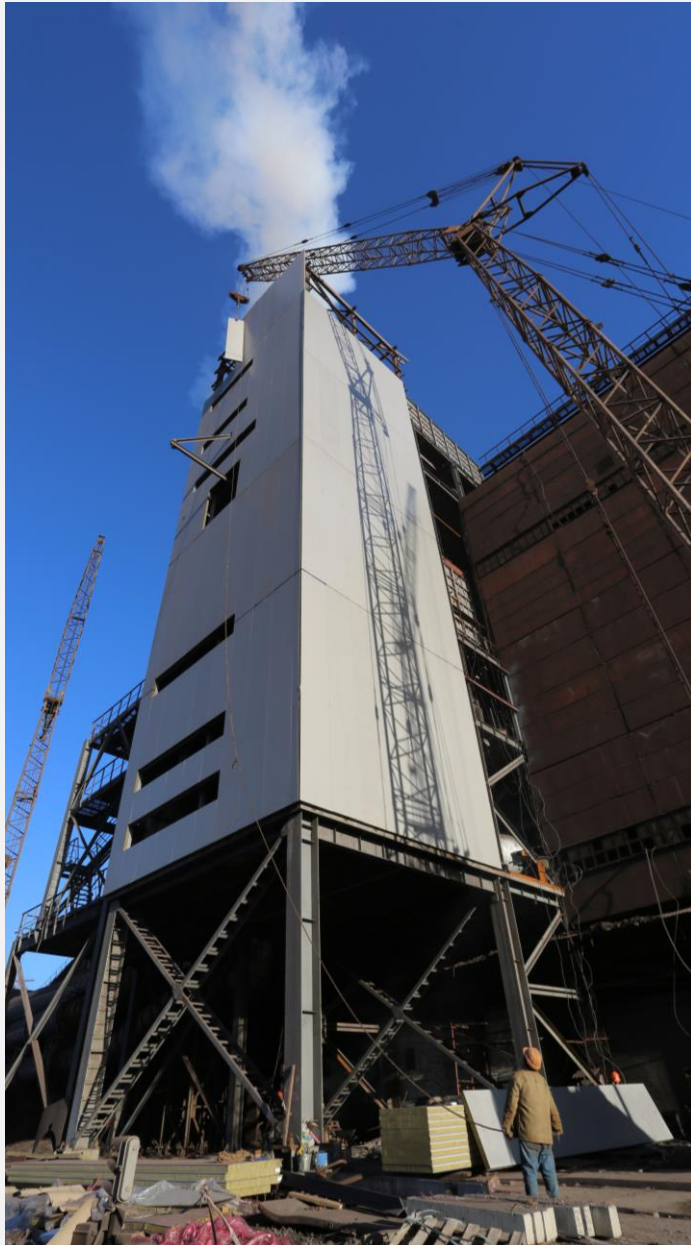
Scope of work

Oxygen-compressor shop
reconstruction and VRU-60
reconstruction.

Both dismantling of existing buildings and constructions as well as new building and utility system construction were done.

New air separation unit by AIR LIQUID (France) with capacity of 60m³ air per hour was installed and commissioned. «Hot» and «cold» oxygen storage units of V=500m³ were erected.





Customer

METINVEST | ZAPORIZHSTAL
Sinter Plant.



Schedule

2009-2016



Scope of work

Integrated reconstruction of sintering machines No.2,3,4,5,6 and gas-purifying system installation.

Sinter plant reconstruction and gas-purifying system installation were executed within the framework of the environmental program of ZAPORIZHSTAL plant. Wet gas-cleaners were replaced with the modern dry type.

Construction and assembly works of sintering machines were carried out phase-by-phase with the plant in operation, without interruption of basic metallurgical process.

Gas-cleaners with electrostatic precipitators for the aspiration system of the sintering machine tail section were commissioned.

Principal gas-purifying equipment was supplied by Berdichev Machinery Plant "Progress" (Ukraine).

The producer of draught equipment is REITZ (Germany).



Customer

METINVEST | ZAPORIZHSTAL
Sinter Plant.



