

THE LIST OF EQUIPMENT
OF LLC "CHERNIHIV AUTOZAVOD" WHICH WAS DESTROYED
DURING HOSTILITIES IN THE CITY OF CHERNIHIV
IN THE PERIOD FROM 24.02.2022 TO 01.04.2022

№	Name of Equipment	Manufacturer	Analog	Quantity
LABORATORY				
1.	SMV 8.5 Selective microvoltmeter <i>the level of quasi-peak and peak voltages of electromagnetic interference in the frequency range of 26-1000 MHz (10 ... 115) dB; ±3dB; 26.0...300.0 MHz ± 3 dB; 300.0...1000.0 MHz ± 3 dB.</i>	RFT (Germany)	--	1 pc.
2.	Underlayment scales DimiArgeo WWSD1OTRF <i>mass and its distribution between the wheels of the vehicle (0... 10000) kg. Discreteness 5kg. Accuracy ±0.5%</i>	DimiArgeo (Italy)	Intercomp (USA), PT300DW	1 pc.
3.	Racelogic complex <i>based on a 100 Hz device with two antennas, an inertial module and accessories for mounting antennas: speed (0...200) km/h ± 0.5%, time (0...100.0) s ±0.01s, path (0...1000.0) m ± 0.5%, deceleration (0...10.00 m/s² ± 4.0%, force on controls (0...1.0) kN ±3%</i>	Racelogic Ltd (Great Britain)	--	1 pc.
4.	Inclinometer BoschGTM 120 <i>with measuring range 0-90°, error ±0.1.</i>	Bosch (Germany)	ADA Instruments (USA), ADA PRODIGIT 60	1 pc.
5.	Goniometer BoschGAM 220 <i>with measuring range 0-220°, error ±0.1.</i>	Bosch (Germany)	ADA Instruments (USA), ADA ANGLEMETER	1 pc.
6.	Sound level meter Bruel and Kjaer 2240 <i>(with calibrator)</i>	Bruel and Kjaer (Denmark)	PCE Instruments (Germany), PCE-432 (Class 1)	1 pc.

7.	Smoke meter META - 0.1 MP 0.43 GTN	META (Russia)	BOSCH (Germany), RTM 430	1 pc.
8.	Device for adjusting headlights HL-200	TECO (Italy)	NITROMAC (Turkey), NitroMax	1 pc.
9.	Digital Thickness Gauge CARSYS DPM-816 Pro	CARSYS ELECTRONICS LIMITED (United Kingdom)	PHYNIX Sensortechnik GmbH (Germany), Phynix PaintCheck Plus	3 pcs.
10.	Thermohydrometer BEURER HM16	BEURER (Germany)	Miaomiaoce (China). MHO-C202	3 pcs.
11.	Viscometer VZ-246	NOVOTEST (Ukraine)	Air Pro (Taiwan), VC-02PLASTIC	2 pcs.
12.	Large-format monochrome copier Ricoh MP W 3601, format A0	Ricoh (Japan)	Ricoh (Japan), MP 2401 format A0 or KONICA MINOLTA (Japan), KIP 7170 K Copier A0	1 pc.
13.	MFD (multifunctional device) Ricoh M2700, format A3	Ricoh (Japan)	Canon (Japan), Image RUNNER 1643; or Canon (Japan), OKI MB 472dnw or HP (USA), LJ Pro M443nda MFP (8AF72A)	1 pc.
TRAM PRODUCTION SITE				
14.	Band saw for cutting a package of pipes EVERISING H-260HB;	EVERISING (Taiwan)	FDB Maschinen (Germany), SGA 4006.	1 pc.
15.	Mandrel hydraulic pipe machine (or automatic mandrel pipe bending machine with CNC) Cansa Makina CMH-51	Cansa Makina (Turkey)	HC-500R 2-43M (Taiwan).	1 pc.

