

Rubber lining

Tender No. FOSCO-RFP-00-2024

Description:

1 INTRODUCTION

The core business of the Foskor Phalaborwa operations is the mining and beneficiation of phosphates. As part of the beneficiation process water is added to crushed ore and milled into a fine slurry. This slurry is passed through the various stages of the beneficiation process. Because of the high abrasive nature of the ore, components such as Mills, pipes, launders, dropout boxes, distribution boxes, chutes, cyclones, sumps and other components need to be protected against wear.

2 SCOPE OF WORK

It is required from the successful bidder or contractor, to remove from the Foskor site all equipment identified for rubber lining or to do rubber lining on site at Foskor premises. The supplier is to carry out the task of applying the required rubber lining. All work to be carried out in accordance with the requirements of this document and SANS (South African National Standards) and OEM (Original Equipment Suppliers) specifications.

3 GENERAL REQUIREMENTS AND RESPONSIBILITIES

- a) Supplier is be responsible for ensuring that he/she is fully conversant with the requirements of this scope and specification. There shall be no substitution of specifications or materials without prior approval by a Foskor representative.
- b) Supplier to remove from the Foskor site all identified items and transport to the suppliers' premises where applicable to carry out the requested work in accordance with this scope, SANS and OEM specifications. (Supplier to provide transport and all equipment required to safely fasten and transport components)
- c) Supplier to apply rubber lining in mills, sumps and equipment in situ. (Supplier must comply with work works permit and necessary training of personnel to work inside Foskor premises.)
- d) Supplier to apply rubber lining in accordance with the requirements of this documents, SANS standards and OEM specifications or in accordance with the relevant product data sheets.
- e) Supplier to ensure that all rubber, glue, epoxy or any other material or consumable is transported, handled and stored in accordance with SANS and OEM specifications. No material that has passed its expiry date may be used.
- f) Supplier to paint all other exposed or non-treated areas of the component in accordance with Foskor engineering specification GM-3, surface preparation and protection specification and in accordance with the relevant product data sheets, the requirements of this document, SANS standards and OEM requirements.
- g) Supplier shall return to site the component where they were removed.
- h) Supplier is responsible for the supply of all materials, consumables, equipment, components, labour, cost of sub-contractors, transportation and any other item or service of expense required to successfully complete the task.
- i) Supplier shall be responsible for planning of the task. A Foskor representative shall have the authority to conduct ad-hoc inspections or instruct hold points as required.
- j) All components will undergo a complete inspection by a Foskor representative to ensure that all the requirements of this scope have been met.
- k) The rubber lining of all equipment must be completed within agreed periods with a Foskor representative.

4 SPECIFICATIONS

4.1 PAINT (UNDER AND OVERCOAT) WILL BE AS PER FOSKOR PAINT SPECIFICATION.

- a) Surfaces shall be prepared in accordance with the paint manufacturers specifications and the supplementary requirements of this scope, where:
- All sharp edges shall be dressed to a radius of not less than 3 mm.
 - All steel surfaces shall be dry abrasive blasted to remove all old paint, grit, oil, grease, rust, mill scale, surface contaminants or corrosion products of any kind and shall be free of any moisture.
 - Prior to the application of the primer, all steel surfaces shall be prepared in accordance with *SANS 10064 The preparation of steel surfaces for coating*.
 - Within 60 minutes after dry abrasive blasting, all steel surfaces shall be blown down, brushed and/or vacuum cleaned to remove all loose particles and primed.
- b) Mixing and application shall be in accordance with paint manufacturer requirements and supplemented by the requirements of this scope, where:
- Unless specified otherwise, the colour of all surfaces shall be light admiralty grey in accordance with SANS 1091 National Colour Standard, colour code E46 (NCS colour code 2312-B58G)
 - Primer or overcoat shall be thoroughly mixed using a power driven mixer for at least 3 minutes before application and frequently during application to maintain contents in suspension.
 - Paint brushes and rollers shall be clean, dry and free of any solvents before use.
 - Primer and overcoats shall be evenly applied, the whole surface to be painted must form a smooth, continuous and unbroken coating.

4.2 RUBBER LINING

- a) Only rubber that conforms to the following specifications and requirements may be used:
- All rubber products must comply to SANS 1198 for the manufacture of rubber sheeting for rubber lining
 - Unless otherwise specified, all rubber sheeting shall be 50 to 55 shore cured black rubber with excellent abrasive, tear and wear resistance for use in pulp and slurry applications.
 - As specified in clause 5.4 of SANS 1198, rubber lining used shall have resistance against ozone, abrasion, tear, wear, water, oil and hydrocarbons.
 - The rubber lining shall be such that the contractor is prepared to state that it will satisfy the physical conditions specified (Abrasive, tear and wear resistance) with regards to extended service life and deterioration by prolonged contact with pulp and slurry. **(RUBBER SHEET SPECIFICATION TO BE INCLUDED IN OFFICIAL QUOTATION)**
- b) Surfaces shall be prepared in accordance with the specifications and requirements of the rubber and adhesive supplier, *SANS 1201 for The application of rubber linings to pipes, pipe fittings and vessels*, *SANS 10064 The preparation of steel surfaces for coating* and the supplementary requirements of this scope, where:
- All sharp edges shall be dressed to a radius of not less than 3 mm, surfaces shall be free of any other sharp protrusions and any damage shall be ground to a suitable finish for rubber lining.
 - All welds shall be ground smooth and flush on the side to be rubber lined.
 - All surfaces contaminated by oil shall be cleaned by live steam, flame or solvent prior to dry abrasive grit blasting.
 - All steel surfaces shall be dry abrasive grit blasted to remove all old paint, grit, rust, mill scale, surface contaminants or corrosion products of any kind and shall be free of any moisture.
- c) The application of adhesive shall be prepared in accordance with the specifications and requirements of the rubber and adhesive manufacturer and the supplementary requirements of this scope, where:
- Steel surfaces to be rubber lined shall be blown down, brushed and/or vacuum cleaned to remove all loose particles and the adhesive applied within the following time span after surface preparation.