Schedule

2009-2014



Scope of work

PCI plant for Blast Furnaces
No.No.2-5.



PCI plant construction for Blast Furnaces №№2-5 was accomplished in collaboration with KUETTNER (Germany) in 2 phases:

Phase I: coal-dust section with coal receiver and conveyor gallery;

Phase II: basic stockyard for raw material handling.

The coal stockyard facilities include:

- Wagon tippler;
- Consolidation coal storage (5 stacks with overall capacity 136.6 thous. m³);
- Bedding yard (2 stacks with overall capacity 38.6 thous. m³);
- Railcar loading station;
- Frozen coal mixing unit;
- Belt-conveyor gallery of more than 7 km long.



Customer

METINVEST | ZAPORIZHSTAL
Blast Furnace No.2



Schedule

2014-2015



Scope of work

Second grade overhaul repair with
partial reconstruction.

Duration of work:

- overall duration of work240 days
- preparatory work182 days
- banking period58 days

Personnel involved:

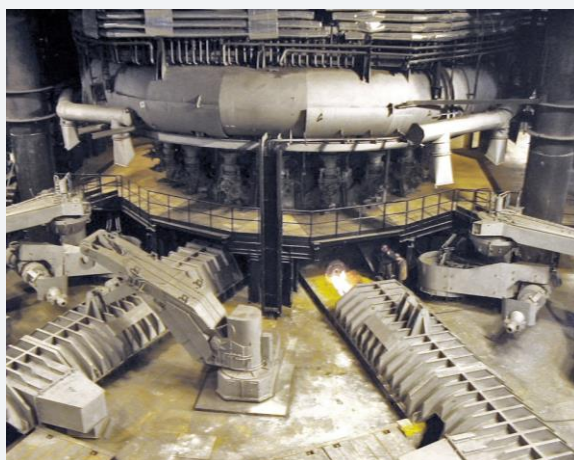
- number of personnel.....600 people

Scope of work:

- feed pipes replacement;
- aspiration equipment repair;
- repair of refractory lining;
- replacement of shaft coolers;
- replacement of charging device;
- cooling system reconstruction;
- upgrading of casthouse equipment.

Total weight of installed structures is over 1000 t.

Total weight of new refractory lining is over 1500 t.



Customer

METINVEST | ZAPORIZHSTAL
Blast Furnace No.2



Schedule

2016



Scope of work

Third grade overhaul repair.

Duration of work (overhaul repair BF No.2):

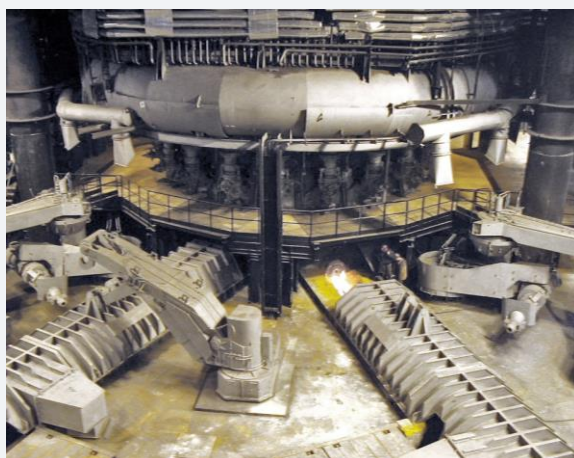
- overall duration of work67 days
- preparatory work60 days
- banking period7 days

Personnel involved (overhaul repair BF No.2):

- number of personnel.....400 people

Scope of work (overhaul repair BF No.2)::

- replacement of furnace charging device;
- equipment inspection;
- skip hoist joint inspection and replacement;
- throttle unit steel structures repair;
- air heater equipment inspection;
- casthouse deduster inspection;
- bin trestle equipment repair;
- steel structures of charge-conveying system repair;
- lubrication system inspection.



Customer

METINVEST | ZAPORIZHSTAL
Blast Furnace No.2.



Schedule

2016



Scope of work

Casthouse aspiration unit.

