SCOPE OF WORK

1.2 SCOPE

The primary instructions to the service provider includes but not limited to:

Repair, replacement, component re-instatement and general mechanical components/fittings refurbishment as stipulated on the sub instructions below:

1) The Contractor should develop and submit QCP for approval by the end user – System Engineer prior to commence of any activities. 2) Visual Inspection (internal and external valve body and components) to be carried out together with Eskom and contractor Quality Inspectors. *Take photos if necessary*. The inspection sheet is to be completed for each valve.

3) Valves to be inspected (NDT or Visual) must first be released by Eskom's Quality Inspector. **NDT contractor will be the responsibility of Eskom.** Thus supply both NDT and Visual Inspection reports.

4) Spindle or Valve Stem to be inspected for scoring, pitting and erosion and surface crack tested (NDT) and conduct dimensional checks. Perform spindle run out test. Spindle to be repaired or replaced if defects are noted or the spindle is found to be deformed; the spindles are supplied through a sole source and also made stock items.

5) All gland retaining washers, studs and nuts to be removed and inspected. All washers, studs and nuts to be of same dimension with respect to the valve.

6) Gland stuffing boxes to be cleaned and inspected and conducts dimensional checks, Wall thickness analysis.

7) Worn press-in neck rings in stuffing boxes are to be replaced.

8) Ensure that the density of the required packing graphite rings is within the required rating or specification of the originally used packing and also the graphite rings are to be used on all valves (as per the OEM specification), and the material and specification defining certificates to be made available.

9) Valve bonnet retaining nuts and studs are to be removed and inspected for damage to threads, corrosion and stretching of studs. Replace damaged or out of specification nuts, washers and studs.

10) Studs holes to be inspected for thread damage and repaired as required. All nuts to be free and not seized on studs. When a valve is assembled, ensure that washers are in place (at least 3-4 the thread pitch is exposed on the studs when nuts are tightened).

11) Special attention to be paid to gasket sealing areas. Gaskets are to be checked to conform to the recommended material with respect to temperature and pressure rating per valve.

12) Ensure that correct gasket dimensions by verifying with the specification and the contractor will be liable for the installation of lower rating gasket when higher rating gasket is required.

13) Proper or Gasket installation or torque procedure to be applied fitting the gasket, to ensure that there are no premature failures.

14) Valves fitted with the required pressure seals to be inspected for wear of retaining segments and segment location areas. Plug jacking screws to be inspected for thread damage and should not be seized.

15) All heads to be inspected for stretching, pitting or oversize. Replace retaining screws as required. Pressure seals to be replaced, ensuring correct size and density. Plug size and body size to be checked to ensure tolerances are correct to avoid extrusions of pressure seal. The material and specification defining certificates to be made available.

16) All open valves, pipes, to be closed by the contractor to avoid ingress of debris. Covers to be constructed as to prevent persons from removing them. Plastic will not be acceptable for this purpose

17) Mechanical artisans and Fitters to be available to carry out any necessary rework, and to assist with commissioning of valves with actuators

18) Magnetic particle testing or suitable NDE (e.g. UT or Replication (remnant life monitoring (Eskom Standard GST 36-702)) will be carried out on valves and may necessitate in situ repairs or replacing valve bodies.

19) Due to loss of components on previous General Overhauls the contractor will be responsible for storage of all valves components. In the event of components being misplaced because of poor housekeeping or security, the contractor will be responsible to replace any items, at his own cost.

20) QCP showing all witness, inspection and hold points to be provided by the contractor with tender and approved by Eskom before any work commences.

21) Contractor to have his/her staff available during pressure test and unit commissioning to fix any defects that might arise during test since the valves are part of the valves examination or test plan.

22) The contractor shall provide a technical report of the inspection findings and repairs conducted on every valve. The report should as a minimum include the following:

- The initial condition of the valve after stripping – report on debris, wear, and defects noted on the valves and associated components.

- The repairs/replacements conducted to restore the valves mechanical integrity.

- Measured dimensions vs. allowable tolerances.

- List of recommended actions and/or spares for the next overhaul.

- Photographs of all notable defects.

1.2.1 Items to be supplied and refurbished QUANTITY		**APPLICATION**		**DESIGN**		
TEMP (°C)	**PRESS (BAR)**		**Stock Number**	**SIZE**		**TYPE**
4/ Unit	MAIN STEAM STOP VALVE	535	191	N/A	10 INCHES	PARALLEL SLIDE
4/Unit	STRAINER	516	191	671584	3/4 INCH	STRAINER DRUM