Relative Humidity	Maximum Time Span
Over 90%	No application
86-90%	1 hour
80-85%	4 hours
50-79%	8 hours

50 or below

24 hours

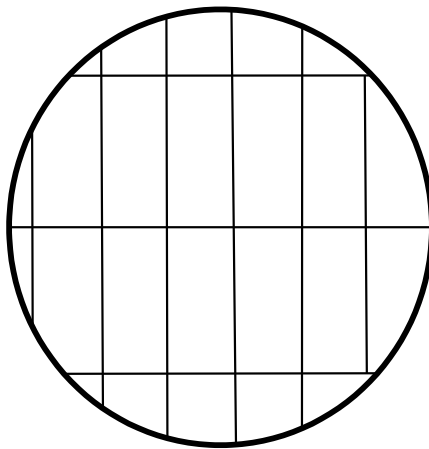
- ii. Adhesive shall be thoroughly mixed using a power driven mixer for at least 5 minutes before application and frequently during application to maintain contents in suspension.
- iii. Brushes and rollers shall be clean, dry and free of any solvents before use.
- iv. Adhesive shall be evenly applied. Adhesive must form a smooth, continuous and unbroken coating.

d)

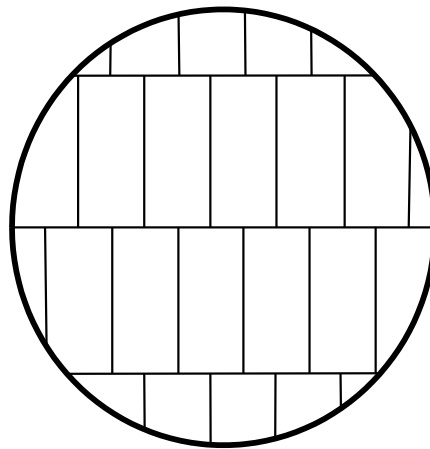
The preparation and application of rubber lining shall be in accordance with the specifications and requirements of the rubber and adhesive manufacturer, *SANS 1201 for The application of rubber linings to pipes, pipe fittings and vessels* and the supplementary requirements of this scope, where:

- i. Take care to ensure that air is not trapped between rubber and casing. If strings (Only cotton) are used for venting, ends will be trimmed so as not to extend onto flange faces.
- ii. Panel lay-up must be staggered so that no area of the lining has more than two layers of sheet stock. Where three sheet corners must come together, the overlay shall be cut down before application of the third sheet. Every effort shall be made to avoid four layer overlaps including staggering alternate panels.

INCORRECT LAY



CORRECT LAY

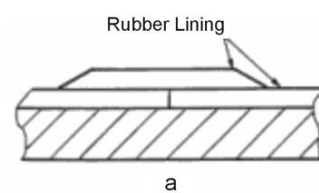
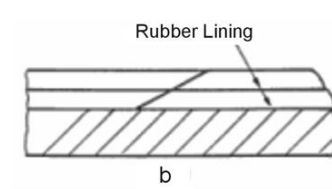
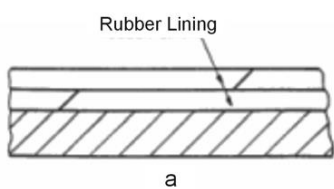
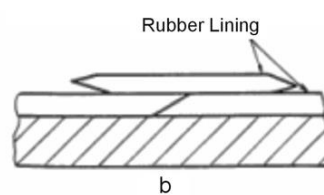
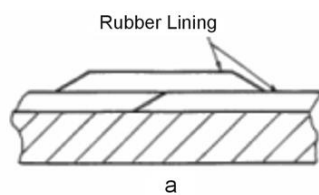
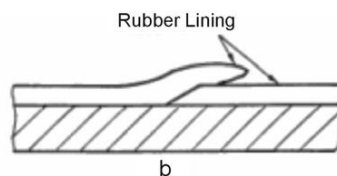
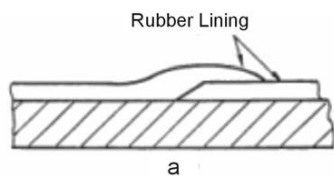


- iii. All edges and seams shall be laid straight, and all lapped seams shall be made by overlapping adjacent sheets by not less than 50 mm. Overlapping edges shall be grinded down so as to give a smooth, neat appearance with no exposed epoxy. The number of seams shall be kept to a minimum, consistent with good workmanship. The bond between adjacent sheets of overlap shall be such that separation cannot occur.
- iv. Butt seams may be used only where lapped seams are impractical. Butt seams shall be covered with a cap strip 100 mm wide and must have 45 degree bevelled edges.