Duration of work (aspiration):

- overall duration of work240 days

Personnel involved (aspiration):

- number of personnel.....100 people

Scope of work (aspiration):

- general construction works;
- steel structures of duct aspiration and charge-conveying system repair;
- site assembly and installation of main flue structure with supports;
- installation of compressor station equipment;
- finishing works;
- electrical installation work;
- improvement of the area.



Over 950 tons of steel structures, equipment, pipeline of gas purifiers and deduster were fabricated and installed, including steel structures of deduster, scrubber, water separator, large diameter pipelines, supporting structures, platforms and stair shafts.

Refractory lining of raw gas main and deduster diffuser was done.

Modern aspiration system with continuous automatic control, complying with international standards, was equipped.

All the works were carried out at limited area site while keeping production in operation.



Customer

METINVEST | ZAPORIZHSTAL
Blast Furnace No.3



Schedule

2016-2017



Scope of work

Blast Furnace reconstruction.

Production and installation of deduster and gas-purifier steel structures.

Duration of work:

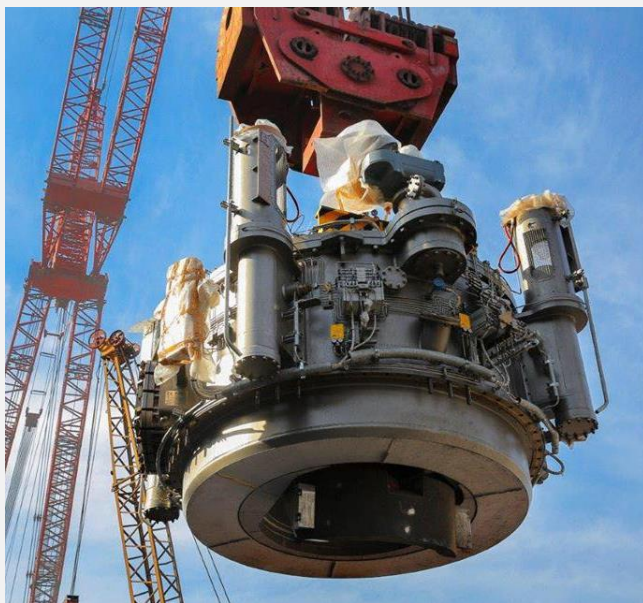
- overall duration of work265 days

Personnel involved:

- number of personnel.....450 people

Scope of work:

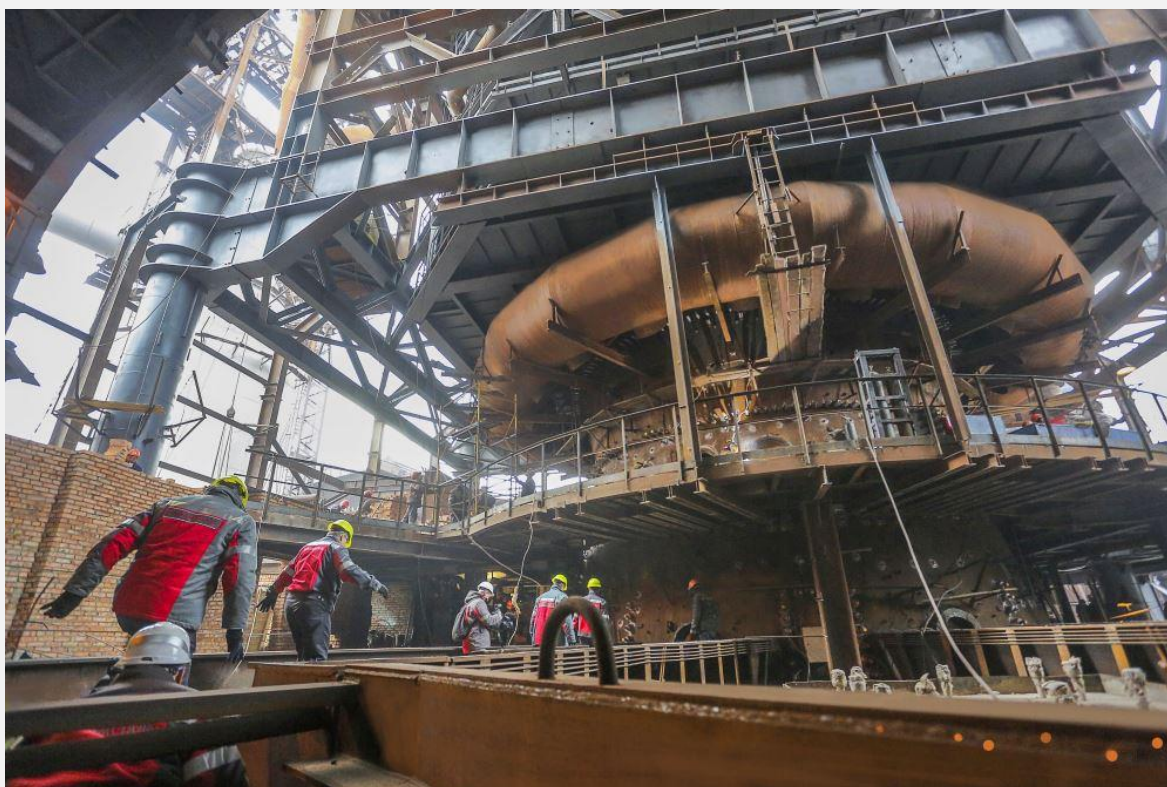
- fabrication and installation of steel structures;
- equipment installation;
- fabrication and installation of pipeline of gas-purifiers and deduster, including large diameter pipeline;
- fabrication and installation of steel structures of deduster, scrubber, water separator, supporting structures, platforms and stair shafts;
- refractory lining accomplishment;
- cooling plates replacement.



