

SCOPE OF WORK

MILL RELINING

COMPANY BACKGROUND AND OBJECTIVE(S)

Foskor is one of the world's largest producers of phosphate rock (concentrate) and phosphoric acid. It is one of the world's few vertically integrated producers of phosphoric acid and is the second largest supplier to India, the world's largest consumer of phosphoric acid.

The Company owns and mines phosphate resources and beneficiates the mined material to produce a phosphate concentrate at Phalaborwa, in the Limpopo Province of South Africa. The phosphate concentrate is sold locally and also transported to the Richards Bay plant on the coast of Kwa-Zulu Natal to produce phosphoric acid, sulphuric acid and granular fertilisers MAP and DAP from phosphoric acid and is the leading supplier of fertilisers to South Africa. In all about 95% of the phosphoric acid is exported and the granular sales are divided between exports and local markets. Since 1951 Foskor has supplied more than 95% of South Africa's fertiliser requirements.

The first objective for the contractor is to submit the required tender documentation listed in section seven (7) of this document. After obtaining the order the successful contractor must complete the tasks stipulated in section five (5) of this document to successfully complete the project.

1. Introduction and Background Information

This document describes the Scope of Work and Specifications for a maintenance service contract between Foskor and a contractor with relevant experience for the re-lining of 12 Vecor and 12 Allis Chalmers horizontal mills as well as 5 Svedala Vertimills (Vertical Mills). These mills get fully relined every 4 years and mill ends every 2 years. The Vertimills run 6000 hours between relines. This task is high risk in confined space and specialised. The contract will be set up for a duration of 3 years.

2. Work to be performed by the Contractor.

The contractor shall supply the following equipment and items: -

- All supervision, labour, equipment, tools, consumables and supervision to perform the tasks as specified under the Scope of Work, unless otherwise stated

The contractor shall be required to co-operate and liaise with Foskor representatives.

The contractor will be required to co-operate and liaise with other contractors on site.

3. Foskor Supply

Foskor will supply the following: -

- Mill Liners
- Bolts and Fasteners
- Electricity on site for installation purposes.
- Drawings
- Liner Hole inserts and line boring done by second contractor.
- Rubber lining done by third contractor.
- Epoxy appliance by fourth contractor.

4. Scope of Work

This contract is for the following maintenance activities: -

- 4.1. Complete reline of Vecor Horizontal Mill. This includes loading out of rods, stripping out old liners, shell preparation, installing new liners and casting of Nordbak filler, loading rods and tightening of liner bolts 1 week after start-up.
- 4.2. Complete reline of Allis Chalmers Mill. This includes loading out of rods, stripping out old liners, shell preparation, installing new liners and casting of Nordbak filler, loading rods and tightening of liner bolts 1 week after start-up.
- 4.3. Complete reline of Svedala Vertimills. This includes opening of mill doors, dropping balls, washing out of mill, removal of mill screw, removal of shell magnetic liners, shell preparation, installation of new magnetic liners, installing screw and closing the mill doors.
- 4.4. Replacing of Vecor Mill Inlet and Outlet End Liners only. This includes loading out of rods, stripping out old liners, shell preparation, installing new liners and casting of Nordbak filler, loading rods and tightening of liner bolts 1 week after start-up.
- 4.5. Replacing of Allis Chalmers Inlet and Outlet End Liners only. This includes loading out of rods, stripping out old liners, shell preparation, installing new liners and casting of Nordbak filler, loading rods and tightening of liner bolts 1 week after start-up.
- 4.6. Replacement of one liner in Vecor or Allis Chalmers Mill. This activity occurs during mill operation and is required when broken liners are detected – service may be required after hours on a call-out basis.
- 4.7. Replacement of one magnetic liner in a Vertimill. This activity occurs during mill operation and is required when broken liners are detected – service may be required after hours on a call-out basis.
- 4.8. Remove liner bolt, insert new bolt and tighten – service may be required after hours on a call-out basis.

- 4.9. Tighten loose liner bolts during mill operation – service may be required after hours on a call-out basis.
- 4.10. Weekly liner inspection during rod loading and reporting of liner thickness and damages.
- 4.11. Load-out and loading of rods from a mill when required by the mill maintenance section – service may be required after hours on a call-out basis.
- 4.12. Hourly Rate required for welding-up shell wash cavities including all welding equipment and consumables required for the task.
- 4.13. Hourly Rate required for gouging out shell cracks and welding-up including all welding equipment and consumables required to perform the task.