16.	Machine for forming the ends of copper pipes S55 T-DRILL	T-Drill Industries Inc. (USA)	SRT65 (Ukraine).	1 pc.
17.	Impact dot marking machine (or portable impact dot marking machine) ADP 25120	Automator Marking Systems (USA)	RED DRAGON (China), RDP 120-40	1 pc.
18	CNC lathe HAAS ST-10;	HAAS Automation (USA)	DOOSAN (South Korea), LYNX 210B	1 pc.
19	Table drilling machine Proma E1516B - 400V;	PROMA CZ s.r.o (Czech Republic)	JET Tools Switzerland (JPW Industries, USA) JDP 13M	2 pcs.
20	Argon-arc welding Device FRONIUS TRANSTIG 170/210;	Fronius International GmbH (Austria)	TESLA Weld (China), TIG/MMA 500 H;	2 pcs.
21	Semiautomatic Welding device FRONIUS TRANS Steel 2700;	Fronius International GmbH (Austria)	ESAB (Sweden) Warrior 500i CC/CV	20 pcs.
22	Tabletop hydraulic press 10 tons TY 10003 TORIN;	TORIN (Taiwan)	Trommelberg (Taiwan), SD 2G1210	1 pc.
23	Laser cutting machine TRUMATIC TC L 3050 6 kW.	TRUMPF (Germany)	Bystronic Laser AG (Switzerland), BYSTAR 3015 6 kW	1 pc.
24	Vacuum manipulator for windshield replacement	Optosfera (Ukraine)	Glass Land Sp z.o.o. (distributor, Poland), Vector	1 pc.
GENERAL FACTORY				
25	Beam crane 8.0 t 8-22.8-10.5+10.5-6-380	(Ukraine)	"Балканско ехо" ЕООД ("ВАЛКАНСКО ЕХО", Bulgaria), Beam crane 8.0 t	4 pcs.
26	Beam crane 5.0 t 5-22.8-10.5+10.5-6-380	(Ukraine)	"Балканско ехо" ЕООД ("ВАЛКАНСКО ЕХО", Bulgaria), Beam crane 5.0 t	2 pcs.
27	Dieselloader Балканкар Рекорд (Balkanкар Record) ДВ178830.2МСЕ	Балканкар Рекорд (Balkanкар Record) (Bulgaria)	Caterpillar Inc. (USA), DP40-55NT or Toyota (Japan),	2 pcs.

			8FDD40-50	
28	Hydraulicstracker LEISTUNGSLIFT EFS 1030;	LEISTUNGSLIFT (Germany)	Niuli (China), CTY-EN 1.0/2.0	2 pcs.
29	Mobile column lift ST 1075-FSF Stertil koni;	Stertil koni (The Netherlands)	MAHA (Germany), MCL 22 or AMI (Czech Republic), 5.5 TRUCK	2 sets

THE LIST OF EQUIPMENT
OF LLC "UKRAINIAN CARDAN" WHICH WAS DESTROYED
DURING HOSTILITIES IN THE CITY OF CHERNIHIV
IN THE PERIOD FROM 24.02.2022 TO 01.04.2022

№	Name of Equipment	Manufacturer	Analog	Quantity
GENERAL FACTORY				
1	Galvanizing line ALG-128	OJSC «TambovGalvanoTechnika» (TAGAT) (Russia)		1 line
2	Phosphating line	OJSC «TambovGalvanoTechnika» (TAGAT) (Russia)	TMA Metizalliance (Taiwan)	1 line
3	Nickel plating line	OJSC «TambovGalvanoTechnika» (TAGAT) (Russia)		1 line
4	Rilsan coating line	Own production	AFRAN (Turkey)	1 line
5	Hardening salt bath for hardening of high-speed steel.	OJSC «GAZ» (Russia)	LAK (Czech Republic), KSL8/11; or Plasma (Ukraine), SVS-9.11/9	1 set
6	Horizontal machining center MCP-150	Heller (Germany)	HAAS (USA), Horizontal two-pallet machining center EU-500-NGC	2 pcs.
7	Horizontal machining center MCP-250	Heller (Germany)	Kitamura (Japan), Horizontal machining center Mycenter HX630G	2 pcs.
8	Vertical CNC milling machine BAZ 15 CNC	Alzmetall (Germany)	RAIS (Bulgaria), M500	1 pc.