Up-to-date solutions were applied to furnace cooling system.

Evaporative cooling system pumps were replaced with more powerful ones. Copper coolers, lined-up with improved resistance refractory by GONGIY (China), were installed as well as cooling elements.

The repair of furnace electric equipment, tilting runner remote control and evaporative cooling system pumps was done.



Customer

METINVEST | ZAPORIZHSTAL
Blast Furnace No.4



Schedule

2016



Scope of work

Third Grade overhaul repair with reconstruction features and upgrading.

Duration of work:

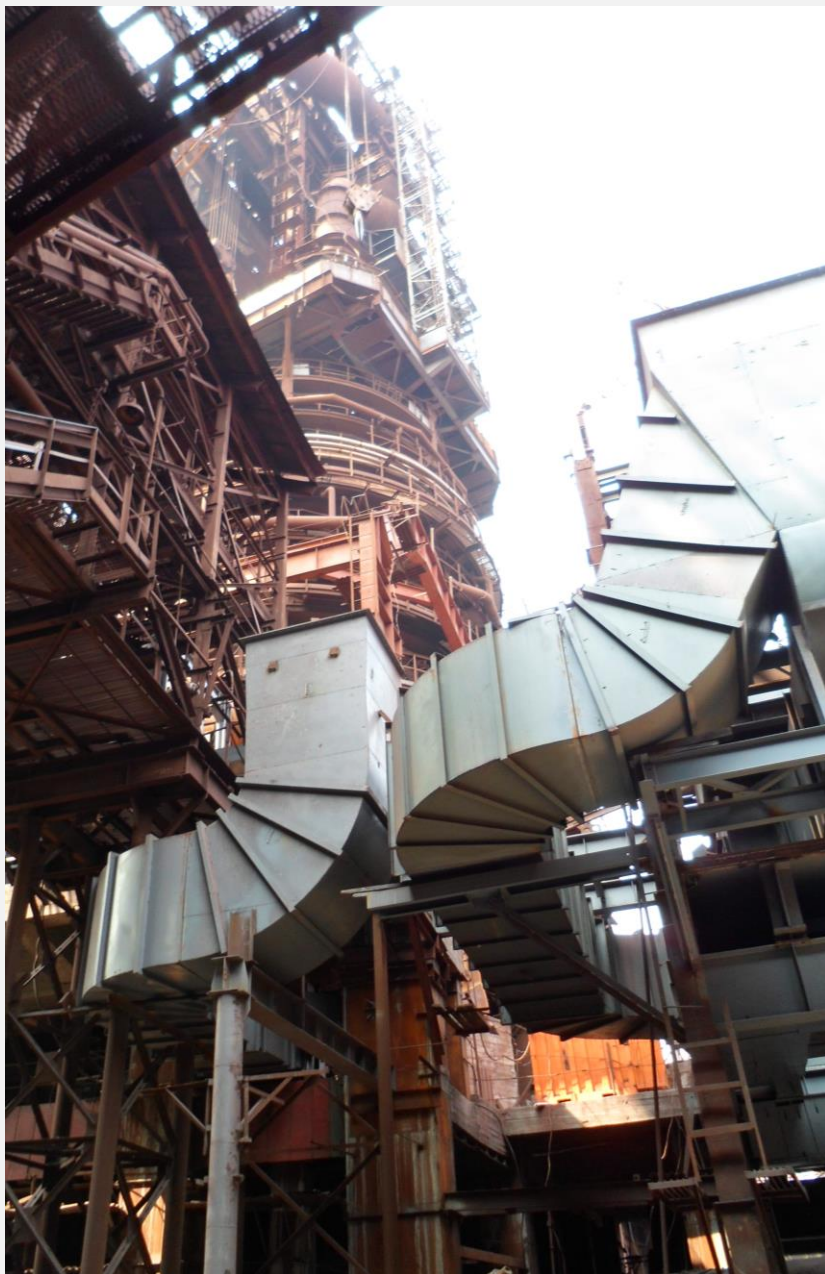
- overall duration of work180 days
- preparatory work150 days
- banking period30 days

