AREA OF ACCREDITATION

TESTING LABORATORY (GOST ISO/IEC 17025-2019)

Testing Center of Izhora Scientific and Technical Company, Limited Liability Company

name of testing laboratory

RA.RU.21ИЖ01

Number in the register of accredited persons

1. 196650, RUSSIA, Saint Petersburg, Kolpino, Finlandskaya str., 13, lit. BM, room 96-100, 102-106, 113, 114, 120-123, 144-146, 180, 181, 186, 189, 191, 193, 194, 199201, 209, 210, 375, 376, 398-400, 402, 406-409, 571, 572, 961, 962, 982..

business addresses

2. 196650, RUSSIA, Saint Petersburg, Kolpino, Izhorsky Zavod, w/n, room 3N, lit. EX, room 19, 59, 61..

business addresses

For compliance
GOST ISO/IEC 17025-2019 General requirements for the competence of testing and calibration laboratories. GOST ISO/IEC 17025-2019

name and details of the interstate or national standard

196650, RUSSIA, Saint Petersburg, Kolpino, Finlandskaya str., 13, lit. BM, room 96-100, 102-106, 113, 114, 120-123, 144-146, 180, 181, 186, 189, 191, 193, 194, 199- 201, 209, 210, 375, 376, 398-400, 402, 406-409, 571, 572, 961, 962, 982..

business addresses

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1. Testing (research), measurement of products						
1.1.	ASTM E381-2020; Other examinations (tests); Methods of other examinations (tests) without specification	Steel (steel billets);	24.10.2	-	Macrostructure defects: cracks, flocenes, porosity, liquidations, slag and non-metallic inclusions	availability/absence -

