DEAR PARTNERS

THANK YOU SINCERELY FOR CHOOSING THE EQUIPMENT OF OUR BRAND

For long-term reliable operation of the equipment, we ask you to timely service the equipment and follow the recommendations given in this document.



BURN WHATEVER

Service Log

Company	
Boiler's model and ID plate # _	

A list of actions for the technical inspection and maintenance of boiler equipment during each acceptance / delivery of a change of service personnel

Hydroelectric power stations and hydraulic units

- 1 Check the oil level in the tank and, if necessary, top up to the specified level
- 2 Check the absence of mechanical damage to the components and oil leaks at the flange and screw connections
- 3 Check the reliability of fastening to the structures of the constituent assemblies and parts, if necessary, tighten the bolted connections
- 4 Carry out a visual inspection and check the serviceability of automation devices
- 5 Check the tightness of the hydraulic hose connections with consumers
- 6 Check the absence of foreign objects, dust and debris, if necessary, clean the valve blocks, hydraulic unit housings and hydraulic cylinders.
- 7 Check the integrity and cleanliness of the cable connections of the motors, automation elements and valve connectors.
- 8 Check the reliability of the grounding connection.

Moving floor

- 1 Check the fuel load level. The recommended height of the fuel layer is 2.5 m from the moving section.
- 2 Check that there are no foreign objects in the fuel layer, if any, remove them from the fuel.
- 3. Check fuel quality: recommended geometric dimensions, moisture content, bulk density
- 4 Check the integrity and absence of mechanical damage to the floor slabs, canopy elements, hydraulic cylinders and elements of their connections with the movable plate.

- 1 Check the absence of mechanical damage to the frame and lining of the fuel storage.
- 2 Check the integrity and tightness of the bolt fasteners to the foundation and grounding.
- 3 Check the absence of damage to the elements of automation and power and control cables.
- 4 Check the serviceability and technical condition of the drives of the re-distributors and the fuel metering unit.
- 5 Check the serviceability of the chain and its elements. Check for damage and misalignment.
- 6 Check valve opening and water pressure upstream of the Silo fire protection system
- 7 Check the absence of gaps and false activation of the fire protection elements of the fuel storage.
- 8 Analyze the reliability of the fuel level indicators in the "silo" by consumption and the last load.

Conveyor

- 1 Check the correct direction of travel and the rate of filling the conveyor with fuel.
- 2 Check the absence of foreign objects in the conveyor box and on its moving elements (chains and scrapers).
- 3 Check the continuity of the chain and the elements of its connection with the scrapers.
- 4 Check the smoothness of the movement and the absence of mechanical damage to the guide elements of the conveyor.
- 5 Visually check the tension of the chain and the absence of its twists or kinks (accumulation) of segments.
- 6 Check the water level in the ash removal conveyor, the mechanical integrity of the box and the serviceability of the level control devices, the filling and emptying of the conveyor.

Hopper

- 1 Check that the damper is in good condition and that there are no foreign objects or traces of fire or other damage in the boiler fuel tank.
- 2 Check that there is no hanging or pressing of fuel on the elements of the bunker, in case of occurrence, eliminate it.
- 3 Visually check the reliability of the fuel level indicators in the boiler bunker.
- 4 Check the water pressure in the cooling system of the adapter (for cooled designs).
- 5 Check the opening of the valves and the water pressure in front of the fire protection system of the boiler bunker.
- 6 Check the absence of a pass and false operation of the fire extinguishing system of the boiler bunker.

- 1 Check the absence of mechanical or thermal damage to the main elements of the boiler body, economizer and gas ducts.
- 2 Visually check through the sight glass that the fuel is distributed and burns evenly and that there are no flashes, explosions or signs of obvious damage to the grate or lining.
- 3 Check the tightness of the doors to the firebox
- Check the state of the indicating and recording devices according to the graph and indicators on the screen, by analyzing and comparing data with previous intervals and by registering and analyzing sharp deviations
- 5 Check the water temperature and pressure readings by comparing the readings on the screen and on indicating devices (manometers, thermometers).
- 6 Check the integrity and absence of leaks at the flange and threaded connections, in the valve bodies and seals.
- 7 Check the integrity and performance of the multicyclone cell feeder and economizer, make sure that their hoppers are free of ash.
- 8 Check the filling status of the ash containers and, if necessary, empty them.
- Check the compliance with the established cycle of the grate movement (forward travel, end of travel, end of travel, forward travel ...) and the absence of extraneous sounds or sudden movements of 9 the grate.
- 10 Check for damage and clogging of power and automation cables and their supporting structures.
- 11 Check the operation of the blast fans and the functionality of the air dampers.
- 12 Check the integrity and cleanliness of the traction pressure gauges.
- 13 Periodically purge the lower points of the boiler by opening the drain valves at two to three intervals of 10 seconds in order to avoid the accumulation of sediment in the boiler.
- 14 Check the performance of the pressure gauges by closing the three-way valves (the arrow should show "0").
- 15 Check the absence of airing and the operability of automatic or manual air vents by briefly opening / closing the valves.
- 16 Check the integrity, cleanliness and functionality of the cooling and sealing of the control cabinets.
- 17 Check the performance of the safety valves by short-term detonation.
- 18 Check the condition of all bolted connections of the components and parts, if necessary, tighten the bolts and the union nut.

