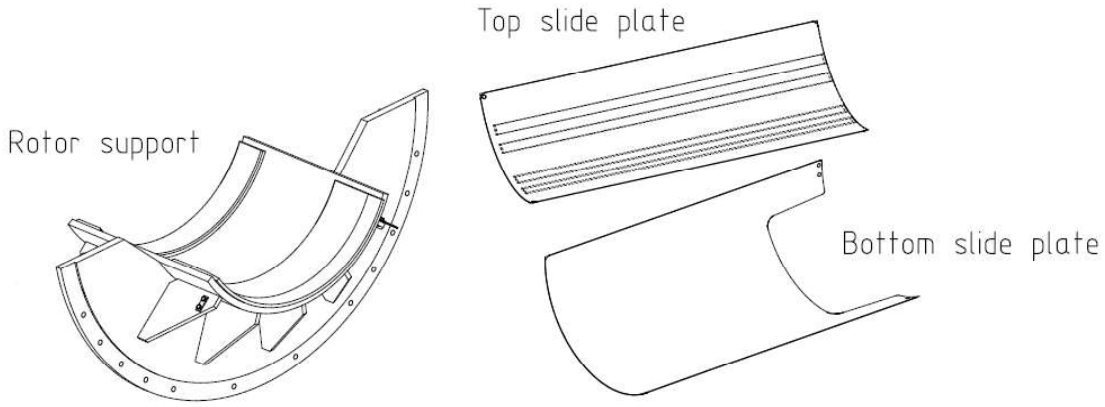
2.3.26. Generator (WTE turbine) V10MKA10

NOTICE!

Prior the maintenance and disassembly works related to the generator of WTE turbine V10MKA10 the producer's operation and maintenance technical documentation should be deeply analyzed and familiar to all staff involved.

The generator of the WTE turbine (V10MKA10) is located on the turbine foundation, +9,0m level in the machine-hall building between axes "3" => "4" and close to the axis "G".

The main overhaul related to generator refers to the generator rotor disassembly and maintenance. The rotor of generator is very heavy and large element, for this reason needs special attention and preparation. During preparatory works all connected electrical, and other (if any) installations must be removed. All installations located on the way of generator rotor evacuation must be disassembled. All necessary special tools must be prepared. Only qualified staff can be involved in the generator overhauls. The area of works must be enclosed and protected from the access of unauthorized and untrained persons.

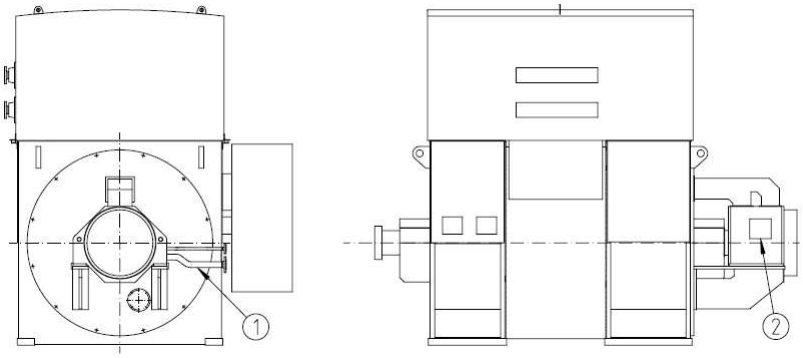


Special tools for rotor disassembly

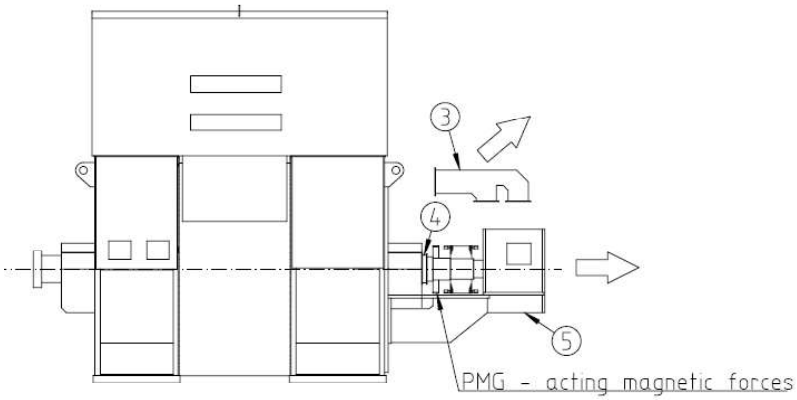
Generator elements are located in the main crane V50SMD10AE001 range of operation, for this reason main crane will be used during its maintenance and disassembly.