Personnel involved:

- number of personnel.....400 people

Scope of work:

- evaporative cooling system pumps replacement;
- installation of copper coolers, lined-up with improved resistance refractory;
- shotcreting technology appliance;
- furnace-charging gear replacement;
- furnace feed delivery equipment inspection;
- repair of furnace electric equipment.



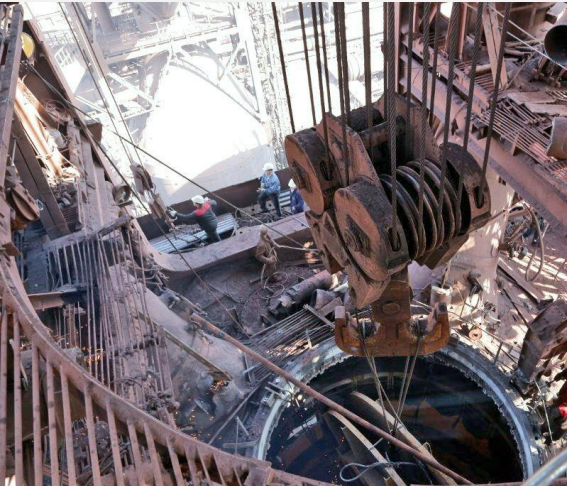


The blast furnace shell integrity and geometry were restored, bell-less top was replaced. The whole furnace shaft relining was done with BAT and refractory lining of hearth and hearth bottom was recovered.

Cooling system was repaired; the main parts of blast furnace aspiration system were renovated.

Blast furnace overhaul repair was accomplished by plant experts in collaboration with contractor and engineering company.

Overall weight of refractory lining is over 1500 tons.



Customer

METINVEST | ZAPORIZHSTAL
Blast Furnace No.5



Schedule

2016



Scope of work

Second grade overhaul repair.

Duration of work:

- overall duration of work180 days
- preparatory work135 days
- banking period45 days

Personnel involved:

- number of personnel.....400 people

Scope of work:

- blast furnace shell integrity restoration;
- bell-less top replacement;
- the whole furnace shaft relining was done;
- refractory lining of hearth and hearth bottom recovery;
- cooling system repair;
- aspiration system renovation.



Customer

ArcelorMittal Kryviy Rih
Blast Furnace No.7



Schedule

2015



Scope of work

Blast Furnace repair.