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.2.	GOST 16698.4; Chemical tests, physicochemical tests;photometric method	Manganese and manganese products, powders (metallic and nitrided manganese);	24.45.30.240	-	Mass fraction of phosphorus (P)	- 0.002 to 0.09 (%)
1.3.	GOST 16698.5, cl.5; Chemical tests, physico-chemical tests; gravimetric (weight) method	Manganese and manganese products, powders (metallic and nitrided manganese);	24.45.30.240	-	Mass fraction of silicon (Si)	- 0.5 to 2.5 (%)
1.4.	GOST 16698.5, cl.4; Chemical tests, physicochemical tests;photometric method	Manganese and manganese products, powders (metallic and nitrided manganese);	24.45.30.240	-	Mass fraction of silicon (Si)	- 0.1 to 2.5 (%)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.5	GOST 16698.6, cl.5; Chemical tests, physicochemical tests; photometric method	Manganese and manganese products, powders (metallic and nitrided manganese);	24.45.30.240	-	Mass fraction of iron (Fe)	- 0.1 to 3.5 (%)
1.6.	GOST 16698.6, cl.7; Chemical tests, physicochemical tests; titrimetric (volumetric) method	Manganese and manganese products, powders (metallic and nitrided manganese);	24.45.30.240	-	Mass fraction of iron (Fe)	- 0.5 to 3.5 (%)
1.7.	GOST 16698.11; Chemical tests, physicochemical tests; photometric method	Manganese and manganese products, powders (metallic and nitrided manganese);	24.45.30.240	-	Mass fraction of titanium (Ti)	- 0.005 to 0.10 (%)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.8.	GOST 21639.1, cl.2; Chemical tests, physico-chemical tests; gravimetric (weight) method	Fluxes (for electroslag remelting);	20.59.56.120	-	Mass fraction of hygroscopic moisture	- 0.5 to 5.0 (%)
1.9.	GOST 9087, cl.5.6; Chemical tests, physico-chemical tests; gravimetric (weight) method	Fluxes (welding fusions);	20.59.56.120	-	Humidity	- 0.02 to 0.2 (%)
1.10.	GOST 27611; Chemical tests, physicochemical tests; Atomic emission spectrometric method (AES)	Iron, pig iron, steel and ferroalloys (cas iron);	24.10	-	Mass fraction of vanadium (V)	- 0.010 to 0.5 (%)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.10.					Mass fraction of silicon (Si)	- 0.10 to 5.0 (%)
					Mass fraction of magnesium (Mg)	- 0.010 to 0.10 (%)
					Mass fraction of manganese (Mn)	- 0.10 to 2.0 (%)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.10.					Mass fraction of copper (Cu)	- 0.02 to 0.20 (%)
					Mass fraction of arsenic (As)	- 0.010 to 0.20 (%)
					Mass fraction of nickel (Ni)	- 0.010 to 0.5 (%)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.10.					Mass fraction of sulphur (S)	- 0.005 to 0.20 (%)
					Mass fraction of titanium (Ti)	- 0.010 to 0.10 (%)
					Mass fraction of phosphorus (P)	- 0.02 to 0.5 (%)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.10.					Mass fraction of chromium (Cr)	- 0.010 to 0.5 (%)
1.11.	GOST 31382, cl.5.6.4, 8.3, 10.3; Chemical tests, physicochemical tests;photometric method	Copper ;	24.44	-	Mass fraction of iron (Fe)	- 0.0005 to 0.1 (%)
					Mass fraction of copper (Cu)	- 99.00 to 99.90 (%)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.11.					Mass fraction of nickel (Ni)	- 0.0005 to 0.5 (%)
1.12.	GOST 27208, cl.3; Physical-mechanical; determination of strength	Cast iron (cast iron castings);	24.10.11.130	-	Bending moment resistance	- 100 to 300 (MPa)
2. Testing (research), measurements of industrial environment objects						
2.1.	MUK 4.3.2756-10; ;Measurement of parameters of physical factors; other methods of measurement of physical factors;	Production (working) environment	-	-	Intensity of thermal irradiation	- 10 to 350 (W/m^2)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
2.1.					Relative humidity	- 3 to 90 (%)
					Air velocity	- 0 to 1.0 (m/s)
					Air temperature	- -10 to 50 ("C)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
2.2.	GOST 31191.2; ;Measurement of parameters of physical factors; vibration measurement;	Production (working) environment	-	-	General vibration. Corrected value of vibration acceleration in the frequency range from 0.8 to 80 Hz	- 0.01 to 10 (m/s^2)
2.3.	MU 4945-88, cl.3.4; ; Chemical tests, physico-chemical tests; atomic absorption spectrometric method (AAS);	Work area air	-	-	Mass concentration of iron (Fe)	- 0.1 to 10 (mg/m^3)
					Mass concentration of manganese (Mn)	- 0.02 to 3 (mg/m3)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
2.3.					Mass concentration of copper (Cu)	- 0.02 to 5 (mg/m^3)
					Mass concentration of nickel (Ni)	- 0.005 to 0.5 (mg/m3)
					Mass concentration of lead (Pb)	- 0.007 to 0.7 (mg/m3)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
2.3.					Mass concentration of chromium (VI) trioxide	- 0.005 to 5 (mg/m^3)
					Mass concentration of chromium (for chromium III)	- 0.1 to 10.0 (mg/m3)
3. Testing (research), measurements of environmental objects						
3.1.	PND F 14.1:2:3:4.121-97 (2018 edition); Chemical testing, physicochemical tests; electrochemical method (all method groups)	Drinking water ; Natural water ; Wastewater ;	-	-	Hydrogen value (pH)	- 1 to 2.9 (pH units) 11.1 to 14 (pH units)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1. Testing (research), measurement of products						
1.1.	RD-19L00.00-KTN-001- 10; Non-destructive testing;ultrasonic reflected radiation method (echo method)	Steel (welded joints);	24.10.2	-	Number of imperfections	- 0 to 1000
					Coordinates of the non-flaw location	- 3 to 5000 (mm)
					Conditional extent of the non-continuity	- 1 to 5000 (mm)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.1.					Equivalent size of the non-continuity	- 0.3 to 24 (mm)
1.2.	RD-19.100.00-KTN-001- 10; Non-destructive testing; Magnetic powder method	Steel (welded joints);	24.10.2	-	Number of imperfections	- 0 to 1000
					Surface and sub-surface non-solidities	- availability/absence

