COMPANY PRESENTATION

ARMAPROM

ENGINEERING COMPANY

2014

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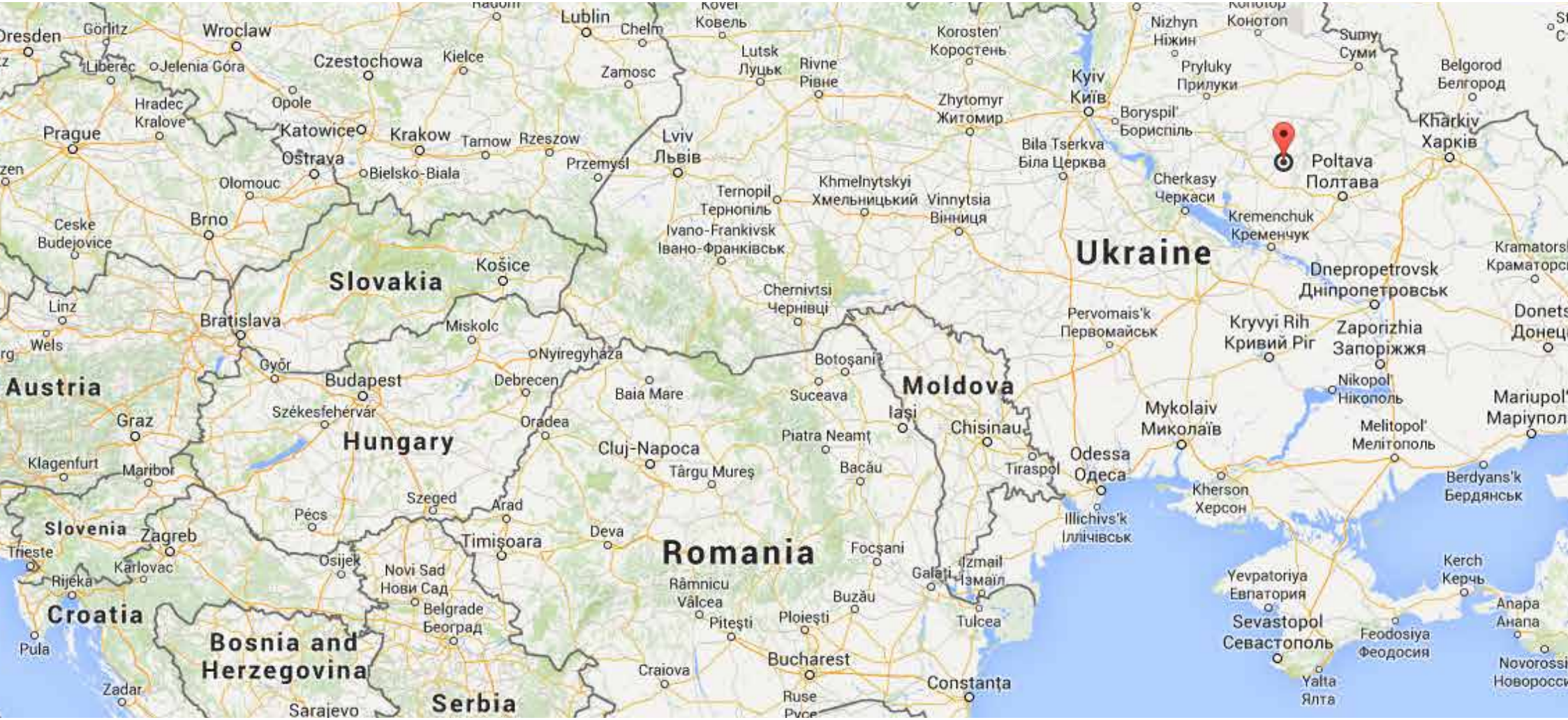
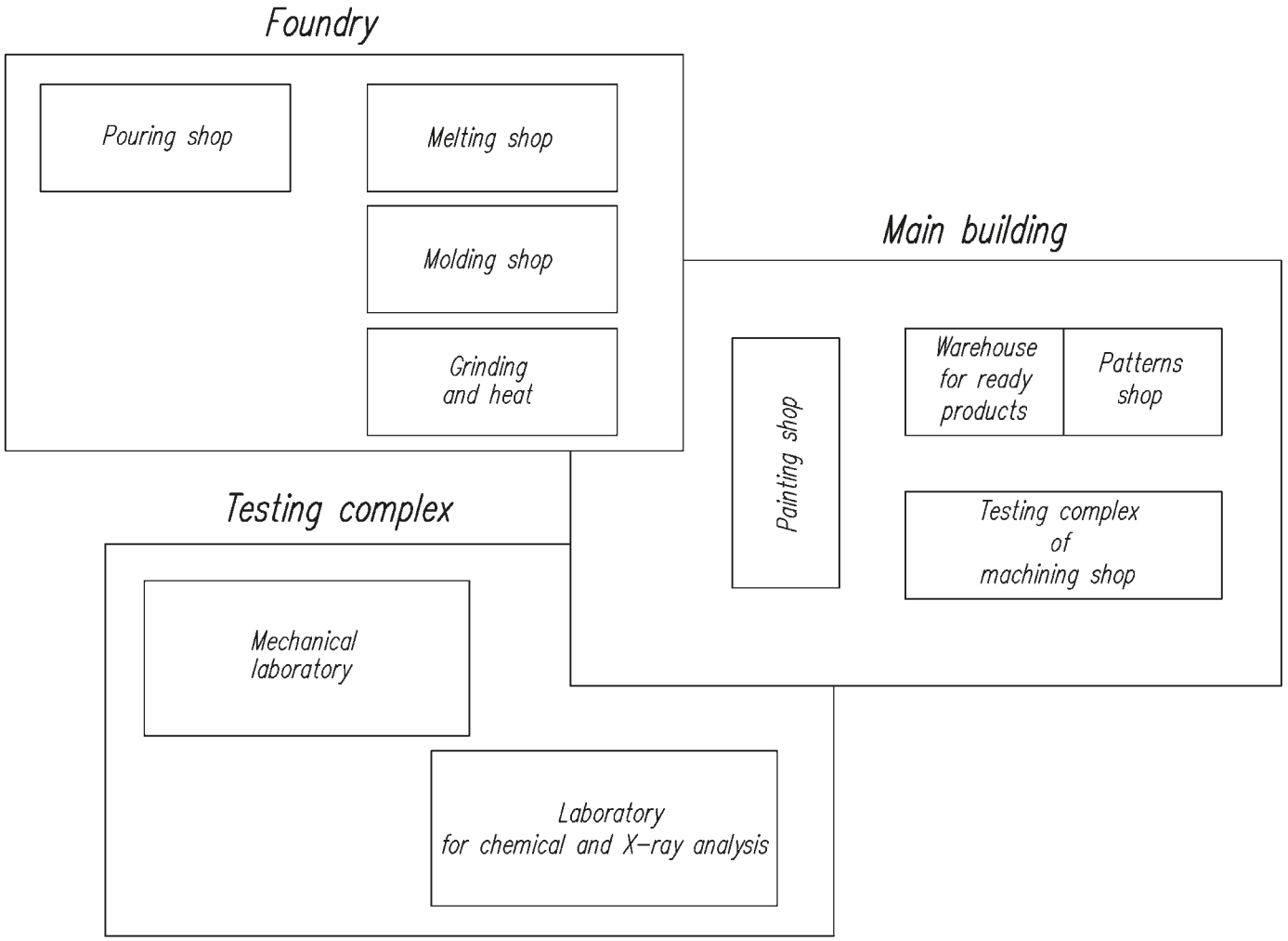
Factory ARMAPROM is located in Mirgorod city of Poltava region – it is the central part of Ukraine and it is 200km distance from big industrial centers – Kyiv, Kharkiv, Dnipropetrovs'k.