9	Vertical CNC milling machine F Φ 2171C5	«Gorky Machine-Building Plant» (Russia)	RAIS (Bulgaria), M500	1 pc.
10	Duplex (double-sided) CNC drilling and boring machine ESC 04/630	LARU LANG (Germany)	LARU LANG (Germany), ESC 04/630	1 pc.
11	CNC Lathe DF 2/3	NILES (Germany)	Gildemeister (Germany), NEE 600	1 pc.
12	CNC Lathe DFS 2/2	NILES (Germany)	DMG Mori (Germany), Universal lathe CTX beta 1250 linear	1 pc.
13	CNC Lathe ST-30	HAAS Automation (USA)	HAAS Automation (USA), ST-30	1 pc.
14	CNC Lathe 11T756 Φ 3	«Ryazan Machine Tool Plant» (Russia)	DMG Mori (Germany), Universal lathe CTX beta 1250 linear	2 pcs.
15	CNC Lathe 1740 Φ 3	«Orzhonikidze Moscow Machine Tool Plant» (Russia)	DMG Mori (Germany), Universal lathe CTX beta 1250 linear	2 pcs.
16	Cold rolling machine ZRM-9	ERNST GROB (Switzerland)	ERNST GROB (Switzerland), ZRM-9	1 pc.
17	Balancing machine AC-6153	OJSC «GAZ» (Russia)	SCHENCK (Germany), balancing machine for propeller shafts	1 pc.

LABORATORY

METALLOGRAPHIC ANALYSIS

18	Metallographic microscope Neophot 2	Carl Zeiss (Germany)	AFFRI (Italy), Optika XDS3-MET	1 pc.
19	Microhardness tester TIMT-3M	LOMO (LENINGRAD OPTICAL AND MECHANICAL	AFFRI (Italy), DM2	1 pc.

- Microstructure of parts, forgings before and after heat treatment (process control);
- Metallographic analysis of parts, tools for destruction during machining, operational failures;
- Microstructure of the surface layer after chemical-thermal treatment (CTT, cementation), after hardening with high frequency currents (microwave) parts, determining the depth of the hardening layer CTT, microwave;
- Determining the depth of the decarburization layer;
- Metallographic analysis of the microstructure of the weld and the zone of thermal influence of welded joints.

		ASSOCIATION NAMED AFTER V.I. LENIN) (USSR)		
20	Rockwell Hardness Tester (HRC, HRA, HRB) TP 2140	(USSR)	AFFRI (Italy), 206EX2	1 pc.
21	Vickers Hardness Tester HV IT 5010	LLC «Plant of Testing Instruments» (ZIP), Ivanovo (USSR)	AFFRI (Italy), WIKI JS	1 pc.
22	Brinell hardness tester HB TH600	LLC «UkrPribor» (Ukraine)	AFFRI (Italy), LD3000	1 pc.
23	Shore hardness tester (for determination of rubber hardness) TIIIIP	LLC «Plant of Testing Instruments» (ZIP), Ivanovo (USSR)	AFFRI (Italy), IRHD	1 pc.
24	Cutting machine BRILLANT 200	LLC «MACROLAB LTD» (Ukraine)	Struers (Denmark), Accutorn 10	1 pc.
25	Grinding and polishing machine for the preparation of metallographic sections 3E881	ZSHS NERIS (USSR)	LAM PLAN (France), MASTERLAM 2.0	1 pc.
26	Drying cabinet SNOL 58/350	SNOL (Lithuania)	SNOL (Lithuania), SNOL 58/350	1 pc.
27	Muffle electric furnace (1100°C) SNOL 30/1100	SNOL (Lithuania)	Renfert (Germany), Magna 230V	1 pc.
28	Exhaust hood HB-1500 IIIIP-У	(USSR)	Esco (Singapur), Frontier MONO E F H; or TopAir Systems (USA), Topair FH-120, FH-150	1 pc.
DETERMINATION OF MECHANICAL PROPERTIES				
<ul style="list-style-type: none"> ○ Determination of hardness of parts, forgings by Brinell (HB) method ○ Determination of hardness of parts, forgings by Rockwell method (HRC, HRA, HRB) ○ Determination of hardness of parts, forgings by Vickers (HB) ○ Determination of microhardness of parts during analysis of the surface layer of hardening (HV) ○ Determination of hardness of rubber parts by Shore method ○ Determination of tensile strength, yield strength, elongation of standard specimens 				

o Determination of toughness of standard samples

29	Tensile test machine (1; 2; 4; 6; 10 t) with a set of grips ZD 10/90	FRITZ HECKER (GDR)	Ibertest (Spain), EUROTEST 200	1 pc.
30	Pendulum dill KM-30	LLC "Plant of Testing Instruments" (ZIP), Ivanovo (USSR)	GALDABINI (Italy), Galbabini Impact 300	1 pc.