Duration of work:

- overall duration of work180 days
- preparatory work158 days
- banking period 22 days

Personnel involved:

- number of personnel..... 230 people

Scope of work:

- furnace-charging gear replacement;
- furnace scaffold and skull shattering;
- dismantling, repair, manufacturing, assembly work and installation of steel structures;
- dismantling and installation of furnace shaft cooling plates;
- shut-off valves inspection, dismantling and reinstallation;
- pipeline manufacturing and installation;
- refractory lining dismantling and restoration.



Customer

ArcelorMittal Kryviy Rih
Blast Furnace No.9



Schedule

2015



Scope of work

Blast Furnace repair.



Duration of work:

- overall duration of work180 days
- preparatory work138 days
- banking period42 days

Personnel involved:

- number of personnel.....300 people

Scope of work:

- suspended platforms repair;
- cleaning out of scaffold, gunite lining and concrete;
- blast furnace shell replacement;
- shell support system installation;
- cooling plates replacement;
- pipeline production and replacement;
- steel structures all over blast furnace repair.



PROJECT # 145, 149, 153, 154.



Customer

NLMK Group | Novolipetskiy Steel Plant
Metallurgical Industry.



Schedule

2010-2011



Scope of work

Design. Site supervision.



Blast Furnace No.7.

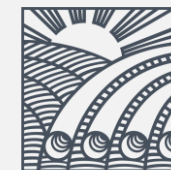
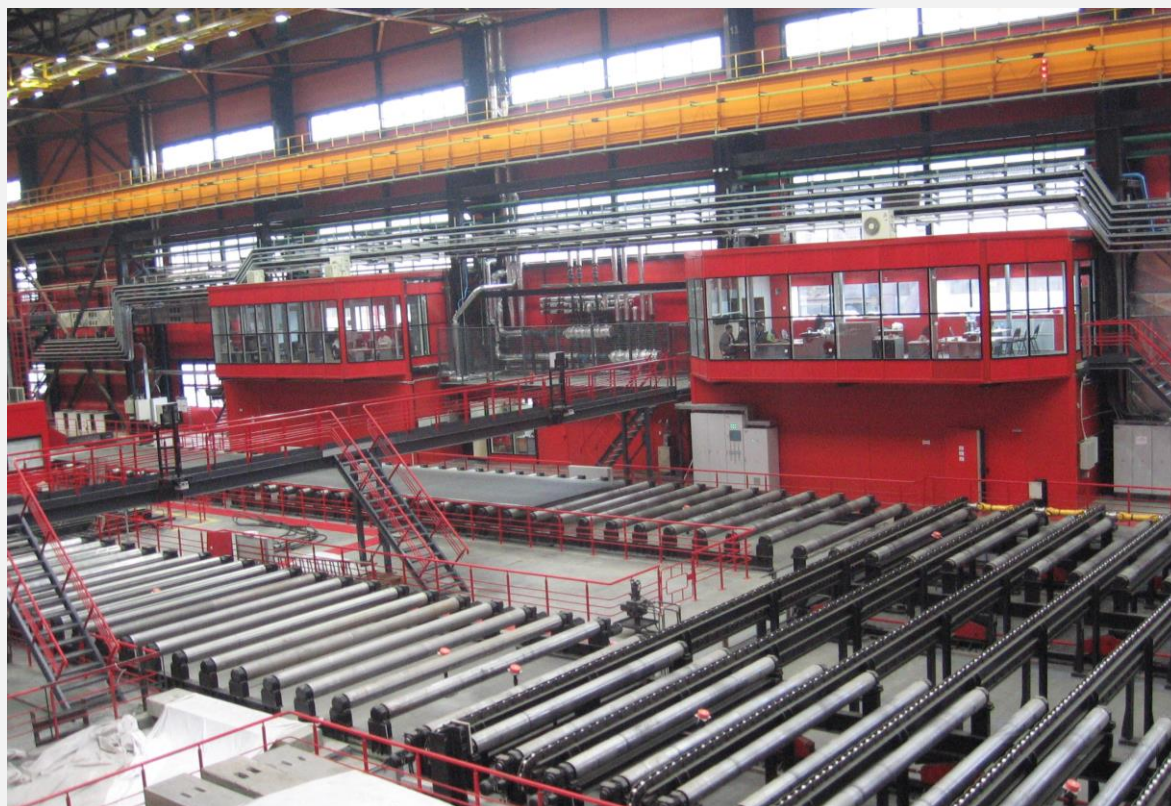
Scope of work:

- bin trestle;
- inclined charge gallery;
- bin trestle control building;
- sinter fines screening unit.