• Factory ARMAPROM was founded in the year 1946 in Mirgorod city. After reconstruction during 1966 -1975 the factory became an enterprise producing pipe-line valves and castings from corrosion resistant steel grades.
• In 2002 the factory was reconstructed again and steel melting converter with GOR technology was commissioned.

- The area of the enterprise is 122 000 m², of which 71 700 m² is the area of the work shops and administrative buildings.
- The number of employees is 417 people, among them there are 36 design engineers and production engineers

The enterprise of ARMAPROM makes complete cycle of production of castings made of iron, carbon and corrosion resistant steel grades. Major direction of the factory is the production of pipe-line valves, castings and ingots. ARMAPROM possesses all necessary facilities to perform these tasks.


Foundry
Pouring shop
Melting shop
Molding shop
Grinding and heat
Main building
Painting shop
Warehouse for ready products
Patterns shop
Testing complex of machining shop
Testing complex
Mechanical laboratory
Laboratory for chemical and X-ray analysis

The chart contains the materials that are most frequently produced by ARMAPROM. For production of steel grades that are not in the list, please, contact us. Main groups of cast steels:

Super low carbon steels • High temperature steels • Low temperature steels
Duplex steels Super • Duplex steels • Precisions steels • Sparingly alloyed steels
High nickel alloyed steels • Extensionally nitrited steels • Chemically degasified steels

Carbon steels

EN	DIN	ASTM/ AISI
1.0446	GS-45	A216 WCB
1.0619	GS-C25	A216 WCA
1.0621		
1.1138	GS-21 Mn 5	

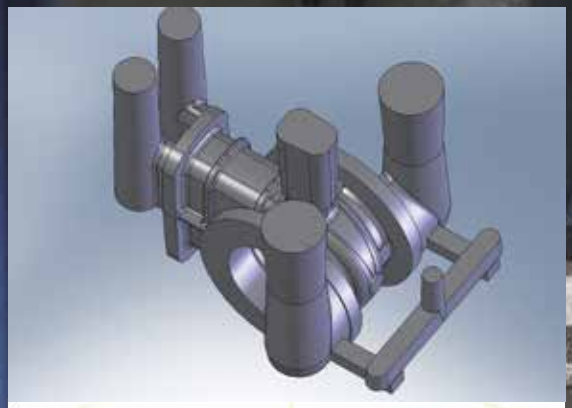
Low alloy steel

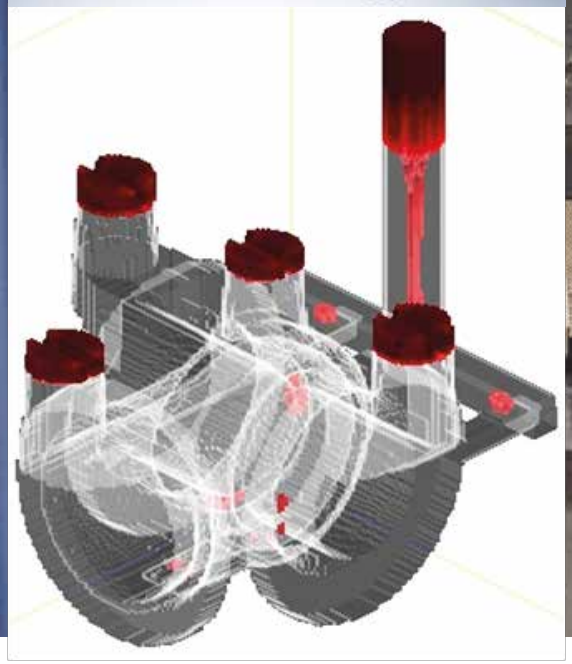
EN	DIN	ASTM/ AISI
1.3802		A128 A
1.7220	GS-34 CrMo 4	
1.7357	GS-17 CrMo 5 5	
1.7365	GX 15 CrMo 5	