CHEMICAL ANALYSIS

- o Determination of the chemical composition of steels and alloys used in the enterprise: carbon and alloy steels, copper alloys (brass, bronze), aluminum alloys, nickel-based alloys, and others.
- o Determination of the concentration of alloying elements: C, Si, Mn, Cr, Mo, V, W, Ni, Ti, Nb, Cu, Al, S, P

31	X-ray fluorescent metal analyzer CJL-13	NK SPEKTR (USSR)	Hitachi (Japan), High-Tech X-Met 8000	1 pc.
32	Optical emission spectrometer METAVISION-1008 I	Metal Power (India)	Thermo Fisher Scientific (Switzerland), ARL iSpark 8860	1 pc.
33	Exhaust hood HB-1500 ИИБ-У	(USSR)	Esco (Singapore), Frontier MONO E F H; or TopAir Systems (USA), Topair FH-120, FH-150	1. pc.

CHIEF METROLOGIST SERVICE

34	Profilometer (for measuring the surface roughness of products (Ra Rz)) profilometer-profilograph model 252	Factory "Caliber" (Russia)	TAYLOR HOBSON (Great Britain), Surtronic S100 (S116/S128); or SM-instruments (Italy), TS-7	1 pc.
35	Horizontal optimeter (designed for accurate measurements of external and internal linear dimensions.) ИКТ-3	LOMO (LENINGRAD OPTICAL AND MECHANICAL ASSOCIATION NAMED AFTER V.I. LENIN) (USSR)	TRIMOS (Switzerland), Horizon Setting Hs4; or Carl Zeiss (Germany)	1 pc.
36	Optical vertical measuring microscope (designed to measure linear dimensions, diameters of external	LOMO (LENINGRAD OPTICAL AND MECHANICAL	Mahr (Germany), MarVision MM 420;	1 pc.

	calibers, products, diameters of balls, wires) ИКВ-3	ASSOCIATION NAMED AFTER V.I. LENIN) (USSR)	or Carl Zeiss (Germany)	
37	Measuring microscope (designed to measure the linear and angular dimensions of various products in rectangular and polar coordinates) ДИП-6У	LOMO (LENINGRAD OPTICAL AND MECHANICAL ASSOCIATION NAMED AFTER V.I. LENIN) (USSR)	NIKON (Japan), MM 200 / MM 400	1 pc.
38	Long-range meter (designed to measure the external linear dimensions of gauges and other products. Products with flat cylindrical and spherical surfaces are measured.) ИЗВ-3	LOMO (LENINGRAD OPTICAL AND MECHANICAL ASSOCIATION NAMED AFTER V.I. LENIN) (USSR)	TAYLOR HOBSON (Great Britain), DMS 680, 1000; Or TRIMOS (Switzerland), Horizon Setting HS500	1 pc.
			6-10	3 pcs.
			10-18	3 pcs.
39	Internal indicator gauges of increased accuracy:		18-50	3 pcs.
			50-100	3 pcs.
			100-150	1 pc.
			№3 (112 мтр.)	4 sets
40	Sets of finite measures of length		№21 (for micrometers)	1 set
			№23 (for calipers)	1 set
			№16 (micron)	4 sets
			№8 (up to 500 mm)	1 set
41	Lever brackets		0-25	5 pcs.
			25-50	5 pcs.

			50-75.	5 pcs.
			75-100	5 pcs.
			100-125	3 pcs.
			125-150	2 pcs.
			150-175	2 pcs.

THE LIST OF EQUIPMENT
OF LLC "CHERNIHIV FORGING PLANT" WHICH WAS DESTROYED
DURING HOSTILITIES IN THE CITY OF CHERNIHIV
IN THE PERIOD FROM 24.02.2022 TO 01.04.2022