4.3 JOINING OF SEAMS AND EDGES

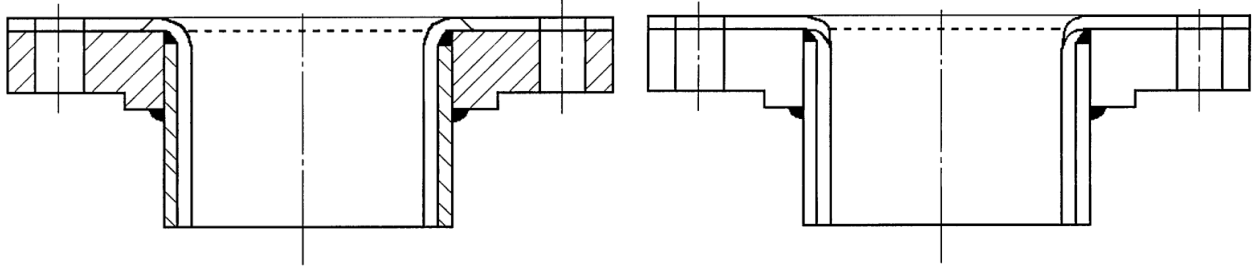
CORRECT (a)

INCORRECT (b)

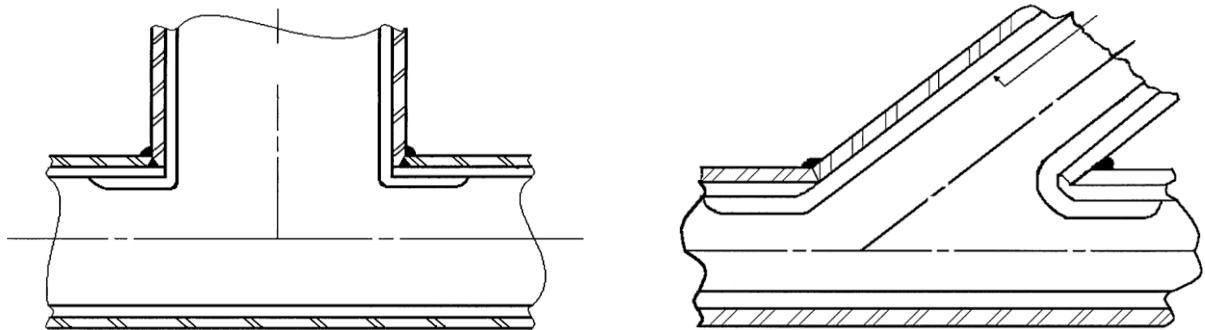


- v. The rubber lining shall extend out on all flanges, manholes, and nozzles. Circumferential joints in nozzles shall be located so as not to restrict the opening.

4.4 FLANGE LINING METHODS TO BE USED



4.5 NOZZLE AND JOINT LINING METHODS TO BE USED



- i. The ambient temperature during lining application shall be maintained between 10°C and 35°C and the relative humidity shall not exceed 90%. The temperature of the surface being cemented shall be at least 15°C above the dew point.
 - ii. Double linings shall be lined such that item “d” (above) is accomplished for the outer lining only. Seams of the underlying lining shall be butt joints and shall not be within 150 mm of the lapped seams of the overlay (Top) lining, unless approved by a Foskor representative.
 - iii. Internal flanges shall be completely lined, including the bolt holes.
 - iv. After cure, all flange faces shall be ground smooth and even.
 - v. High-voltage spark tests, in accordance with the requirements of BS 6374, shall be made before and after vulcanizing. A minimum of 15 kV and a maximum of 40 kV shall be used. These tests shall consist of grounding the steel members, and passing a searching electrode across the entire lined surface. If any defects are revealed, proper repairs shall be made, and the repaired area shall be retested to ensure that the defect has been eliminated.
 - vi. Lining shall be checked for blisters, physical damage, looseness of splices, etc. Defective areas shall be repaired and the lining shall be retested and inspected after cure.
 - vii. All air blisters shall be removed from between the lining and the metal surface. Any air not removed by rolling shall be removed with a hypodermic needle. Each needle puncture is to be capped with a patch. All patches must have 45 degree bevelled edges and be circular with a diameter of at least 50 mm. This repair procedure shall be the absolute last resort. Every effort shall be made to prevent an entrapment when stitching the lining in place.
- e) All pipe openings to be closed using a sheet of hard-board with minimum thickness of 4 mm securely fixed to the pipe flange. Hard-board to cover entire flanged area.

5 SAFETY

- Contractor to refer to the full and updated Foskop COP's available:
- The contractor and subcontractors needs to comply with the Mine Health and Safety act at all times. All Foskop COP's Policies and procedures needs to be adhered to.
- A contractor 2.9.2 to be permanently on site.
- Medical, Induction, Foskop ID Card, etc. is approximately R500 per Person. Exit medicals need to be done at termination of contract.
- The Successful tenderer will be required to compile a Foskop Work permit and at least 2 weeks should be allocated for this. The contractor must provide the following appointed persons in terms of the MHSA: 2.6.1; 2.9.2 and Section 29(1) – SHE REP for the duration of the contract
- All vehicles and cranes and other TMM's to be inspected before entering Foskop Premises.
- All person competencies to be verified before being allowed to work on Foskop premises for a specific task.
- The contractor must compile a Safety File as per Foskop standard for all contractors and sub-contractors
- Site access will need to be controlled and all persons must receive site specific induction before entering the site.
- Conduct inspections as per Foskop Safety System. Analyze data and trends and recommend preventative measures where required
- Ensure all authorizations are in place as per the Foskop Safety System. Arrangement with Foskop training to be done by the contractor to ensure that authorization and training is conducted. Arrange timeously.
- Ensure all workers competencies are available and have been validated.
- Ensure proper security, sign boards, fencing and barricading is in place on site where applicable
- The contractor shall in general comply with the FOSKOR General Engineering Specifications, COP's, latest revisions and all relevant regulations
- The contractor must complete a Baseline risk assessment (COP 26) before a work permit can be issued for the installation
- All contractors not in possession of a valid Foskop ID card have to complete the Foskop induction course and have to undergo a medical examination at the Foskop clinic for the contractor's account
- The contractor shall be responsible for coordinating and integrating his schedule and responsibilities with other FOSKOR appointed contract manager on site for this Scope of Work.
- All personnel operating mobile equipment including LDV's must have a Foskop driver's permit.
- An open Pit License is required for driving in the mining area's
- All the required PPE and Safety Equipment are for the contractor's account.
- All contractors must ensure that:
 - His workers are issued with the correct personal protective equipment free of charge.
 - That the workers wear the PPE in accordance with the project area's requirements or as given by the contractor Supervisor.
 - Training is provided in the correct use of PPE to workers.
 - Daily inspections are done on PPE.
 - The registers will be complete at least monthly on findings on PPE. (All PPE must be kept in good condition)
- All providers of services need be informed of the following minimum training is applicable to all contractors (irrespective of the tasks or scope of work) that will enter Foskop Phalaborwa site with effect from 1 April 2014. This training is not presented by Foskop Training section and service providers must ensure that the training is sourced through accredited external training companies:
 - Basic health and safety principles
 - HIRA
 - Lock out
 - First Aid Training
- All other training requirements must be aligned with the baseline risk assessment. Risks identified in the baseline risk assessment will guide the requirements for training. A summary of the training must be completed as well as status on required authorization as per Foskop COP's.
- Training certificate will be accepted if complying to the following:
 - Unit Standard Title