High alloy steel

EN	DIN	ASTM/ AISI
1.4027	GX 20 Cr 14	
1.4307	X 2 CrNi 18-9	A351 CF3
1.4308	GX 5 CrNi 19-10	A351 CF8
1.4401	X 5 CrNiMo 17 12 2	AISI 316
1.4404	X 2 CrNiMo 17 13 2	AISI 316L
1.4408	GX 5 CrNiMo 19 11 2	A351 CF8M
1.4409	GX 2 CrNiMo 19 11 2	A351 CF3M
1.4435	X 2 CrNiMo 18 14 3	AISI 316L
1.4436	X 5 CrNiMo 17 13 3	AISI 316
1.4462	X 2 CrNiMoN 22 5 3	A182 F51
1.4503	X 3 NiCrCuMoTi 27-23	
1.4539	X 1 NiCrMoCu(N) 25 20 5	
1.4541	X 6 CrNiTi 18-10	AISI 321
1.4542	X 5 CrNiCuNb 17 4	
1.4552	GX 5 CrNiNb 19-10	
1.4571	X 6 CrNiMoTi 17-12-2	AISI 316Ti
1.4581	GX 5 CrNiMoNb 19-11	A351 CF10MC
1.4841	X 15 CrNiSi 25-20	

DESIGN AND CREATION OF PATTERNS





- Creation of 3D models of patterns
- Fabrication of patterns on 5-coordinate machine DAHLIN MCV-1700 or MCV-720
- Assembling of patterns
- The shop where the patterns are stored

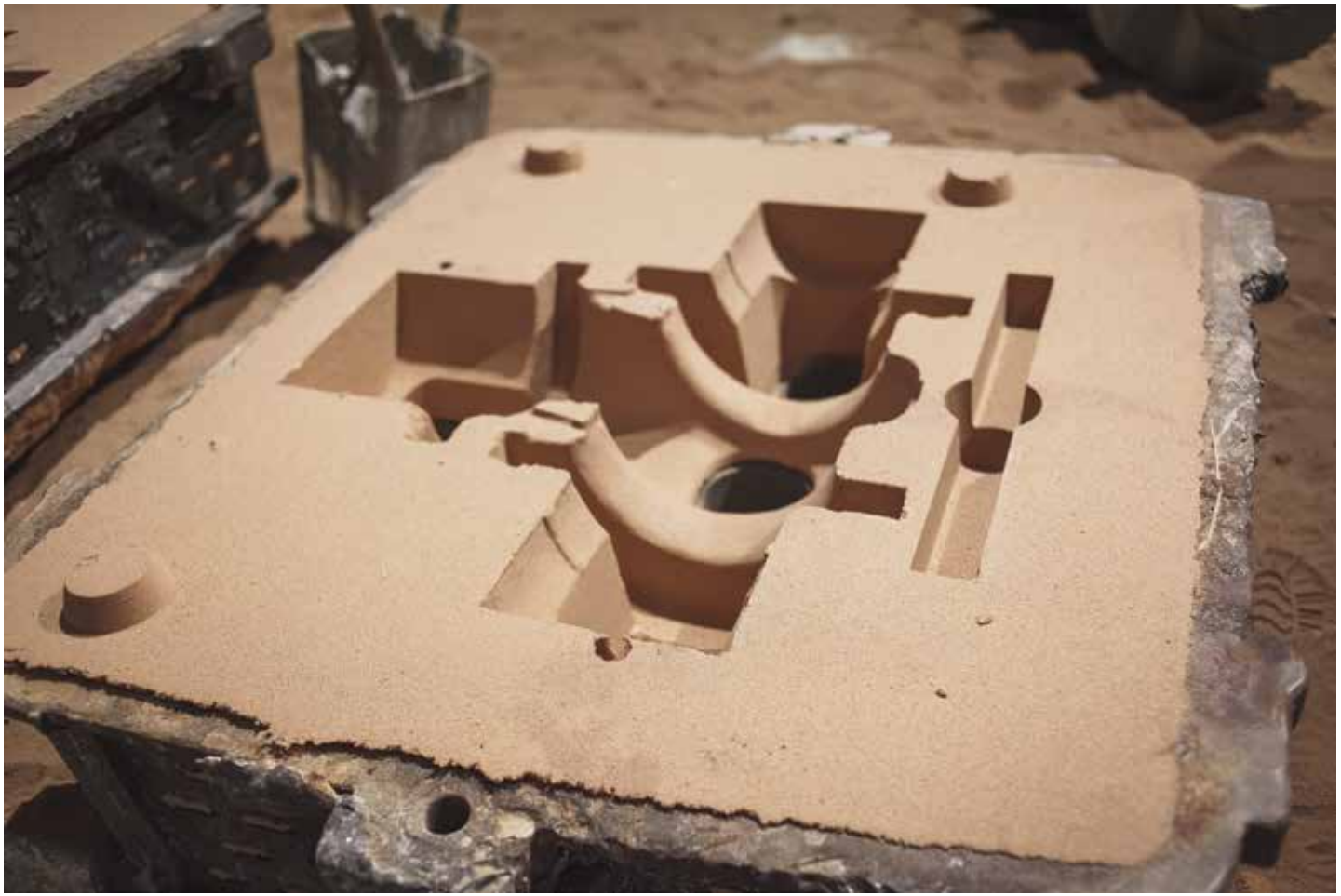
•The factory is equipped with modern mixers FAT (Germany): for fabrication of moulds (with capacity 20 tn/hour) and for production of cores (spending 5tn/hour of molding sand)