№	Name of Equipment	Manufacturer	Analog	Quantity
1	Transformer TRDN-25000/110-66	Togliatti Transformer	CHINT Group Corporation (China), 110kV Power Transformer 25000 kVA	2 pcs.
2	Transformer 30 DCN-4800 / 10-70	Togliatti Transformer	GBE S.p.a. (Italy), 6 kV/0,4 kV, 5000 kVA	2 pcs.
3	The Elettromeccanica Piossasco transformer dry with cast isolation, three-phase 800 kVA, 6/0,4 kV, 10/0,4 kV	Elettromeccanica Piossasco (Italy)	Elettromeccanica Piossasco (Italy), 800 kVA, 6/0,4 kV, 10/0,4 kV	5 pcs.
4	Complete transformer substation of block type 400-1600/10(6)/0,4 (0,69)	LLC «UkrElcom» (Ukraine)	«ЗАВН-ДЮБРИЧ» АД («ЗАВН ДОБРИЧ» АД», Bulgaria) БКТИ-2М 20/6 kV, 2x1600 kVA,	4 pcs.
5	Installation for processing of transformer oil УВМ-3/6	LLC "Ukrmashprom" (Ukraine)	Acore Filtration Co., Ltd. (China) АСОРЕ МТП-65,	1 pc.
6	Transformer oil T-1500 Agrinol GOST 982-80	«Agrinol» (Ukraine)	Texaco (Belgium) Transformer Oil Uninhibited TEXACO, DIN 57370 part 1 Siemens TUN 901 293,	60 ton
7	Aluminum tire 100 x 12 mm	LLC «BRAZ» (Ukraine)	Crema Aluminium Deutschland gmbh, rectangular bars 100x12 mm (Germany)	1500 m
8	Electric motor with short-circuited rotor, 162 kW, 900 rpm, 380 V	«Novokakhovka Machine-Building Plant» (Ukraine)	LLOYD DYNAMOWERKE GMBH (Germany), Electric motor with short-circuited rotor, 162 kW, 900 rpm, 380 V.	1 pc.
9	Electric motor with short-circuited rotor, 132 kW, 900 rpm, 380 V	«Novokakhovka Electromechanical Plant» (Ukraine)	LLOYD DYNAMOWERKE GMBH (Germany), Electric motor with short-circuited rotor, 132 kW, 900 rpm, 380 V.	2 pcs.
10	Electric motor with short-circuited rotor, 40 kW, 1500 rpm, 380 V	«Novokakhovka Machine-Building Plant» (Ukraine)	LLOYD DYNAMOWERKE GMBH (Germany), Electric motor with short-circuited rotor, 40 kW, 1500 rpm, 380 V	2 pcs.
11	High-voltage electric motor, 400 kW, 620 rpm, 6000 V	LLC «NKMZ»,	LLOYD DYNAMOWERKE GMBH	1 pc.

		(Ukraine)	(Germany), High-voltage electric motor, 400 kW, 620 rpm, 6000 V	
12	Electric motor with short-circuited rotor, 95 kW, 900 rpm, 380 V	«Novokakhovka Machine-Building Plant» (Ukraine)	LLOYD DYNAMOWERKE GMBH (Germany), Electric motor with short-circuited rotor, 95 kW, 900 rpm, 380 V	4 pcs.
13	Electric motor 2Ach-80PAU3, 1.5 kW, 1500 rpm, 380 V	«Novokakhovka Machine-Building Plant» (Ukraine)	LLOYD DYNAMOWERKE GMBH (Germany), Electric motor 2Ach-80PAU3, 1.5 kW, 1500 rpm, 380 V	5 pcs.
14	Thyristor frequency converter 650 kVA/2.4 KHz	«Termolit» (Ukraine)	Ding Hong (China), KGPS-1000 kW	4 pcs.
15	Pendant lamp Betalight BL-200-H3-V13 200 W	Betalight, (Ukraine)	Philips (Netherlands), Philips Lumileds VS-FLD-PM-500 W	60 pcs.
16	Console lamp IEK DKU 1002-150D LED 150 W.	IEK (China)	IEK (China) IEK DKU 1002-150D LED 150 W	30 pcs.
17	Circulation pump WILLO TOP-S 50/4 EM 2080048	Wilo (Germany)	Wilo SE (Germany), Wilo TOP-S 50/4 EM 2080048	3 pcs.
18	Pump Wilo Typ BL65/140-7,5/2	Wilo (Germany)	Wilo SE (Germany), Wilo Typ BL65/140-7,5/2	3 pcs.
19	Pump Wilo Typ BL65/190-18,5/2	Wilo (Germany)	Wilo SE (Germany), Wilo Typ BL65/190-18,5/2	3 pcs.
20	Pump Lowara LNEE 50-200/55/P	Goulds Pumps (Italy)	Goulds Pumps (Italy), Lowara LNEE 50-200/55/P	2 pcs.
21	Pump Pedrollo HF 70 A	Pedrollo, Irarria	Pedrollo, Pedrollo HF 70 A, Irarria	3 pcs.
22	Industrial turbine water meter Sensus MeisStream Plus 50/50	SENSUS (Germany)	SENSUS (Germany), Sensus MeisStream Plus 50/50	3 pcs.
23	Industrial turbine water meter Sensus MeisStream Plus 80/50	SENSUS (Germany)	SENSUS (Germany), Sensus MeisStream Plus 80/50	1 pc.
24	Electric water distiller Livam de-100	LIVAM GMBH (Germany)	LIVAM GMBH (Germany), Livam De-100 water distiller water machine, 100 l/h	2 pcs.
25	Heating module Bernard MN-120	JV «Ukrinterm»	Buderus (Germany),	4 pcs.