5. Specifications, Codes and Standards

NOTE: FOSKOR and SANS specifications are aligned unless otherwise specified.

5.1. Foskor Specifications

The latest FOSKOR specifications are applicable to this Contract (amongst others)

- GV-1 Rev 12 - General Engineering Specifications for Contractors
- GM-1 Rev.2 - General Mechanical
- GM-2 Rev.1 - Mechanical Erection
- GM-3 Rev. 7 - Painting and Surface Protection of Steel
- GA-1 Rev. 2 - Procedures for Enquiries and Tenders

5.2. Foskor Codes of Practice (amongst others)

- COP 1 - Foskor Risk Management 2016
- COP 2 - Legal Other requirements and appointments
- COP 25 - Contractor Control
- COP 28 - Work Permits
- COP 49 - Waste Management
- COP 53 - Lockout System and Usage

- COP 56 - Lifting equipment and lifting Tackle.
- COP 60 - Portable Electrical Equipment
- COP 65 - Personal Protective Equipment (PPE)
- COP 95 - Confined space
- All work carried out in terms of this specification shall conform to the requirements of the Mines Health and Safety Act (No. 29 of 1996, as amended) and the related Regulations, with special reference to the manufacturer/suppliers/contractors' duties
- All work carried out in terms of this specification shall also conform to the requirements of Foskor's General Engineering Specifications, Codes of Practice and other specifications stipulated above
- A competent person appointed under MH&S Act Regulation 2.6.1 (Sub-ordinate Manager) will always manage all work and activities
- A competent person appointed under MH&S Act Regulation 2.9.2 will always supervise all work
- Before any work can start, a proper HIRA and Safe Work Procedure must be drawn up and approved by the following people
 - Milling Workshop Supervisor
 - Milling Section Engineer
 - Foskor SHEQ Department
 - 2.13.1 Appointed Engineer
- The successful contractor will have to supply all safety equipment as required by the Safe Work Procedure. (Lifelines, PPE, knee pads, safety harnesses, 24/32 volt lighting etc.)

6. Drawings, Data and Certificates

- ACM-LNR-00915-0 - Mill Liner Schedule

Foskor Drawing ACM-LNR-00915-0 is a Mill Liner Schedule that gives reference to all liners used, quantities and their individual drawing numbers

A complete set of liner layout drawings is available from the Procurement Office on request.

7. Contractor Evaluation

Enclosed with the tender document, the contractor must submit a company profile stating specifically, amongst others,

- Previous experience in mill re-lining
- Any other major contracts or projects completed within the last two (2) years.
- References relevant to the above two items
- Number of qualified trade artisans that will be utilized for tasks.
- Number of other personnel that will be utilized for tasks.
- Number of shifts (Note: maximum 55 hours per person per week including overtime)

8. Working on Site

The contractor during construction and erection on site,

- shall maintain the working area in a clean, sanitary and safe condition
- will repair possible damage caused to adjacent areas during his part of the construction

The contractor shall in general comply with the FOSKOR General Engineering Specification" SAFETY", GV-1, latest revision and all relevant regulations contained within the Specification

The contractor and all site personnel must complete hazard identification and risk assessment (HIRA), lock out, confined space competency and authorized before a work permit can be issued for the installation. A new HIRA must be completed for each mill reline task

Each HIRA must be reviewed and approved by the Milling Section Maintenance Supervisor and Engineer before any work can commence

The contractor will have to appoint 2.9.2 and 2.6.1 legal appointees and LACA within one month of the awarding of contract

- **The 2.9.2 appointee will resume the duties of the site supervisor and will supervise site work at all times. The 2.9.2 must be a qualified artisan mechanical. Each shift must have its own 2.9.2 appointee**
- **The 2.6.1 legal appointee will resume the duties of site manager and will report to the Milling Maintenance Engineer daily at 07h00 while site work is being done**

The successful contractor must make arrangements with the FOSKOR SHEQ Department for examinations and legal appointments.