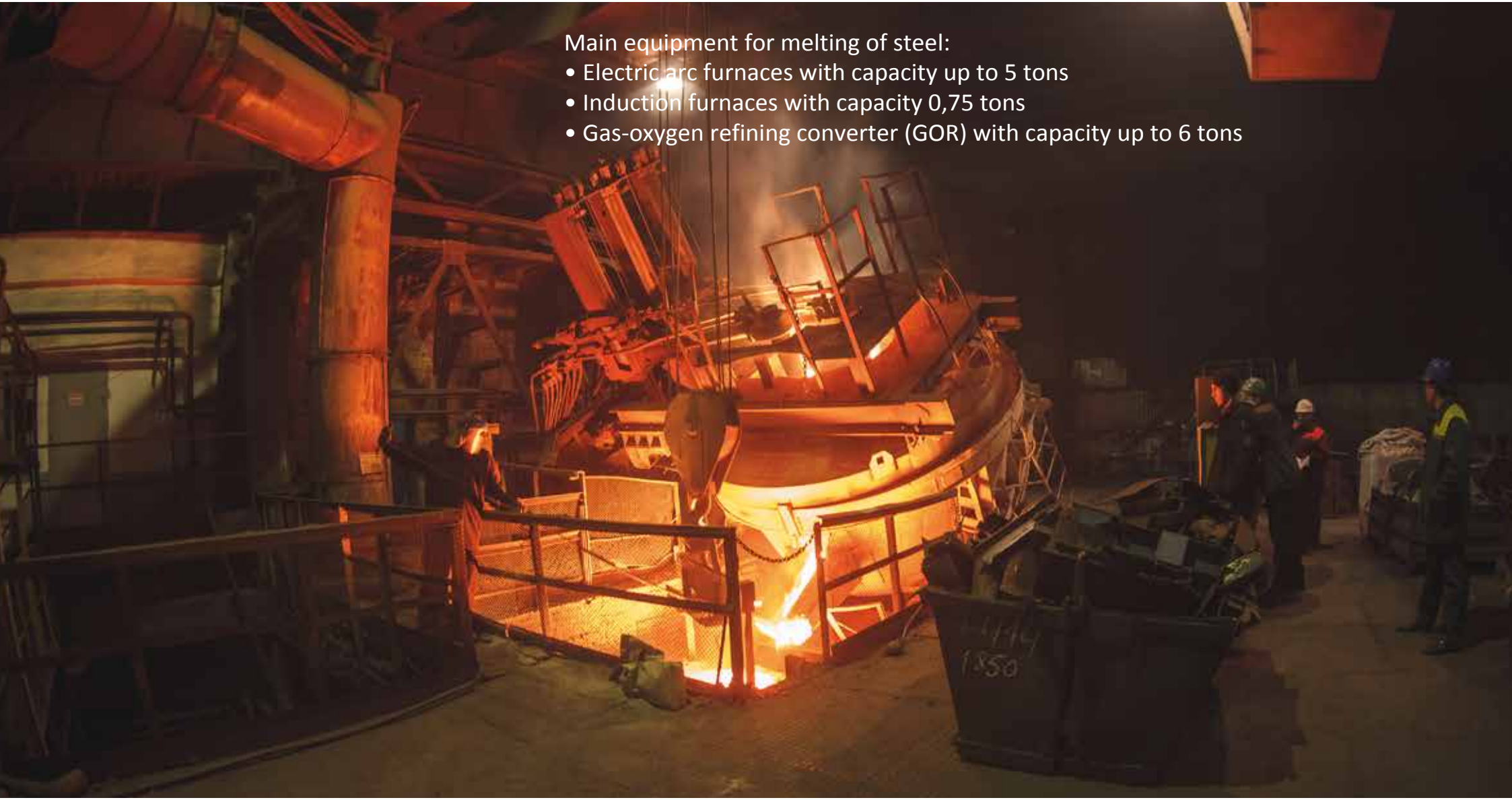
• Knocking-out grate ASR 2500x2500

• Dust removal system in the areas where the mixers and knocking-out grate work /technology of INFASTAUB/

TECHNOLOGY OF CHEMICAL HARDENING MOLDING SANDS

• Weight of castings made using technology of chemical hardening molding sands is from 1 to 3500kg depending on complexity of castings.
• Maximum size of casting boxes used for molding - 3000x2000x600 mm and 4400x700x400 mm



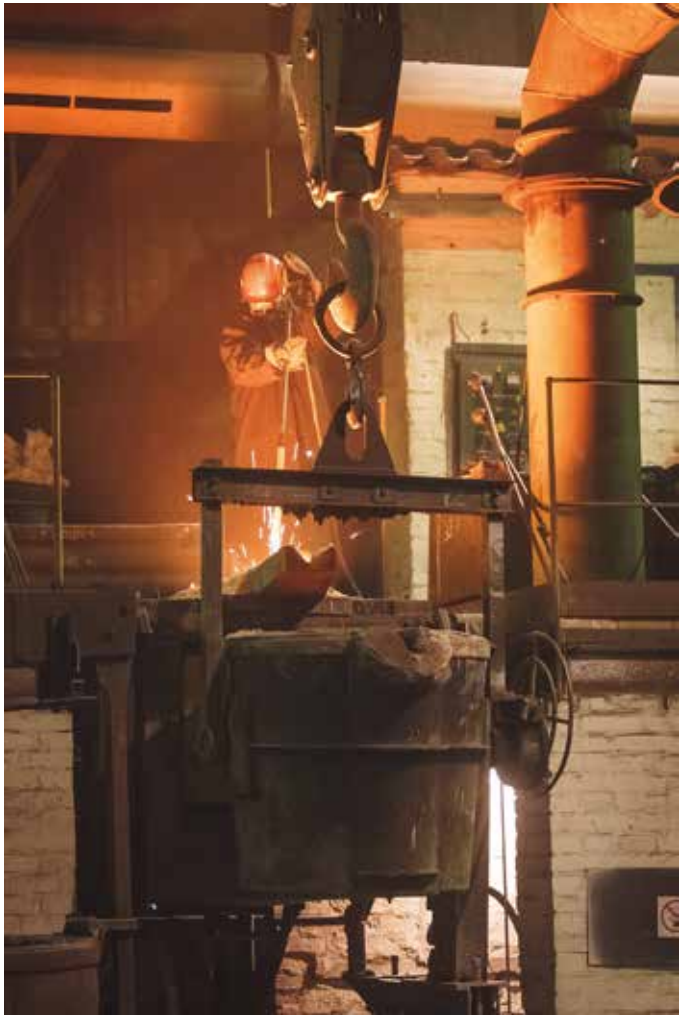


Main equipment for melting of steel:

- Electric arc furnaces with capacity up to 5 tons
- Induction furnaces with capacity 0,75 tons
- Gas-oxygen refining converter (GOR) with capacity up to 6 tons

Capacity of metallurgical complex of PJSC “Armaprom” makes:

- 18 807 tons per year of liquid steel
- 10 615 tons per year of final product (ingots + castings)



GAS-OXYGEN REFINING CONVERTER

GOR technology makes it possible to produce metal parts with set parameters of chemical composition and mechanical properties.