Converter Shop No.2.

Scope of work:

- converter No.1 construction;
- converter shop expanding;
- sludge dewatering block;
- cable tunnels, valve pumping station and electrical equipment rooms.



CHELPIPE

PROJECT # 141, 142



Customer

CHELPIPE | Chelyabinsk Pipe-Rolling Plant
Electric-weld pipe workshop No.3.

Electric-Weld Pipe Division.
Anticorrosive Coating Division.



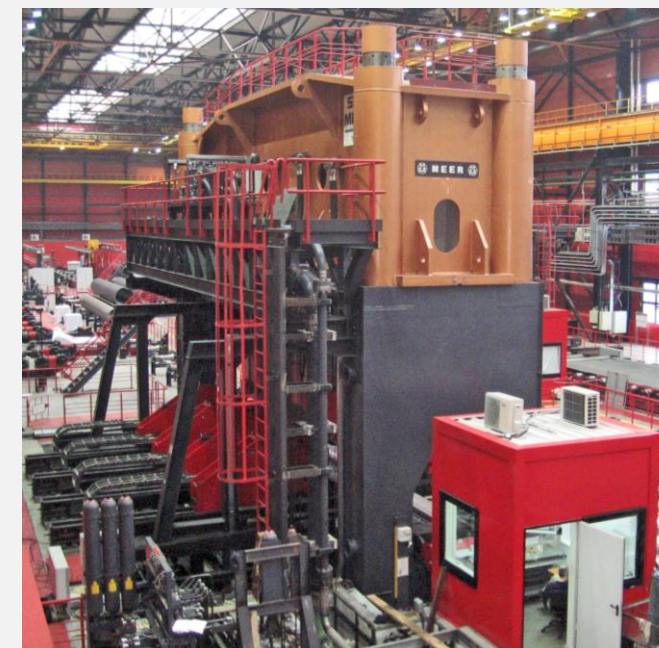
Schedule

2009



Scope of work

Design. Foundations for equipment.
Reinforced-concrete structures drawings.





Customer

INTERKOS-IV | Forged Element Shop and Steel Service Center

Production facility and administration and amenity block.



Schedule

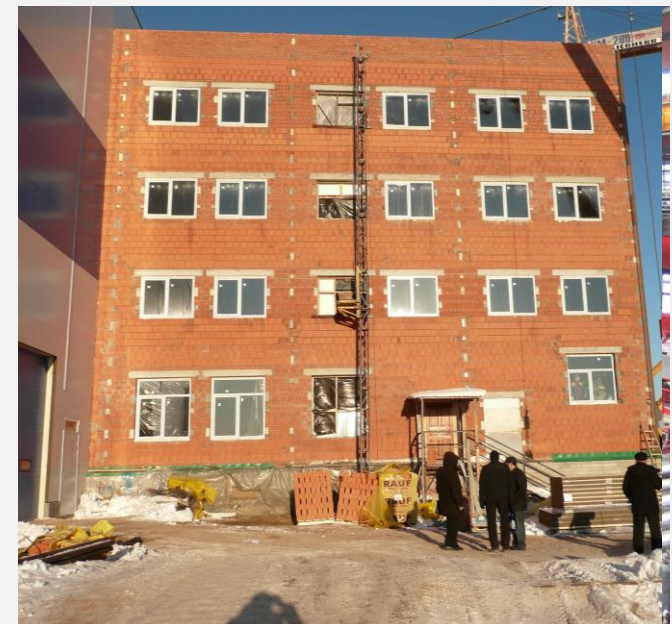
2009-2010



Scope of work

Design.

Manufacturing drawings.





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