- Learner Full name
- Learner ID no
- Competency achieved
- Date of Assessment
- Assessors signature
- Training provider logo
- Training provider registration no and accreditation no
- Seta logo

6 LEGISLATIVE REQUIREMENTS

- The successful or appointed contractor shall comply with:
 - The Mines Health and Safety Act with Regulations (Latest revision)
 - The National Road Traffic Act with Regulations (Latest revision)
 - All applicable national and international legislative requirements and regulations.
 - Foskop (Pty) Ltd. COP (Compendium of Procedures) No. 25 for Contractor Control (Available on request)
 - Foskop (Pty) Ltd. COP (Compendium of Procedures) No. 59 for Trackless Mobile Machinery (Available on request)
 - All Foskop (Pty) Ltd. safety, health, quality and environmental procedures. (Available on request)
 - All Foskop procedures and policies applicable to the successful application of the contract. (Available on request)
- Before entering and operating a service vehicle (Own vehicle) on the Foskop site, the appointed contractor shall:
 - Ensure that his driver/s are in possession of a valid national driver's license for the specific class of vehicle, has been tested by the Foskop mobile equipment training Centre and authorized by a Foskop MHSA (Mines Health and Safety Act) regulation 2.13.1 appointee for the class of vehicle to be used on site. (Contact the Foskop mobile equipment training Centre on 015 789 2840 to make an appointment for competence testing and authorizations)
 - The appointed contractor shall, before entering and operating a vehicle or trailer on the Foskop premises:
 - Obtain permission from the Foskop Safety & Security manager to operate his nominated service vehicle/s or trailers on the Foskop site. (Forms will be provided)
 - Obtain a certificate of fitness from the Foskop Light Vehicle maintenance workshop supervisor or appointed Foskop inspector for his nominated service vehicle/s. Inspections conducted daily between 08:00 and 08:30 and between 13:30 and 14:00 (Excl Fridays) at the Light Vehicle Maintenance workshop.
 - Submit the above permission and COF in at the main security office for issue of a vehicle access disk.
 - Ensure that his service vehicles / trailers have been inspected (Daily) in accordance with the Foskop standard (COP 59) to ensure that they are safe and fit for use. (Forms will be provided)
 - See Foskop COP 59, Trackless Mobile Machinery for details.
- Before entering and operating/working on the Foskop site the appointed contractor shall ensure that his driver/workmen are:
 - Briefed on the required task and have been informed of any abnormal conditions/situations.
 - Physically, emotionally and mentally fit to perform their duty.
 - Issued with the necessary PPE (Personal Protective Equipment) to safely operate his service vehicles and perform the duty of maintaining, servicing, inspecting and testing earthmoving- and mobile equipment.
 - Before commencement of work:
 - All tools and equipment shall have been inspected and tested to be in a good and safe working order.
 - All workmen have participated in the completion of a standard Foskop site risk assessment (Commonly known as a HIRA or Hazard Identification and Risk Assessment) and taken appropriate actions to mitigate any identified hazards.
- Before entering and operating/working on the Foskop site the appointed contractor shall ensure that his portable electrical equipment have been tested and declared safe to use by the Foskop electrical services workshop.

- Although every effort has been made to ensure that the information contained within this document is correct, it remains the responsibility of the bidder to verify actual status and site conditions. (A site visit can be arranged)

7 PERMIT TO WORK

Before any on-site work under this contract may commence, the appointed or successful contractor shall obtain from FOSKOR a PERMIT TO WORK. The following guidelines are provided in order to assist the appointed contractor in obtaining a PERMIT TO WORK. (See FOSKOR COP 28, Permit to work and COP 25, Contractor control for details):