- Capacity of converter is up to 6 tons/hour;
- Possibility to realize both oxidizing and reducing conditions of refining during steel melting;
- In the process of blowing of liquid metal by technical gas mixtures semi-product goes through the process of decarbonization which helps to achieve higher degree of recovery of Cr (95%), Mn (70%);
- There is a possibility to make steel with specially low content of carbon (≤0,01%) and sulfur (≤0,01%).

Control room – supervising over automatic process of controlling the mode of steel melting on the basis of controller of blasting mode SIEMENS

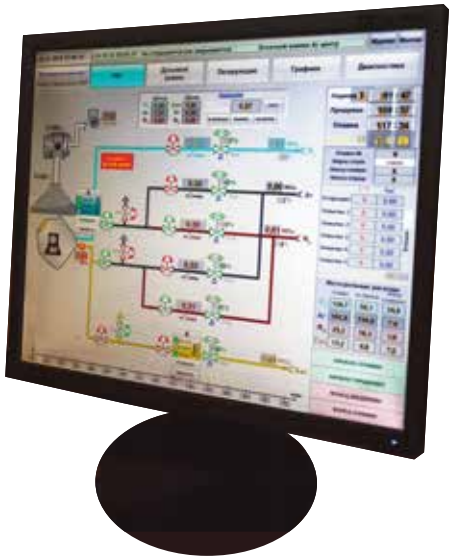
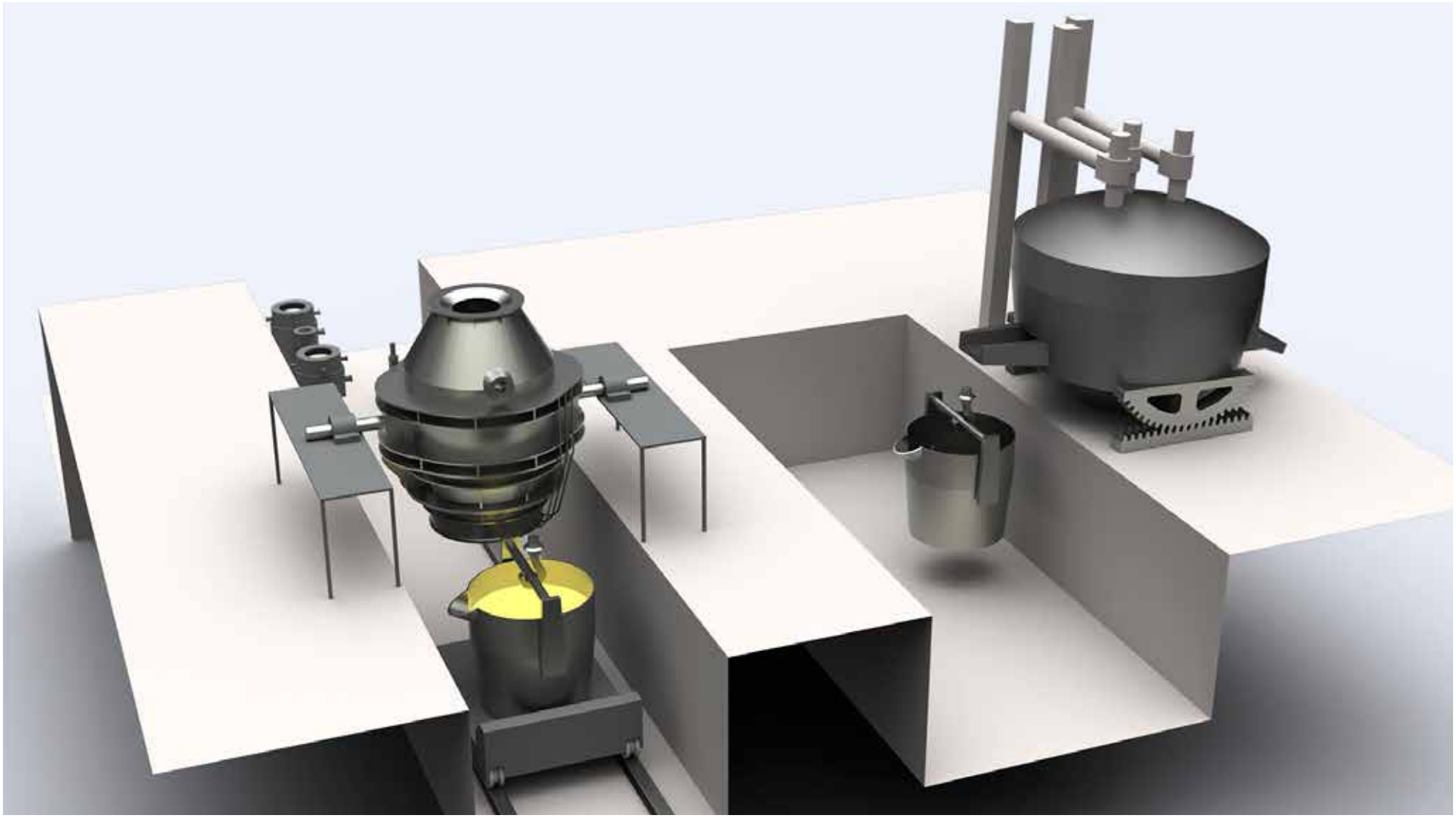