The generator rotor disassembly is realized in following stages:

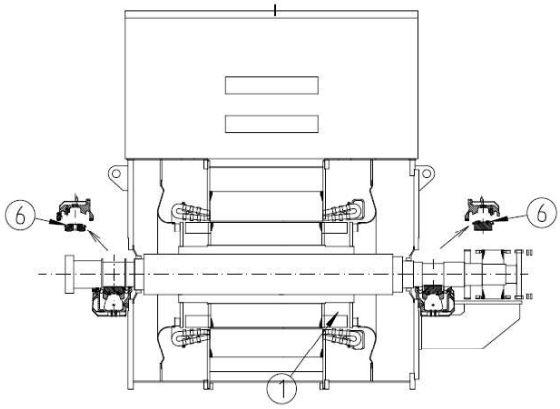
1. Disassemble bearing thermometers, vibration detectors
2. Disconnect exciter terminal box and heater



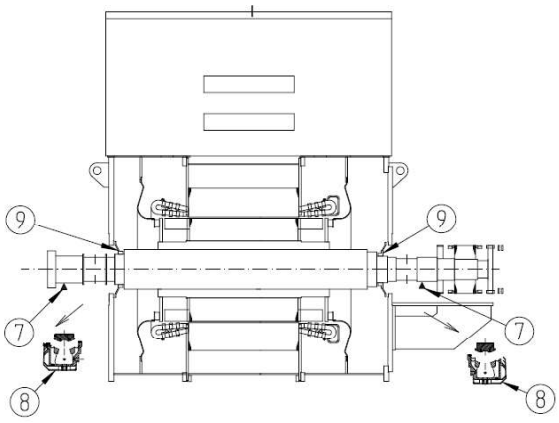
3. Disassemble air duct (weight 25kg) and exciter covers
4. Disassemble seal between NDE bearing housing and exciter housing
5. Use crane to lift slightly the exciter housing (max 0,5mm) and secure it against radial movement. Move in axial direction, observing the air gap in exciter stator



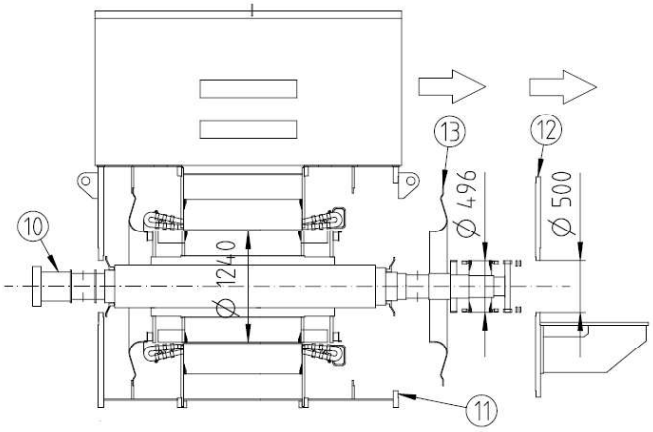
6. Disassemble shell and upper part of the bearing housing



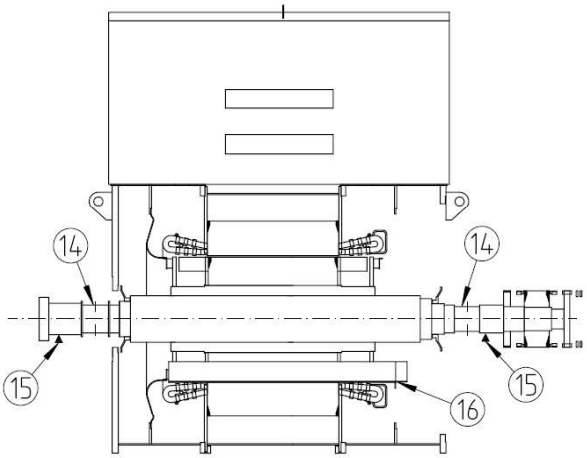
7. Use a hydraulic jack or crane to lift the shaft by max 0,5mm
8. Disassemble shell and bottom part of the bearing housing
9. Unbolt the bearing seal



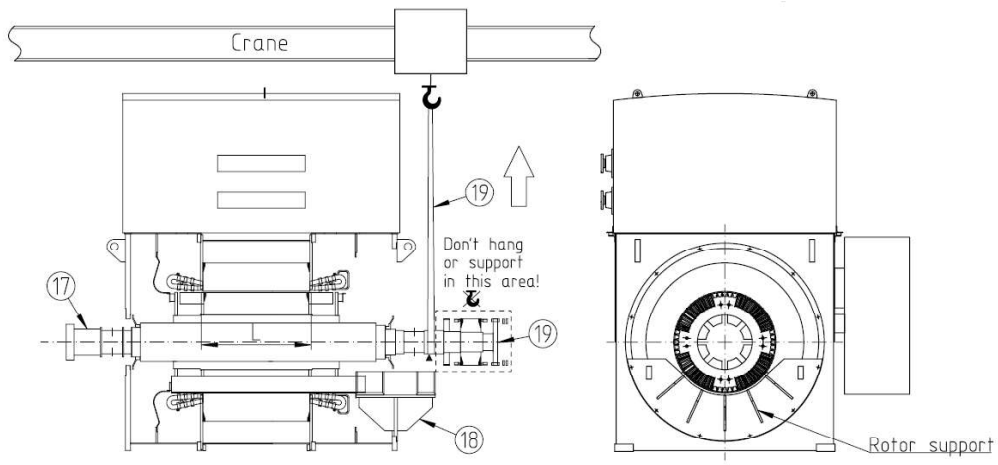
10. Put the rotor carefully into the stator bore
11. Unbolt connection between bearing shield and bearing plate
12. Use crane to lift the shield and move in axial direction. Observe the air gap between Bore in NDE shield and rotor exciter
13. Unbolt air guide baffle (weight 25kg) and move out of the machine