The contractor shall be responsible for coordinating and integrating his schedule and responsibilities with other FOSKOR appointed contractors on site for this scope of work

9. Performance

Prior to each job the contractor will be issued a bar chart indicating the sequence of work and duration. The contractor will be required to agree and sign-off on this bar chart

Penalties will be applicable for late completion of work as agreed on the bar chart. This will be a 2.5% of the tendered rate for the job involved for every six (6) hours late or part thereof

Late completion will be penalised unless caused by delays resulting from: -

- Changes to Scope of Work or drawings from Foskor
- Any other instruction or delay caused by Foskor, which is agreed upon by the section engineer
- This excludes instructions given related to the contractor's non-compliance with Foskor SHEQ standards
- Items not specifically mentioned within this Scope of Work document, but are covered under Foskor General Engineering Specifications and which cause delays in completion of work, will not be exempted from the penalty clause

Pre-qualifier				
FOSPHB-RFP-41-25/26 Mills Major Components replacements				
No	Technical Criteria Description	Qualification (Y/N)	Proof/documents to be submitted	Notes
a)	6 ME CIDB		Provide valid CIDB certificate	

Evaluation Criteria (Technical)				
T /25 Mills Major Components replacements				
No	Technical Criteria Description	% Contribution	Proof/documents to be submitted	Notes
1	Company Experience, Capacity and Capability			
a)	<p>Company experience– Previous similar mechanical maintenance, repair and replacement of mill major components work.</p> <p>Scoring:</p> <p>1 year = 25%;</p> <p>2 years 50%;</p> <p>3 years = 75%;</p> <p>4 years = 100%</p>	20%	<p>Bidder must provide reference letters in client's letterhead showing Previous similar mechanical maintenance, repair and replacement of mill major components work.</p> <p>References can be in the form of a reference letter from a client or contract or purchase orders.</p> <p>NB: References to be in client's letterhead.</p> <p>References must be in POs, Contracts, Reference letters or Letters of completion</p>	
b)	<p>Company – Projects valued minimum of R250 000.00 or more in mechanical maintenance, repair and replacement of mill components in the last 5 years in concentrator plant.</p> <p>Scoring:</p> <p>R 250 000 = 25%</p> <p>R 500 000 = 50%</p> <p>R1M and more = 100%</p>	20%	<p>Bidders must submit references can be in the form of a reference letter from a client or contract or purchase orders.</p> <p>NB: References to be in client's letterhead.</p> <p>References must be in POs, Contracts, Reference letters or Letters of completion</p>	
c)	<p>Company – Capability to provide minimum of Skilled Artisan, technicians to perform the Jobs (2 Fitter, 1 Condition Monitoring Specialist, 2Boilermaker, 5 Unskilled labor).</p> <p>Scoring:</p> <p>No CVs submitted = 0%;</p> <p>1 – 2 CVs & Trade tests submitted, with than 4</p>	20%	<p>Bidders must submit CVs and qualifications as per professional.</p>	

	<p>years and all credentials = 25%.</p> <p>3 – 4 CVs & Trade tests submitted, with than 4 years and all credentials = 25%.</p> <p>5 or more CVs & Trade test submitted, with 4 years and all credentials = 100%.</p>			
2	Company Quality management			
a)	<p>Quality Planning, Quality assurance/control plan, Quality Control</p> <p>Scoring: No Quality Plan = 0; Quality Plan not signed off = 50% Quality Plan signed off = 100%</p>	10%	<p>Provide documentation of one (1) previously signed off Project plan.</p>	
b)	<p>Condition Monitoring competency and Equipment (Pin gauges, 3d laser scanner, mill mapper software)</p> <p>Scoring: No report and no proof equipment= 0; Report signed off and pin gauge or 3d scanner = 50%; Report signed off and all Pin gauges, 3d laser scanner, mill mapper software = 100 %</p>	25%	<p>Proof of condition monitoring signed reports and equipment (laser alignment, Girth Gear alignment)</p> <p>NB site visit will be done to confirm equipment</p>	
c)	<p>MQA based Basic health and Safety, First Aid, Hira.</p> <p>Scoring: No Training or some trained 0% All relevant personnel trained 100%</p>	5%	<p>Bidder must submit certificates of employees for Basic health and Safety, First Aid, Hira.</p>	-

Total Technical Score	100.00%		
Note: In order for the bid to be considered the bidder needs to score 70% and above, and comply to all mandatory requirements			

10. Pricing

The attached Pricing Schedule **MUST** be used to submit your prices, failure to submit your pricing on this schedule shall lead to your tender being disqualified.

PLEASE DO NOT CHANGE THE FORMAT OF THE PRICING SCHEDULE.

Any additional costs must be stated in your covering letter.