		(Ukraine)	Logano plus GB402-545 G20 UA	
26	Industrial fan BP 88-75 (VC 4-75) №8 11 kW 1000 rpm	LLC "KVZ" (Ukraine)	Ventilatori-industriali (Poland), Mod CA-560/4, 37 kW	4 pcs.
27	Smoke extractor DN-12.5 with dv. 75 kW/1500 rpm Scheme №1	LLC "KVZ" (Ukraine)	Ventilatori-industriali (Poland), Mod CA-560/4, 37 kW	2 pcs.
28	Filter installation for shot blasting chambers FU-32	RRE «TechVagonMash» (Ukraine)	Nestro (Germany), Zyklon Nestro NZ	2 pcs.
29	Screw compressor Ingersoll Rand R 132i	Ingersoll Rand (USA)	Ingersoll Rand (USA), Ingersoll Rand R 132i	5 pcs.
30	«Aichelin» unit control cabinet	Aichelin Group (Austria)	Aichelin Group (Austria), Schaltschrank STEP CHAIN CONVEYOR FURNACE	1 pc.
31	«Aichelin» Hydraulic Station	Aichelin Group (Austria)	Aichelin Group (Austria), Hydrastation STEP CHAIN CONVEYOR FURNACE	1 pc.
32	Hot stamping press Smeral MKP 2500	Smeral Brno (Czech Republic)	Smeral Brno (Czech Republic), Smeral MKP 2500	1 pc.
33	Horizontal forging machine Smeral LKH-1200	Smeral Brno (Czech Republic)	Smeral Brno (Czech Republic) Smeral LKH-1200	1 pc.
34	Automatic disk cutting machine Amada CMBCN 100	Amada (Germany)	Amada (Germany), Amada CMBCN 100	1 pc.
35	Automatic cutting machine Amada PCSAW 530	Amada (Germany)	Amada (Germany), Amada PCSAW 530 (Germany)	1 pc.
36	Horizontal machining center KOVOSVIT MAS HMC 630	KOVOSVIT (Czech Republic)	KOVOSVIT (Czech Republic), KOVOSVIT MAS HMC 630	1 pc.
37	Vertical machining center KOVOSVIT MAS MCU1000	KOVOSVIT (Czech Republic)	KOVOSVIT (Czech Republic) KOVOSVIT MAS MCU1000	2 pcs.
38	Vertical machining center SMEC CO MCV 5500	SMEC (USA)	SMEC (USA), SMEC CO MCV 5500	1 pc.
39	CNC lathe KOVOSVIT MASTURN 820i 2000	KOVOSVIT (Czech Republic)	KOVOSVIT (Czech Republic), KOVOSVIT MASTURN 820i 2000	2 pcs.
40	CNC lathe KOVOSVIT MASTURN 550i 800	KOVOSVIT (Czech Republic)	KOVOSVIT (Czech Republic) KOVOSVIT MASTURN 550i 800	1 pc.
41	Universal milling machine OPTmill MT230S	OPTmill (Germany)	OPTmill (Germany), OPTmill MT230S	1 pc.
42	Universal lathe Bernardo Titan 800x3000 Vario (03-	Bernardo (Austria)	Bernardo (Austria)	1 pc.