- The PERMIT TO WORK can be obtained from- and on completion returned to the Legal Administrator, FOSKOR Safety department.
- Obtain a contract number from the FOSKOR procurement department.
- Appoint a subordinate manager in accordance with Regulation 2.6.1 and an on-site supervisor in accordance with Regulation 2.9.2 of the Mines Health and Safety Act.
 - The appointed subordinate manager and -supervisor shall be required to write and pass the FOSKOR 2.6.1 and 2.9.2 legal examinations within 30 days after being awarded this contract.
 - Attend a hour long legal exam briefing any Thursday between 08:00 and 09:00 at the Security training hall.
 - Write legal examination any Friday between 07:30 and 10:30 at the Security training hall. (Please book)
- **Appoint an on-site SHE-Rep in accordance with section 29(1) of the MSHA to assist the Regulation 2.6.1 and 2.9.2 in the daily on-site management of health, safety and environmental issues.**
 - **The designated SHE Rep must have the ability to read, write and express him/herself.**
 - **The appointed SHE-Rep shall be required to attend a five day SHE-Rep training course within 30 days after being awarded this contract (Training free of charge). Make booking on 015 789 2531**
 - **A pre-requisite for attending the SHE-Rep training course is successful completion of Basic Health & Safety Principals- and HIRA training. (See item 8(a) below)**
 - **See FOSKOR's COP 5 Health and Safety Representatives for details.**
- Provide a name list, including ID numbers, residential and postal addresses and telephone numbers of all of the appointed contractors' on-site employees.
- All of the appointed contractors' on-site employees shall undergo a full medical examination at the FOSKOR on-site Clinic. The clinic can be contacted at 015 789 2427 for an appointment.
- (NOTE: Employees leaving the service of the appointed contractor must undergo an exit medical examination)
- The appointed contractors' designated on-site drivers shall receive competence testing and authorization in operate vehicles on the FOSKOR site (See item 2(a) under the heading LEGISLATIVE REQUIREMENTS).
- All of the appointed contractors' employees shall receive/have received authorized in:
 - First aid level 1 (Provide own training)
 - Basic Health & Safety Principals (Provide own training)
 - HIRA (Provide own training)
 - Basic firefighting. (Provide own- or receive FOSKOR training, contact 015 789 2531 to book)
 - Lock out. (Provide own- or receive FOSKOR training, contact 015 789 2531 to book)
- All training not provided by FOSKOR must be verified by the FOSKOR training superintendent Mr. Johan Fouche. Please contact him on 015 7789 2525 to make an appointment or alternatively email proof of training and certificates to johanfo@foskor.co.za to confirm compliance before requesting his approval on the PERMIT TO WORK.
- All of the appointed contractors' on-site employees shall receive the basic FOSKOR site induction training at the FOSKOR Security office.
- All of the appointed contractors' on-site employees shall receive site specific induction training provided by the FOSKOR area Regulation 2.6.1 appointee/s.
- A HIRA (Hazard Identification and Risk Assessment) shall be completed for ALL "typical" tasks that will be completed under this contract. HIRA's to be signed by all contractor employees. Make use of FOSKOR's own HIRA document, Annexure 1.2, contained in of COP 1, FOSKOR risk management
- All FOSKOR's appointed MSHA Regulation 2.9.2, 2.6.1, 2.13.1 and 3.1.a manager must undersign/approve the PERMIT TO WORK.
- Registration and proof of payment under the Compensation for Occupational Injuries and Diseases Act, no. 130 of 1993. Registration number must be provided.
- SARS issued tax clearance certificate.

- All relevant documentation and/or evidence of compliance must be attached to the PERMIT TO WORK.
- Upon successful completion and approval of the PERMIT TO WORK the security department will issue the appointed contractors' employees with access ID cards valid for 12 months.
- Any other documents, certificates or records as requested by a Foskor official deemed necessary to ensure that all safety, legislative and administrative requirements have been met must be attached to the PERMIT TO WORK.
- The appointed contractor must allow at least three to ten working days to complete all the PERMIT TO WORK requirements.

8 SAFETY FILE

The appointed contractor must compile a SAFETY FILE specifically for this contract. The SAFETY FILE must at all times be available for inspection by a Foskor official: The following guidelines are provided in order to assist the appointed contractor in compiling a SAFETY FILE:

- Title and index cover page
- A copy of the PERMIT TO WORK.
- A copy of the MHSA Regulation 2.6.1 and -2.9.2 and SHE Rep appointment letters.
- A copy of Foskor COP 25, Contractor control.
- Base line risk assessment of ALL and ANY POTENTIAL tasks that may be performed on site under this contract. See Foskor COP 26, Critical Task Descriptions for details.
- Copies of critical task descriptions and standard operating/maintenance procedures.
- Copies of the appointed contractor's safety, health, environmental, HIV and AIDS, smoking and waste management policies.
- Training records of all on-site employees.
- Employee records of actual time worked (Normal and overtime).
- Copy of on-site induction training.
- Records of inspections of TMM (Trackless Mobile Machinery) and trailers. See Foskor COP 59, Trackless Mobile Machinery for details.
- Records of issues and inspections of PPE (Personal Protective Equipment) and safety equipment. See Foskor COP 65, Personal Protection Equipment for details.
- Records of issues and inspections of PEE (Portable Electrical Equipment). See Foskor COP 60, Portable electrical Equipment for details.
- Records of issues and inspections of tools and equipment. See Foskor COP 63, hand tools for details
- Records of daily, weekly and monthly 2.6.1 / SHE Rep safety inspections. See Foskor COP 22, SHE Inspections for details.
- Records of daily green-area and safety talks. See Foskor COP 7, Communication for details.
- Any other documents, certificates or records as requested by a Foskor official deemed necessary to ensure that all safety, legislative and administrative requirements have been met.

Note: Contractor can obtain an update with all Foskor COP's from Foskor Intranet

9 QUALITY ASSURANCE

- The contractor must provide the necessary quality management systems and plans to ensure that the quality of his work complies with the requirements of this scope of work
- The contractor shall during all phases of construction comply with the Foskor approved Quality Assurance Plan
- The contractor shall be responsible for all the resources required for executing the Quality Management System including but not limited to, developing the Quality Assurance Plan & performing the Quality Control measures to ensure that the deliverables comply to the specifications & standards mentioned in the scope of work
- Any change requests / additional work resulting due to inadequate quality management system will be to the account of the contractor
- Foskor might appoint a third party for Quality Control Inspections
- The Contractor will have to provide an approved quality system for all work executed.