Ancillary and other equipment

- 1 Check the technical condition, cleanliness and serviceability of the pumps and their fastening and grounding elements.
- 2 Check the proper operation of the pumps by checking the performance of the operating points on the pressure gauges before and after the pump and on the flow meters.
- 3 Check the technical condition, cleanliness and serviceability of the smoke exhausters, fans and their fastening and grounding elements
- 4 Check the oil level and the absence of leaks on the cuffs of the crankcases of geared motors, smoke exhausters and fans.
- 5 Make sure that there are no extraneous sounds or other factors of possible damage to bearings and other moving parts of mechanisms.
- 6 Check the serviceability and, if necessary, tighten the fasteners to the structures or foundations of the drive mechanisms
- 7 Check the serviceability of the compressor, air supply lines, valves and pneumatic cleaning membranes.
- 8 Make sure that the shaft drive is working properly by checking the rotation of the shafts on the visible parts 9 Check the serviceability and integrity of the elements of additional airflow and cooling of motors and augers, if installed.
- 10 Check the serviceability of the CWT systems and make sure they are properly filled with reagents.
- 11 Check the integrity of the coolant lines and analyze, according to the flow meter records, possible deviations from the norm in the amount of make-up, which may indicate damage (boiler or system leaks).
- 12 Check the quality of the feed and boiler water, make sure that the quality is not lower than that specified in the operating instructions. Record the analysis results in the Water Quality Log.
- 13 Check the availability and serviceability of equipment and tools for servicing boiler equipment.
- 14 Poll and check the records of the previous shift.

NOTE

The results of the inspection and checks should be recorded in a shift journal. In case of revealing deviations or breakdowns, it is recommended to write them down in the Defect Log, familiarize the boiler house management with them and contact the service department of the Kriger Company.

Follow the instructions for use every time you start and stop the boiler. Before starting, make sure that there is no airing of the boiler water volume and heating lines. Also make sure that the elements of the main and auxiliary equipment are fully operational.

Boiler equipment maintenance works	execution period	responsible	January	February	March	April	Comple May	June	July	August	September	October	November	December
Lubrication of all bearing assemblies	monthly		January	Teordary	Waten	Арш	Iviay	June	July	August	September	October	November	December
2 Cleaning or replacing the control cabinet air filters	-													
	monthly													
Visual inspection	every 6 months													
4 Internal inspection	every 6 months													
5 Hydraulic test of heating surfaces	every 6 months													
Checking the correct operation of automation, protection and blocking devices	every 6 months													
Replacing or cleaning filters, hydraulic distributors	every 6 months													
B Hydraulic station oil change	every 6 months													
9 Checking the insulation resistance of the power section and grounding lines	every 6 months													
0 Cleaning, external and internal diagnostics of smoke exhausters and fans	every 6 months													
Full technical inspection of the condition of conveyors, identification and replacement of worm parts	every 6 months													
2 Checking the tension and balancing of the conveyor chains	every 6 months													
3 Checking the oil quality in geared motors	every 6 months													
4 Functional check and adjustment of fire protection systems of the bunker and fuel storage	every 6 months													
5 Cleaning, lubricating and checking full strokes of air dampers	every 6 months													
6 Checking or restoring the tightness of closing all technological doors and hatches	every 6 months													
7 Manual cleaning of heating surfaces from ash adhesion	every 6 months													
8 Full inspection and, if necessary, local repair of the lining and thermal insulation of all elements	every 6 months													
9 Checking the performance and ensuring its functions with safety, shut-off and control valves	every 6 months													
0 Cleaning and checking the functionality and tightness of the rotary valves	every 6 months													
21 Cleaning and inspection of the structures of the boiler ash pan, cyclone and economizer	every 6 months													
2 Replacing the water in the ash pan (for wet ash removal)	every 6 months													
Replacing the belt drive belts	every 6 months													
4 Diagnostics of the condition of expansion joints and vibration	every 6 months													
5 Cleaning and rinsing strainers of all equipment	every 6 months													
6 Checking the condition and functionality of the augers, if necessary - repair or replacement	every 6 months													
7 Changing oil and air compressor filters	every 6 months													
28 Calibration of control FTZ of boiler equipment	every 6 months													
Checking the condition of all elements of the conveyors (chains, sprockets, scrapers, fasteners, supporting structures,	-													
if necessary, repair and adjustment) Review and diagnostics of the condition of all moving and supporting parts of the fuel storage	every 6 months													
1 Review and diagnostics of the condition of all moving and supporting parts of the boiler bunker	every 6 months													
2 Condition monitoring and tightening of all electrical connections	every 6 months													
3 Diagnostics of the condition of the grate and grate fastening elements and replacement of worn parts upon detection	every 6 months		1											
4 Cleaning of all elements of the inclined grate and primary and secondary air blast ducts	yearly					-				-	-	-	+	
5 Inspection of the state of anti-corrosion coatings and their restoration as necessary	yearly													
6 Metrological verification of instrumentation	yearly			1		1	1	1		1	1	<u> </u>	1	<u> </u>
7 Oil change in geared motors	every two years			1										1
8 Chemical cleaning of heating surfaces	every two years						İ							1
9 Replacing the control cabinet screen sensor battery	every two years			1	1	1	1	1	1	1	1	1	1	