	1359XL)		Bernardo Titan 800x3000, Vario (03-1359XL)	
43	Cantilever vertical drilling machine KBM 80 (01-1345XL)	Bernardo (Austria)	Bernardo (Austria), Bernardo KBM 80 (01-1345XL)	1 pc.
44	Thermal electric chamber furnace VKT 7000/12	Lac (Czech Republic)	Lac (Czech Republic), VKT 7000/12,	1 pc.
45	Thermal electric chamber furnace PK1400/12	Lac (Czech Republic)	Lac (Czech Republic), PK1400/12	2 pcs.
46	Shot blasting installation Rosler	Rosler (Germany)	Rosler (Germany), Rosler RMT-1200,	1 pc.
47	Stationary metal analyzer SPECTROMAXx	SPECTRO Analytical Instruments (Germany)	SPECTRO Analytical Instruments (Germany), SPECTROMAXx,	1 pc.
48	Glow discharge spectrometer Leco GDS900	LECO Corporation (USA)	LECO Corporation (USA), Leco GDS900	1 pc.
49	Hydrogen analyzer LECO DH603	LECO Corporation (USA)	LECO Corporation (USA), LECO DH603	2 pcs.
50	Electron ion microscope ZEISS Crossbeam 550L	Zeiss AG (Germany)	Zeiss AG (Germany), ZEISS Crossbeam 550L,	1 pc.
51	Surface grinding machine Bernardo BSG 60220 PLC (05-1454XL)	Bernardo (Austria)	Bernardo (Austria), Bernardo BSG 60220 PLC (05-1454XL)	1 pc.
52	Servo-hydraulic test machine UIT GTM 500/2000	RRE "UkrInTech" (Ukraine)	RUMUL RUSSENBERGER PRÜFMASCHINEN AG (Switzerland), VIBROFORTE resonant testing machine up to 700 kN	2 pcs.
53	Coordinate measuring machine G2 10/16/6 Active Carl Zeiss	Zeiss AG (Germany)	Zeiss AG (Germany), CONTURA G2 10/16/6 Active Carl Zeiss	1 pc.
54	Rockwell hardness tester LECO LR800	LECO Corporation (USA)	LECO Corporation (USA), LECO LR800	1 pc.
55	Brinell hardness tester LECO LCB3100	LECO Corporation (USA)	LECO Corporation (USA), LECO LCB3100,	1 pc.
56	Vickers hardness tester LECO LV800	LECO Corporation (USA)	LECO Corporation (USA), LECO LV800	1 pc.
57	Double-girder electric bridge crane with a capacity of 20 tons	LLC "NKMZ", (Ukraine)	"Балканско ехо" ЕООД ("BALKANSKO ECHO", Bulgaria), Double-girder electric bridge crane with a capacity of 20 tons	1 pc.
58	Single-girder electric bridge crane with a capacity of 10	LLC "NKMZ",	"Балканско ехо" ЕООД ("BALKANSKO	1 pc.

	tons	(Ukraine)	ECHO", Bulgaria), Single-girder electric bridge crane with a capacity of 10 tons	
59	Forklift truck TCM FD35T9	TCM Corporation (Japan)	TCM Corporation (Japan) TCM FD35T9	1 pc.
60	Truck conveyor L=8 m	"Conveyor-BC", (Ukraine)	TRAPO AG (Germany), Truck conveyor 8000 mm	4 pcs.
61	Seamless steel pipe 159x8 mm GOST 8732-78	JSC "Dnepropetrovsk Pipe Plant" (Ukraine)	Taviller (Turkey), EN10305-1 355 +Sr H8 Cold Drawn Seamless Skived Burnishing Tube 159x8 mm,	300 m
62	Seamless steel pipe 57x5 mm of GOST 8732-78	JSC "Dnepropetrovsk Pipe Plant" (Ukraine)	Taviller (Turkey), EN10305-1 355 +Sr H8 Cold Drawn Seamless Skived Burnishing Tube 57x5 mm	100 m.
63	Steel electro welded pipe 159x7 mm DSTU 8947	LLC "DMZ KOMINMET" (Ukraine)	Taviller (Turkey), EN10305-1 355 +Sr H8 Cold Drawn Seamless Skived Burnishing Tube 159x7 mm,	1600 m
64	Steel electro welded pipe 50x4 mm DSTU 8947	LLC "DMZ KOMINMET" (Ukraine)	Taviller (Turkey), EN10305-1 355 +Sr H8 Cold Drawn Seamless Skived Burnishing Tube 159x7 mm,	800 m
65	Steel ventilation pipe 500x1.5 mm	LLC "Trubostal" (Ukraine)	Taviller (Turkey), EN10305-1 355 +Sr H8 Cold Drawn Seamless Skived Burnishing Tube 500x1,5 mm,	150 m
66	Railway rail R-65 GOST 8161-75	LLC "UkrMashService" (Ukraine)	GANTRY RAIL S.R.O. (Czech Republic), Rail type A 65 according to DIN 536	300 m
67	Intel Core i7, 11700K, 8 cores, 16 threads, Frequency, GHz - 3.6, Boost frequency, GHz - 5.0, Intel Z590, GPU - discrete, GeForce RTX 3070, GPU - 8 GB, RAM - 32 GB, HDD - 2 TB, SSD - 512 GB, Wi-Fi (IEEE 802.11 a / b / g / n / ac), Bluetooth 5.1, 1 x DisplayPort, 1 x Headphone, 1 x Microphone, 3 x HDMI, 1 x PS / 2, 4 x USB 2.0, 1 x USB 3.0, 4 x USB 3.2 Gen1, 3 x Audio, 2 x USB 3.2 Gen 2, 1 x RJ45, no, PSU - 850 W, Windows 10 Pro. Licensed software Microsoft Windows, Microsoft	Vinga (China)	Vinga (China), Vinga Odin A7647 (I7M32G3070.A7647.02)	17 pcs.