Diagram of duplex-process of steel melting

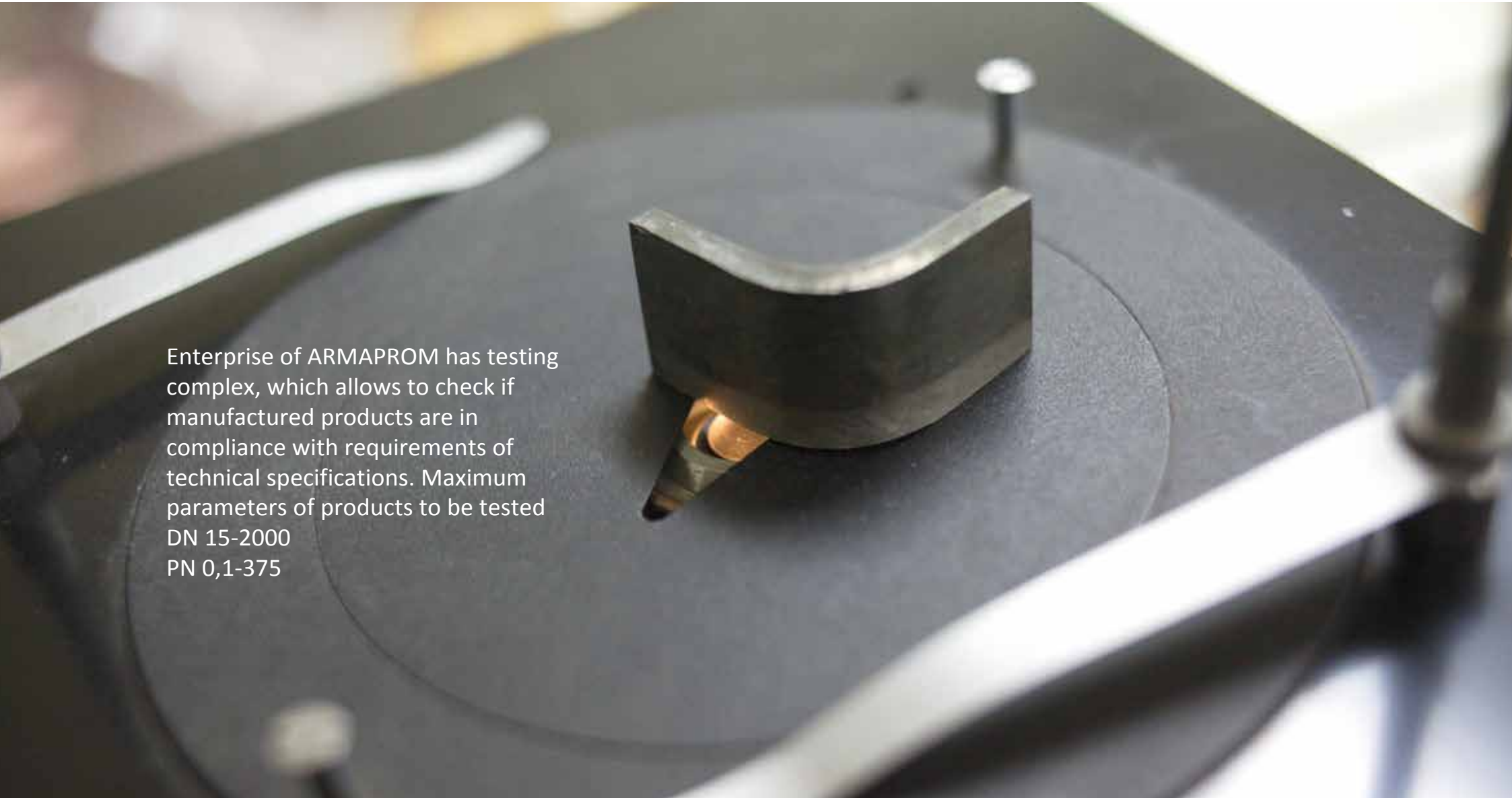


5000 kg

- Foundry grinding shop
- Four heat-treating furnaces for heat treatment of castings and ingots
- Shot-blasting chambers for cleaning off the castings from remains of molding sands and calx.
- Quenching complex

- Lathes with CNC
- Machining centers DAHLIN
- Machining of big parts / Rafamet KSF 320
- The line for machining of special products

TESTING COMPLEX AND QUALITY CONTROL OF THE PRODUCTS



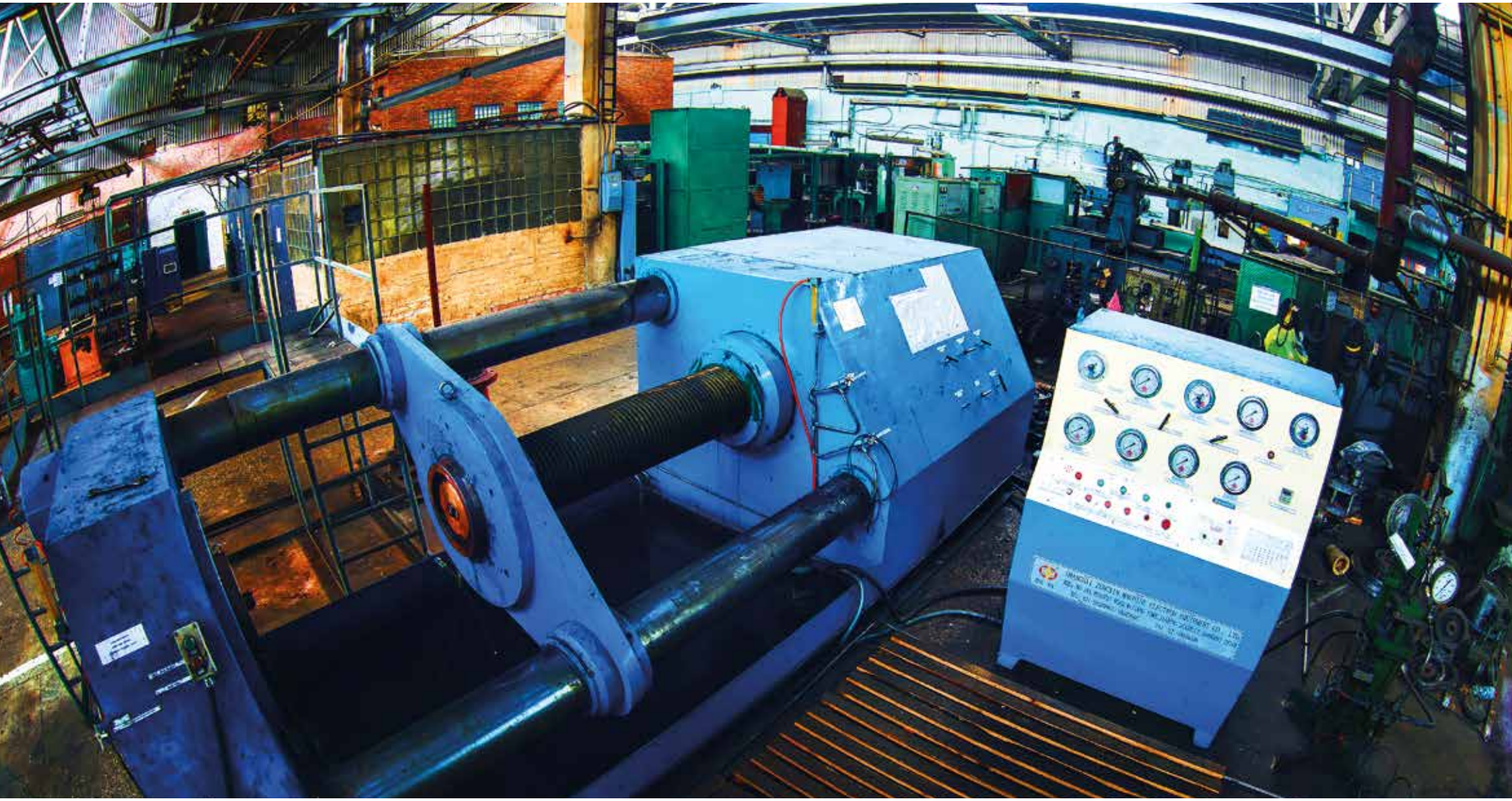
Enterprise of ARMAPROM has testing complex, which allows to check if manufactured products are in compliance with requirements of technical specifications. Maximum parameters of products to be tested
DN 15-2000
PN 0,1-375

