



## REQUEST FOR BID

CIDB

### 10390710 - Scope of Work:

Replace Slaker No.17 Base at Slaker House No.4

Obtain a necessary permit.

Remove the Slaker from the plant with base plate rollers and guard's rollers

All rollers to be replaced and fitted new cronidur 30 material type bearing

Remove old base, manufacture and install new base with the plate

Construct the concrete(foundation)to accommodate the new base

The base, base plates, to be painted red oxide undercoat.

Install complete slaker with new rollers

Safety guards painted as per required safety spec.

Replace all lubrication system (hydraulic distribution blocks, pipes, fittings and solenoid valves/blocks).

Secure anchor bolts ensure no vibration during commission

Align and Commission the slaker

### NOTES

- All the scrap metal to be returned

- The old hydraulic distribution blocks must be cleaned packed neatly and returned as well.

### 10396791 – Scope of Work

The slaker is a horizontal rotating Kiln used to produce Milk of Lime. Milk of Lime is produced through the Exothermic process by mixing water and lime granules. The Milk of Lime produced is stored in M.O.L tanks at a temperature of +- 70 degrees. The produced Milk of Lime is used for varying the pH of Raw Water in Rand Water's purification process.

### TECHNICAL REQUIREMENTS: ZUIKERBOSCH STATION

Major Overhaul on No.8 Slaker at No 3 Slaker House @ Zuikerbosch Water Treatment Plant

Obtain a necessary permit.

### \*\*\*\*\*STRIPPING\*\*\*\*\*

- Remove the Slaker drum from the plant

- Remove base plate and guide rollers

- Remove drive gear guard
- Remove feeder shute
- Remove discharge shute
- Remove surrounding hand rails
- Remove gearbox, guard, motor and base plate
- Remove Lubricating system

NB: Supplier to ensure to accommodate for all necessary rigging equipment required for the removal of the Assets.

\*\*\*\*\*Cleaning\*\*\*\*\*

- Sand blast and clean Slaker drum
- Sand blast and clean base plate and guide rollers
- Sand blast feeder shute
- Sand blast discharge shute
- Sand blast gearbox and motor base plate

NB: All cleaned items to be painted/coated with Red Oxide

Sand Blasting to conform to ISO 8501 - SA2.5, Cert required

\*\*\*\*\*Repair and Replace\*\*\*\*\*

- Overhaul Gearbox (Bearings and seals to be replaced)
- Refurbish Motor (Bearings to be replaced)
- Replace taper lock coupling
- Replace surrounding hand rails (hand rails to be painted yellow as per the OSH act)
- Refurbish lubricating system (all hydraulic blocks, pipes, fittings, nozzles, pressure gauges and micro switch to be replaced)
- manufacture and replace all Supporting Rollers as per Rand Water drawing DRG 8640, replace all bearings and grease nipples (Rollers to be case Hardened)
- Machine flat Slaker ride rings and remove all mushrooming on the ride rings.
- Replace all liners with 16mm Bennox liner plate as per DRG 7934.

\*\*\*\*\*Installation, Alignment and Commissioning\*\*\*\*\*

- Supplier to transport all removed items and install all Slaker Components as per the existing installation
- The Slaker and Base Plate to be aligned after components have been installed
- Supplier to commission and performance test the Slaker.

## TECHNICAL REQUIREMENTS: VEREENIGING STATION

### Slaker drum

Remove slaker drum from plant and transport to contractor's works.

Strip and grit blast (According to ISO 8501 - SA2.5, Cert required) Slaker drum then contact Rand Water site representative for inspection.

Repair any defects on the slaker drum structure.

Replace all liners with 16mm Bennox Steel plate as per Drawing No. 9945.

Inspection by Rand Water site representative is required after replacement of liners before the end covers are installed.

Manufacture new Girth gear and Pinion. Refer to Drawing No. 9947 for details.

Remove, strip and inspect rollers.

Replace roller's bearings (Use only FAG or SKF).

Guide rollers:

Bearings: 22310 C3 Spherical roller bearings – 8 off

Slaker Rollers

Bearings: 22311 C3 Spherical roller bearings – 16 off

Seals: 55 x 80 x 10 – 16 off

Machine/Clean rollers, refer to Drawing No. 9950 for minimum size requirements. Replace if required.

Repair any defects on the rollers pedestals and shafts

Driver

Remove and transport Motor, Coupling and Gearbox to contractor's works

Refurbish Renold WU70 (Ratio 10/1) Slaker Gearbox

Replace gearbox bearings (Use only FAG or SKF)

Bearings:

7212B Angular contact ball bearings – 2 off

7216B Angular contact ball bearings – 2 off

Seals

3" x 4" x ½" DL – 1 off

2" x 3" x ½" DL – 2 off

Refurbish Craft hydraulic drive (Hydraulic coupling)

Refurbish CMG Marathon 22kW 3-phase, 4Pole motor

Repair any defects on coupling guard.

Constant box and Classifier

Remove and transport constant box and classifier to contractor's works.

Grit blast both Constant box and classifier (According to ISO 8501 - SA2.5, Cert required).

Repair all the defects on the constant box and classifier. Refer to Drawing No. 9942

Refurbish constant box level control valve.

Replace liner plate in the classifier.

Replace classifier's chain, scrapers, sprockets, bearings and shafts.

Repair defect on the classifier drive guards, if any.

Overhaul classifier Motor and Gearbox.

\*\*\*\*\*GENERAL REQUIREMENTS OF  
IMPORTANCE\*\*\*\*\*

Obtain site permission from Mechanical foreperson on a daily basis upon.

Access permit to be requested by Contractor every morning and sign off before knockoff time.

All work to match existing installations and standard of quality.

Rand Water will not be held responsible for any losses incurred by the tenderer or contractor.

Quality Control Plan (QCP) with holding points for inspection by Rand Water site representative to be submitted for approval afore commencement of work.

Decommission, transport to contractors works, refurbish, deliver and commission Slakers and associated components at Vereeniging and Zuikerbosch Pumping Station.

All components to be offered 12 (TWELVE MONTHS) guarantee on faulty design, materials and workmanship, commencing once the commission.

No extra work or deviations from the scope is allowed without permission in writing from Rand Water.

NB: Supplier to compile and submit two safety files one for Zuikerbosch and one for Vereeniging Station.

Final release Inspection by Rand Water site representative is required before all the components are transported back to Site.

All slaker components shall be painted with Red oxide primer.

Inspect Slaker Base, secure base if required. DO NOT REMOVE BASE. (VEREENIGING STATION)

Clean up the area where the slaker was removed, Rand Water Site representative must be notified as soon as the cleaning is done to give a go ahead.

Prepare Drive base and Rollers pedestal base for installation.

Clean outlet manifold and assemble.

Transport and install all components to site.

All hold down bolts shall be Grade 8.8.

Cold commission to be done by Contractor and Rand Water site representative.

Post snag list from cold commissioning, Hot commissioning shall be performed by both parties and Rand - Water Operations department.

NB: Upon completion of work Supplier is required to submit two detailed data books for the Slaker refurbishment. Critically all material data sheets and certificates to be issued. (The invoice will not be accepted if submitted without the data book)

A safety file will be required and subsequently site induction will be carried out for each site