- This will include the following but is not limited to:
 - Quality plan
 - Quality compliance – Performance and reports
 - Quantity surveying
 - Quality Assurance
 - Quality Authorization matrix – part of Quality plan
 - Quality control
 - Quality administration. – All documents, checks, measurements, reports, variances, analysis, Corrective actions, etc. needs to be properly filed and available on request at any time. The file will require an index
 - Includes all test work, laboratories, Filing, etc.
 - Survey and survey verifications
 - Construction versus design - Any Deviations from the approved “Construction Drawings”
 - Quality communication – What needs to be reported to whom and at what frequency
- FOSKOR envisage a complete quality System driven by the Contractor and this system / plan will be approved by FOSKOR and the appointed designer (if applicable) before construction/fabrication will be started.
- Compliance to this plan will be measured and failure to adhere to the quality plan will result in the stopping of construction activities until concerns have been addressed. The cost for this delay will be for the contractors account.
- FOSKOR may appoint a third part to measure and control FOSKOR’s interest in the terms of quality in this contract and the contractor is expected to work in conjunction with this company
- Hold points will be discussed and finalized with the successful contractor based on the approved Quality plan
- The Quality plan will only be compiled and signed off after the Method Statement and WBS have been compiled
- Quality on Shutdown type tasks will be included in the Scope of Works but the contractor will have to submit proof of a experienced quality assurer or relevant qualifications. IF the contractor does not have this it will be required that this service be hired in by the contractor at his cost.
 - State any specify hold points that is not negotiable here
 - State any other quality that is applicable that is not in the “Parameters” section
- Method statement – the contractor must list all steps and actions required to complete the work as per the scope of work – typically includes the items listed below
 - Key step and stages of the work required
 - Tools, Equipment, TMMS, etc.
 - Labor requirements, etc.
 - Spares, resources,
 - Safety requirements
- WBS - WBS is a hierarchical and incremental decomposition of the project into phases, deliverables and work packages. It is a tree structure, which shows a subdivision of effort required to achieve an objective; for example, a program, project, and contract. This includes arrangements, tools, equipment labour, Tasks, Purchase, Quality, Communication, etc

10 SPECIFICATIONS, CODES, STANDARDS AND REGULATORS

Latest addition of the South African National Standards in effects at the date of projects design shall establish the minimum requirements for design, materials and construction. This should be referenced with the FOSKOR General Engineering specifications and requirements of the FOSKOR SHEQ system (COP’s)

No work shall be contemplated which is in breach of any of the following regulations:

- Water license (04/B72K/ACGIJ/962)
- Occupational Health and safety Act
- South African Mine Health and Safety Acts and regulations (Act 29 of 1996)
- Explosive acts and regulations - South Africa
- DWA and the national water act.
- FOSKOR COP’s
- FOSKOR Engineering Specifications
- The latest revisions of the SANS standardized specifications and FOSKOR Specifications as applicable at the time of quotation shall apply to this contract.

- The equipment to be capable of continuous operation 24 hrs./day, 365 days/year with operating availability equal to 100%.

11 COMMERCIAL

- Any other optional support or guarantee not mentioned in this scope may be noted on the official tender.
- Quotation prices to be valid for a period of **12 MONTHS**.
- The supplier may also quote on other grades of rubber lining material.
- Provide detail specifications for general price increase after 12 month period. (Example, CPIX + 2%)
- If any minimum requirements may alter or be added for whatever reason, it will be brought to the attention of the contractor before the closing date for the submittance of tenders.
- All meetings will be held on site, unless arranged otherwise.
- All tendered prices to be exclusive of VAT.
- THE ATTACHED PRICING SCHEDULE IS TO BE USED AS ONLY THIS WILL BE ACCEPTED AS THE OFFICIAL QUOTATION.**

12 SITE GEOGRAPHY

Ambient conditions

- Ambient temperature

Summer	35 Degrees Avg	50 Degrees Max
Winter	17 Degrees Avg	2 Degrees Min

- Site Altitude: 380m
- Prevailing wind direction: Generally South Easterly - Maximum design velocity 40m/s (144km/h)
- Very dusty conditions
- Average annual rainfall = 540 mm

13 QUOTE ON THE FOLLOWING CATEGORIES:

- REMOVE OF EXISTING RUBBER PER SQUARE METER
- INSTALLATION OF RUBBER PER SQUARE METER ON SITE
- INSTALLATION OF RUBBER PER SQUARE METER IN WORK SHOP
- PRICE FOR LINATEX PER SQUARE METER SUPPLIED/THICKNESS
- PRICE FOR NATURAL BLACK RUBBER PER SQUARE METER SUPPLIED/THICKNESS 50-55 SHORE(IRHD)

14 TENDER EVALUATION CRITERIA

- As part of the process to assist with the evaluation of the bidders' proposal/quotation and to make an informed decision in the awarding of this tender, the following information is required
- The following tender evaluation criteria will be used for adjudicating the Contractor submitted tender.
- Please provide the required documentation as requested in the "Proof/documents to be submitted" column. Please be specific when submitting documents by ensuring it answer the item specified.
- Please use the annexure number as indicated to identify proof submitted.
- Failure to submit the relevant documentation as requested in the Evaluation criteria document may lead to a disregard of the submitted tender.