TESTING COMPLEX AND QUALITY CONTROL OF THE PRODUCTS

Specialists of central factory laboratory are trained and certified (also by the agency of nuclear power engineering) for performing the following kinds of control:

- Incoming control of the quality of materials (chemical analysis, spectra-lab and X-ray)
- Checking of physical and chemical properties of molding sands
- Operational control of chemical composition of melted steels by SPECTROLAB M

TESTING COMPLEX AND QUALITY CONTROL OF THE PRODUCTS

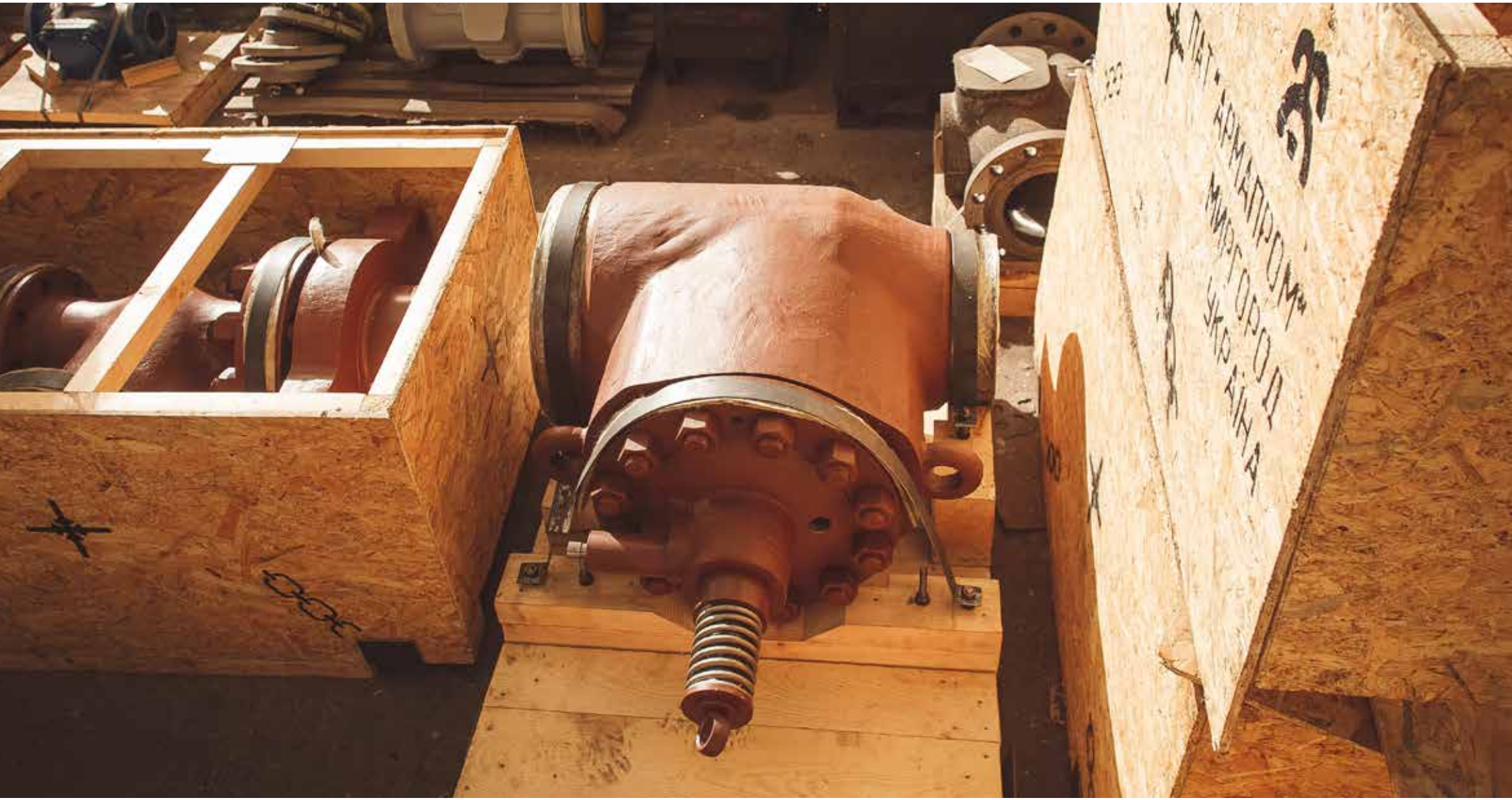


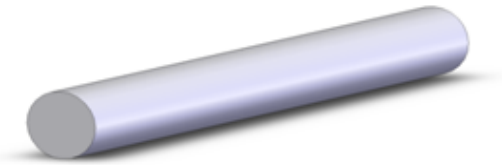
TESTING COMPLEX AND QUALITY CONTROL OF THE PRODUCTS

- Chemical analysis of metals
- Metallographic analysis
- Mechanical tests

Nondestructive methods of control

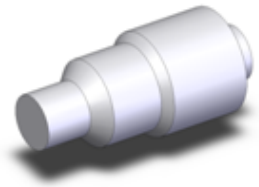
- Dye penetrant flaw detection
- Magnetic powder flow detection
- Ultrasonic control
- X-ray control


ПАТ "АРМАТУРОМ"
МИРГОРОД
УКРАЇНА



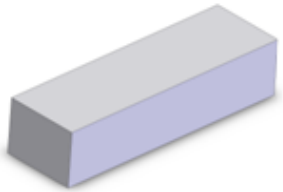
SINGLE DIAMETER AND STEPPED SHAFTS, PISTONS, PLUNGERS,ROLLS

D 150..500 mm
L min 700mm
Lmax 4500mm



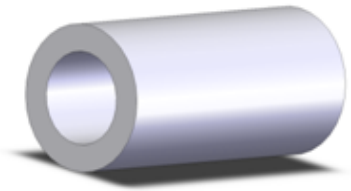
SHAFTS WITH FLANGES AND COLLARS

D ≤ 500mm
d ≥ 180mm
L min 700mm
Lmax 4500mm



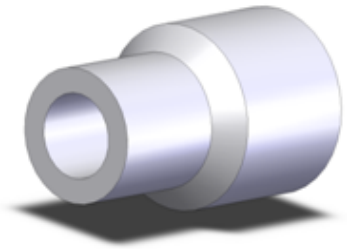
FORGED RODS HAVING SQUARE AND RACTANGULAR SECTION

Bmax 600
Hmax 450
Lmin 700
Lmax 3500



PLAIN CYLINDERS

D 420..1000mm
d 200..650mm
Lmin 700
Lmax 3500

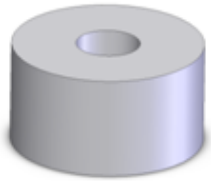


PLAIN CYLINDERS WITH COLLARS

D1 ≤ 1100mm
D2 ≥ 400mm
d 200..650mm
Lmin 700
Lmax 3500

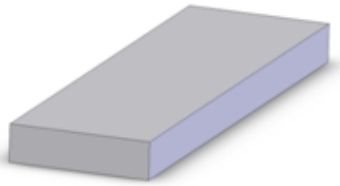
ROLLED RINGS

D 150..4000mm
d ≥ 0,5D
d 200..650mm
Hmin 100..150mm
Hmax 800mm



BUSHING WHEELS AND DISKS

D 650..1580mm
d ≤ D/3
H 450mm



PLATES

B 400..600mm
H 120..450mm
Lmin 400
Lmax 2000

Oil and Gas

Energy

Shipbuilding

Cement Industry

Crushing Industry

Mining Industry

Pressure Equipment

Defence

Iron and Steel Industry

Paper and Pulp Industry

Press Manufacturing

Construction


2096
1096
384
2096

ISO 9001:2008 CERTIFIED
TUV NORD CERTIFIED


QSCert
We cover credibility
CERTIFICATE
PJSC "Armaprom"
ISO 9001:2008
Design, development, production, repairs and sales of valves, castings, forgings and ingots from stainless, alloyed and carbon steels