	Office			
	Vingta Odin A7615 personal computer (I7M16G3070.A7615)			
68	Intel Core i7, 11700K, 8 cores, 16 threads, Frequency, GHz - 3.6, Boost frequency, GHz - 5.0, Intel Z590, GPU - discrete, GeForce RTX 3070, GPU - 8 GB, RAM - 16 GB, HDD - 2 TB, SSD - 240 GB, 3 x DisplayPort, 5 x Audio, 1 x Headphone, 1 x Microphone, 6 x USB 2.0, 1 x USB 3.0, 2 x HDMI, 1 x optical SPDIF out, 5 x USB 3.2 Gen 2, 1 x RJ45, PSU - 850 W, Windows 10 Pro. Licensed software Microsoft Windows, Microsoft Office, 1C	Vingta (China)	Vingta (China), Vingta Odin A7615 (I7M16G3070.A7615)	20 pcs.
69	Vingta Odin A7623 personal computer (I7M16G3070.A7623) Intel Core i7, 11700K, 8 cores, 16 streams, Frequency, GHz - 3.6, Boost frequency, GHz - 5.0, Intel Z590, GPU - discrete, GeForce RTX 3070, GPU - 8 GB, RAM - 16 GB, HDD - 4 TB, SSD - 240 GB, 3 x DisplayPort, 5 x Audio, 1 x Neadphone, 1 x Microphone, 6 x USB 2.0, 1 x USB 3.0, 2 x HDMI, 1 x optical SPDIF out, 5 x USB 3.2 Gen 2, 1 x RJ45, no, PSU - 850 W, Windows 10 Pro. Licensed software Microsoft Windows, Microsoft Office, ProEngineer, Qform	Vingta (China)	Vingta (China), Vingta Odin A7623 (I7M16G3070.A7623)	15 pcs.
70	ASUS PG259QNR monitor 24.5 ", IPS, 1920 x 1080, 360 Hz, 16: 9, 400 cd / m2, 1000: 1, 27 W, 1 x HDMI, 1 x Neadphone, 1 x DisplayPort, 2 x USB 3.0, monitor rotation (Swivel), rotary screen (Pivot), tilt adjustment, height adjustment, VESA - 100 x 100 mm, 7.1 kg, black	AsusTek Computer Inc, (China)	AsusTek Computer Inc, (China), ASUS PG259QNRs	52 pcs.
71	Huawei UPS2000-A-3KTTS uninterruptible power	Huawei Technologies	Huawei Technologies Co. Ltd. (China)	52 pcs.

72	supply for network equipment, PC, continuous operation (online), 2400 W, 3000 V * A, sine wave, battery - built-in, LCD - display, 190 x 421 x 220 mm	Co. Ltd. (China)	Huawei UPS2000-A-3KTTS	10 pcs.
	Air conditioner LG Standard Plus PC12SQ	LG (Turkey)	LG (Turkey), LG Standard Plus PC12SQ,	