Technical Evaluation Criteria

Evaluation Criteria (Technical)				
T				
No	Technical Criteria Description	% Contribution	Proof / documents to be submitted	Notes
1	Experience & Team competence			
a)	Company – Bidders required to have any of the below previous experience. 1. Rubber lining 2. Pipe manufacturing. 3. Repairs Or of similar pipes specifications Scoring: 1 year 05% 2 years 10% 3 Years 15% 4 years or 20%	20%	Give reference list of projects, with values and contact numbers for verification. Bidders must submit reference letters in a client's letterhead.	
b)	Rubber lining Projects Experiences in mining environment in the last 5 years for similar pipes specifications. Scoring: R250 000 10% R1 000 000 15% R2 000 000 20%	20%	Give a reference letter on a client's letterhead showing the duration of the contract.	

	Evaluation Criteria (Technical)			
	T			
No	Technical Criteria Description	% Contribution	Proof / documents to be submitted	Notes
c)	Contractor Workshop Storage Capabilities Scoring: No equipment = 0 %; 2- 3artial Equipment = 5 % All Equipment = 10 %	10%	Equipment to use onsite for rubber lining works, minimum equipment required: 1. Stickers 2. Sandblast pot and hoses. 3. Hand tools 4. PPE (Respiratory equipment, Lights , Fan) Bidders to provide proof of purchase and the PPE register.	
d)	Capability to provide staff skilled in Rubber lining. Submit proof of company skill competency. Scoring: No Comply = 0 %, Comply 10 % - Mandatory	10%	Bidders must provide employee's CVs with rubber lining or similar experience (rubber liners)	
No	Technical Criteria Description	% Contribution	Proof / documents to be submitted	Notes
2	Company's Quality Management & Delivery Capability			
a)	Rubber lining specification Scoring: Provide Rubber sheeting Specification: 15% Cannot provide a specification sheet Specification: 0%	15%	Provide proof of Rubber specification sheet including storage plan with prescribed temperatures.	
b)	Quality Planning, Quality assurance/control plan, Quality Control Scoring: No Quality Plan = 0; Quality Plan not signed off = 05 %; Quality Plan signed off = 10 %	15%	Provide documentation of one (1) previous signed off quality inspection.	
c)	Environmental Compliance and Accreditation Scoring: No Comply = 0 %; Comply 10 %	10%	Provide proof of environmental management aspect compliance.	
	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			

ACCEPTANCE

The conditions and requirements as stated in this "Scope of Requirements" are accepted with the following exceptions:

Signed _____

Date _____

Annexure A – INCLUSIONS AND EXCLUSIONS

WHO WILL SUPPLY THE FOLLOWING?					
N/A = NOT APPLICABLE					
C = CONTRACTOR					
FF = FOSKOR, FREE OF CHARGE					
FC = FOSKOR, AT COST TO CONTRACTOR					
1.Sanitary –		2.Transport		3.Electrical	
1.1 Water on site and toilet facilities / janitorial services	FF	2.1Labour	C	3.1 Generators	C
1.2 Potable connection point	FF	2.2 Materials	C	3.2 Electrical Extensions	C
1.3 Connection to construction water supply	FF	2.3 Equipment	C	3.3 COC Site Establishment	C
1.4 Change rooms	FF	2.4 All TMMS	C	3.4 Temporary lighting	C
				3.5 Electrical connection point	FF
				3.6 Connection to Electrical supply	C
				3.7 Electric panel + distributing wiring	C
				3.8 Power for tools on site fro existing Foskor electrical supply point (Welding plugs and 220v plugs	C
4. Quality –		5. Security		6. Lifting and Rigging	
4.1 Plan, Management, QA, QC, etc	C	5.1Site Security	C	6.1 All rigging equipment (Slings, Chain blocks, turfers, etc	FF
4.2 All quality test Civil, Paint, Mechanical, etc	C	5.2 Foskor ID Card	C	6.2 Rigger	FF
4.3 Sampling and laboratory testing	C			6.3 Mobile cranes and any other lifting devices	FF
7. Medicals -		8. Communication devices – All communication devices like laptops, computers, networks, radios, cellphones, etc	C	9. PPE	
7.1 Entry and Exit	C			9.1 Supply, Issue, inspect and manage	C
7.2 First aid box at place of work	C				
10 Site Surveys	C	11. Safety File - Foskor will issue template	FF	12 Training & Authorizations	
		Ensure file conform/ populate to Foskor standards	C	12.1 All Required Training	C

				12.2 Authorisation - As Per FOSKOR COP	FF
13. Site Establishment		14 Waste management on site		15 Painting - All Equipment and tools paint, labour , etc.	C
13.1 Site office/s with suitable facilities for daily "Green Area" meetings, and lunch area	C	14.1 Transport all waste to FOSKOR designated waste sites	C		
13.2 Site establishment space	FF				
16 Scaffolding		17 Labour		18. Compressed air	
16.1 Scaffolding Supply & Erect	FF	17.1 All labour as per Scope of Work to execute task including management	C	18.1 Sandblasting or flash blast	C
16.2 Scaffolds be managed by the Contractor	C			18.2 Compressor	C
16.3 Cherry Picker's – only if and when available by pre booking	FF			18.3 Air for power tools - If available	FF
16.4 Cherry Picker's Driver– Trained and authorized driver	FF				
19 Fuel		20. Storage and inventory control		21 Consumables	
19.1 Fuel Supply	C	20.1 Protective coverings/tarpaulins	C	21.1 Welding rods	C
19.2 Fuel storage	C	20.2 Storage area and inventory control	C	21.2 Bolts & Nuts	C
19.3 Fuel fire protection	C			21.3 Ect	C
19.4 Refueling	C				
22 Tools & Equipment		23 Certificates -		24 Training	
22.1 All Portable Electrical Equipment	C	Supply All certificates as required	C	All required training and training manuals as required to ensure that FOSKOR can train its workforce and operate the plant / equipment safely	C
22.2 Hot Work Equip as per FOSKOR COP - Welding Machines, Gas Cutting, Grinding, Gauging, etc	C			All manuals and related documents to be supplied to project Eng and FOSKOR Drawing office for safe keeping	C
22.3 Tools as required to execute task	C				