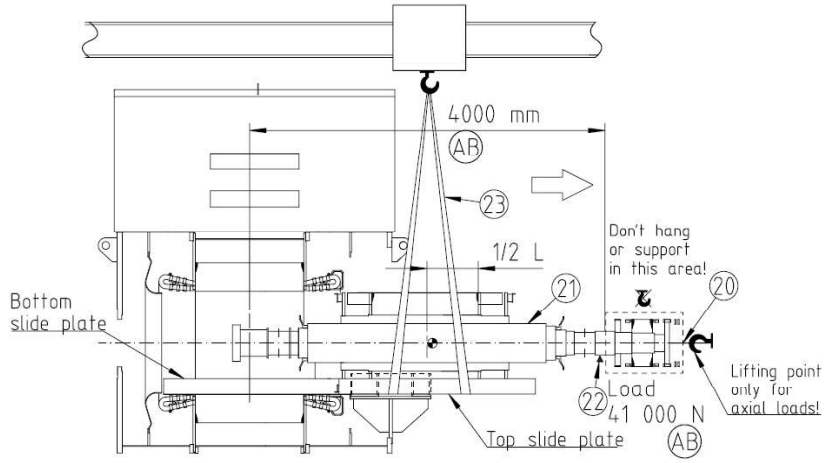
14. Cover journals and sealing surfaces to avoid their damage
15. Use a hydraulic jack or crane to lift the shaft. Rotor and stator must not be touch
16. Apply a thin film of slide grease between slide plates and insert them into the air gap



17. Put the rotor carefully into the stator bore
18. Assemble the rotor support
19. Install eye bolt at the shaft on NDE side and lift the shaft by max 2mm

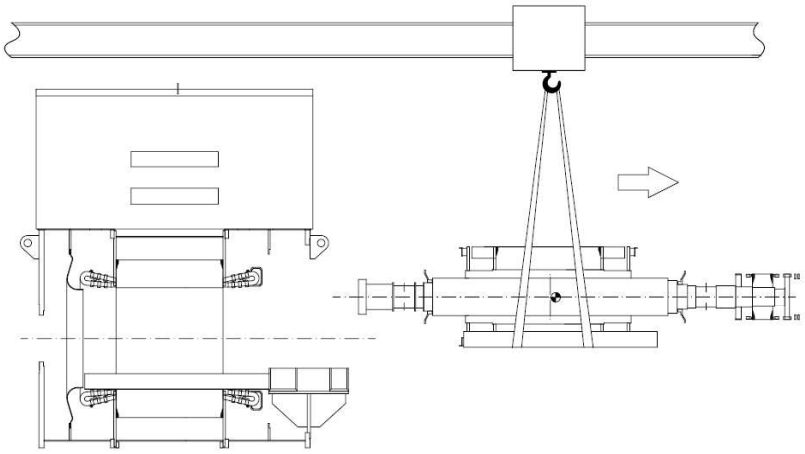


20. Hang up a come-along or a chain pulley block with a load device for axial pull
21. Pull out the rotor on the slide plates while guiding both shaft ends and observing the air gap
22. Use a hydraulic jack or crane to support the rotor. Rotor and stator must not touch.
23. Install the sling around the rotor packet. Position of the rope must be min 100mm behind the center of gravity



24. Pull the rotor completely out of the stator, while guiding both shaft ends

25. Put down and secure the rotor to prevent any movement



26. Transport the rotor to the storage area, on the 0,0m level in machine hall.

2.3.27. Turbine (BIOMASS unit) V20MAA10

NOTICE!

Prior the maintenance and disassembly works related to the BIO turbine V20MAA10 the producer's operation and maintenance technical documentation should be deeply analyzed and familiar to all staff involved.

The BIOMASS turbine V20MAA10 is located on the turbine foundation, +9,0m level in the machine-hall building between axes "C" => "D" and axes "3" => "5".

The maintenance and disassembly of the turbine needs specialized knowledge and can be carried only by qualified personnel. Turbine elements are heavy and large, for this reason need special attention