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.2.					Size of the indicator trace of the non-flaw	- 0.5 to 1000 (mm)
1.3.	RD-19L00.00-KTN-001- 10; Non-destructive testing;non-destructive testing with penetrating agents. Capillary color method	Steel (welded joints);	24.10.2	-	Number of imperfections	- 0 to 1000
					Surface imperfections	- availability/absence

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.3.					Size of the indicator trace of the non-flaw	- 0.5 to 1000 (mm)
1.4.	STO 00220256-005- 2005; Non-destructive testing; Ultrasonic reflected radiation method (echo method)	Steel (joints of butt, angle and T-joint welded joints made of carbon and alloy steel);	24.10.2	-	Number of imperfections	- 0 to 1000
					Coordinates of the non-flaw location	- 3 to 5000 (mm)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.4.					Conditional extent of the non-continuity	- 1 to 5000 (mm)
					Equivalent size of the non-continuity	- 0.3 to 24 (mm)
1.5	OST 26-01; Non-destructive testing; magnetic particle method	Steel (welded joints of steel pressure vessels and apparatus);	24.10.2	-	Number of imperfections	- 0 to 1000

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.5					Surface and sub-surface non-solidities	availability/absence
					Size of the indicator trace of the non-flaw	- 0.5 to 1000 (mm)
1.6.	RD ROSEC-001- 96; Non-destructive testing; ultrasonic reflected radiation method (echo method)	Steel (welded joints, base metal); Copper or copper alloy semi-finished products (welded joints, base metal);	24.10.2;24.44.2	-	Number of imperfections	- 0 to 1000

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.6.					Coordinates of the location of non-flaws	- 3 to 5000 (mm)
					Conditional extent of the non-continuity	- 1 to 5000 (mm)
					Equivalent size of the non-continuity	- 0.3 to 24 (mm)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.7.	RD ROSEC-003- 97;Non-destructive testing; Magnetic powder method	Steel (welded joints, base metal);	24.10.2	-	Number of imperfections	- 0 to 1000
					Surface and subsurface non-surface imperfections	- availability/absence
					Size of the indicator trace of the non-flaw	- 0.5 to 1000 (mm)

Item No.	Documents establishing rules and methods of research (tests) and measurements	Name of object	OKPD CODE 2	EAEU CN of FEA CODE	Defined characteristic (Indicator)	Determination range
1.8.	RD ROSEC-004- 97; Non-destructive testing; Non-destructive testing by penetrating substances. Capillary color method	Steel (welded joints, base metal); Copper or copper alloy semi-finished products (welded joints, base metal);	24.10.2;24.44.2	-	Number of imperfections	0 to 1000
					Surface imperfections	availability/absence
					Size of the indicator trace of the non-flaw	0.5 to 1000 (mm)

Chief Executive Officer	Signed by electronic signature	T.I. Titova
position of authorized person	signature of authorized person	initials, surname of the authorized person

SCOPE OF ACCREDITATION

TESTING LABORATORY (GOST ISO/IEC 17025-2019)

Testing Laboratory of the Limited Liability Company "Izhora Scientific and Technical Company”

name of testing laboratory

RA.RU.21ИЖ01

number in the Register of Accredited Entities

1. **196650, RUSSIA, Saint Petersburg, Kolpino, Finlandskaya str., 13, lit. VM, room 96-100, 102-106, 113, 114, 120-123, 144-146, 180, 181, 186, 189, 191, 193, 194, 199-201, 209, 210, 375, 376, 398-400, 402, 406-409, 571, 572, 961, 962, 982.**

addresses of business activities

2. **RUSSIA, Saint Petersburg, Kolpino, Izhora Plant, b/n, room 3N, building EX, rooms 19, 59, 61.**

addresses of business activities

Accredited in accordance with

GOST ISO/IEC 17025-2019 General requirements for the competence of testing and calibration laboratories
GOST ISO/IEC 17025-2019

name and reference of the interstate or national standard

196650, RUSSIA, Saint Petersburg, Kolpino, Finlandskaya str., 13, lit. VM, room 96-100, 102-106, 113, 114, 120-123, 144-146, 180, 181, 186, 189, 191, 193, 194, 199-201, 209, 210, 375, 376, 398-400, 402, 406-409, 571, 572, 961, 962, 982.