Annexure B – Training Matrix

		Training Unit STD			Legal Appointees				Job Specific/Risk based training requirements															Environmental			
		Basic health and safety principles	HIRA – Including Authorization	First Aid Training (Level 1)	SHEQ COP Level 1	COP 25: 2.9.2. Legal Exams	COP 25: 2.6.1 and 2.9.2 Legal Exams	COP 25: SHE REP	COP 56: Lifting equipment & lifting tackle	COP 94: Perform Hot work	COP 53: Lock Out	COP 59: Foskor TMM License	COP 59: Open Pit License	COP 96: Working at Heights	COP 93: Working on a conveyor belt	COP 94: Operate gas cutting equipment	Basic fire fighting	Artisan (red seal)	COP 96: Mobile Elevating Work Platform	COP 95: Confined Space	COP 86: Noise	Drowning Hazard & Water Rescue	COP 62: General electrical equipment	Radiation Awareness	ISO 14001 Awareness	Environmental Awareness	ISO 9001 Awareness
Minimum Requirements		R	R	R	R	R	R	R	R	R			R	R	R	R	R		R	R		R					
Requirements based on Project risks																											
Comp nr	Name																										

Legend:

Completed training ✓

Outstanding X

Requirement R

Annexure C – Training Matrix

ID	Item or aspect	Typical approach	Comments
1	Scope changes after awarding of the tender	- Change management Register - ECO Book, Site instructions. - Motivation and approval as per Foskop Policy and Procedure. - Review of supplier drawings; risk assessment done in advance of site meeting to be added in bill of quantity	Change management register to be implemented. Evaluate the validity of the scope change in terms of feasibility and cost. Approval by Foskop in writing before any work starts
2	Construction services to be provided by Foskop: Potable water, communication; waste removal; sewerage and electricity	To be added to the bill, for contractor to price and maintain under P&Gs; power can be obtained from pump station; extension of electricity to tower for contractor's action	For the contractors account
3	Configuration management - manage project documentation, Drawings, As built Drawings, Changes, Specifications, Manuals, etc.	- Have a configuration management policy. - Audit effectiveness. - All document to be transmitted to Foskop. - Drawing submission process and live design file.	Implement and administrate the Configuration management system. Ensure Contractor caters for proper control
4	Cash flow control	Contractors responsibility and accountability to provide Foskop with relevant financial information	Contractor to provide and update Cash flow and cash flow forecasts for the duration of construction activities.
5	Poor contract management	- Foskop contract management system - Sign contracts to be in place Prior to work commencement	Contract need to be signed by legal department with Vendor prior to the commencement of the work.
6	No Quality Management system	- Foskop Clerk of Work inspections - Review of the Contractor's system - Audit contractor System. - Third party Mechanical Inspector hired to do inspections during Equipment manufacturing - Civil Clerk of Works appointed by contractor - Contractors Quality Control Plan. Contractors Quality Assurance, Contractors Quality Control - Quality File (Complete) to be transmitted as part of project closure	For the contractors account
7	Non compliance to all legal requirements	- Foskop SHEQ System - Audits as per Foskop SHEQ systems - Ensure Compliance by Environmental Dept. - Audits - Foskop Policies and procedure - Environmental part of Project meetings - Contractor to drive and implement (Audit and control) Contractors responsibility and accountability	All SHEQ related issues as per Foskop safety system
8	Fire on construction site	- Follow Foskop COP's and Procedures - Have and Emergency plan. - Emergency response part of contractor's responsibility and accountability	Include in emergency plan. Emergency plan to be in Contractors responsibility
9	Delay in commissioning of project	Ensure schedule compliance by regular project management meetings	Control & manage work breakdown schedule /project plan. Contractor to provide formal progress information on a weekly basis
10	Labour unrest	- External labour unrest to be monitored in suppliers and contractors - Contractors / Suppliers will inform Foskop of possible action or impact	Contractor to keep Foskop informed on labour stability throughout the project. Contractor to have contingency plans ready for labour unrest situations.
11	Rain	Adjust project schedule to cater for rainy days (Major rain not catered for)	

12	Risk management not taking place	Risk management to be conducted and register compiled and managed	Risk Assessment to be in place and form part of Project progress meetings
13	Capacity of Sub-contractors	Contractor to apply penalties when applicable.	Control work breakdown schedules and execute plans strictly. Main contractor to ensure competent subcontractors
14	Bad Weather, (rain and heat)	Contractor induction on site, weather station to monitor temperatures, regular breaks to be provided. Stop working in extreme weather condition. To be determined by Engineer on site	
15	Construction Quality Supervision	As per the contractors Quality control plan, Assurance and control	Foskor will appoint a resident Engineer to manage and control site activities
16	Animals in the construction area	All working areas should be fenced off to deter animals from walking on to site wherever possible; Contractors health and safety plan should cater for this.	Avoid animals as far as possible
17	Shock from live electricity	All cables and electrical equipment should be isolated where necessary and all dead cables should be checked to ensure there are no live electricity or stored energy left	