IAF
S 3177


TÜV NORD
CERTIFICATE
Quality Assurance System
for Material Manufacturer
acc. to Pressure Equipment Directive 97/23/EC
Certificate-No.: 07-202-9190 WZ- 1922/14
Name and address of manufacturer: "Armaprom" AG, Khorolska Str. 35, Poltava Region, UA - 376 00 Myrgorod
This is to certify that the manufacturer has implemented and applies a QA System. This QA System has been subjected to a specific assessment for material acc. to Directive 97/23/EC, annex I, sec. 4.3 with regard to the materials mentioned within the scope of approval.
Approved: QA System acc. to AD2000-Merkblatt W0 and EN 764-5, sec. 4.2
Audit report no.: 9190 P 1922/14
Scope of approval: Castings and forgings from carbon, alloyed and stainless steels for pressure purposes
Details of the scope are mentioned in the annex of the certificate AD2000-Merkblatt W0
Production site: PJSC "Armaprom", UA - Myrgorod
The manufacturer disposes of the essential procedures and equipments as well as the required qualified personnel to ensure quality of manufacturing and testing the materials and products mentioned in the scope of approval.
Prague 28.07.2014
TÜV NORD 0045
Certification Body for Pressure Equipment of TÜV NORD Systems GmbH & Co. KG


TÜV NORD
CERTIFICATE
Certification Body
of TÜV NORD Systems GmbH & Co. KG
certifies, that the company
"Armaprom" AG
Khorolska Str. 35, Poltava Region
UA - 376 00 Myrgorod
has been verified and recognized as material manufacturer according to
AD 2000-Merkblatt W0
Certificate-No.: 07-203-9190-WP- 1922/14
The scope of approval is available in the annex "scope of approval", file no. 4314314/02
The company fulfills the following essential requirements: Facilities permitting appropriate manufacturing and inspection corresponding to the present technical standards, quality assurance, which guarantees that manufacturing and inspection of products stated in our scope of approval are carried out in accordance with technical regulations, competent supervising and inspecting personnel
This certificate is valid until
July 2017
Prague 28.07.2014
TÜV NORD

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