addresses of business activities

Item No.	Standards and Methods for Testing (research) and Measurement	Test Item	OKPD2 Code	EAEU CN FEA CODE	Characteristic to be determined	Determination Range
1. Testing (research), measurement of products						
1.1.	GOST 9378 Roughness Specimen Set; Other testing (research) methods, not specified elsewhere;	Steel (metal products made of steel and alloys); Aluminum; Semi-finished products made of nickel or nickel-based alloys; Semi-finished products made of copper or copper alloys;	24.10.2;24.42;24.45.2; 24.44.2;	-	Roughness surfaces Ra	- from 0.4 to 12.5 (μm)
1.2.	ASTM E562-19; Testing (research) by microscopy methods; Optical Method;	Steel (blanks and welded joints);	24.10.2	-	Volume fraction of the second phase, including ferrite	- from 0 to 100 (%)

Item No.	Standards and Methods for Testing (research) and Measurement	Test Item	OKPD2 Code	EAEU CN FEA CODE	Characteristic to be determined	Determination Range
1.3.	GOST 6032-2017 (method AMUF); Research (testing) on the impact of external factors; other methods of research (testing) on the impact of external factors;	Steel (metal products made of corrosion-resistant steels and iron-nickel-based alloys, including two-layer ones, their welded joints, deposited metal, weld metal);	24.10.2;	-	Resistance to intergranular corrosion	resistant/non-resistant -
					Cracks in bent specimens	availability/absence -
1.4.	GOST 8.377-80; Research (testing) to determine physical properties; other research (testing) methods to determine physical properties;	Steel (magnetically soft);	24.10.2;	-	Coercive force	- 1.5 to 3.5 (kA/m)

Item No.	Standards and Methods for Testing (research) and Measurement	Test Item	OKPD2 Code	EAEU CN FEA CODE	Characteristic to be determined	Determination Range
1.4.					Magnetic induction	- 1.3 to 2.3 (Tl)
1.5.	GOST 11036-75 (p. 5.7); Research (testing) to determine physical properties; other research (testing) methods to determine physical properties;	Steel (non-alloy electrical steel shapes/sections);	24.10.2	-	Magnetic induction	- 1.3 to 2.3 (Tl)
1.6.	GOST 23304-78 (clause 3.11); Other research (testing); methods of other research (testing) without specification;	Fasteners (including screws, carbon and alloy steels);	25.94.1	-	Thickness of surface-hardened layer	- 0 to 10 (mm)

Item No.	Standards and Methods for Testing (research) and Measurement	Test Item	OKPD2 Code	EAEU CN FEA CODE	Characteristic to be determined	Determination Range
1.7.	DIN 50190-3-1979; Research (testing) to determine physical properties; determination of hardness;	Steel (steel products);	24.10.2	-	Depth of nitrided layer	- from 0.1 to 1.0 (mm)
1.8.	MU 222-536-2011; Research (testing) by microscopy methods; optical method;	Steel (billets of corrosion-resistant austenitic class steels);	24.10.2	-	Grain size number, G	- 1 to 14

Item No.	Standards and Methods for Testing (research) and Measurement	Test Item	OKPD2 Code	EAEU CN FEA CODE	Characteristic to be determined	Determination Range
1. Testing (research), measurement of products						
1.1.	OST 26-5-99; Research (testing) using non-destructive testing methods; non-destructive testing using penetrating substances. Capillary color method	Steel (welded joints, weld and base metal); Titanium and its products, titanium-based alloys, powders (welded joints, weld and base metal); Semi-finished products made of copper or copper alloys (welded joints, weld and base metal); Semi-finished products made of aluminum or aluminum alloys (welded joints, weld and base metal);	24.10.2;24.45.30.180;24.44.2;24.42.2;	-	Number of indications	- 0 to 1000
					Indication size	- 0.5 to 1000 (mm)
					surface discontinuities	availability/absence -

Chief Executive Officer	Signed with an electronic signature	T.I. Titova
position of the authorized person	signature of the authorized person	initials and surname of the authorized person