

Project Name : The Provision of Maintenance and Repair of all Komati Water Scheme Steel Pipeline for a period of five (5) years, on an as when required basis.

Item No.	Description	Unit	Qty	Rate	Total
A	Preliminaries and Generals				
	Medicals for site team	Annual	5		
	PPE for site team	Annual	5		
	Safety File	Annual	5		
Sub total					R -

SCOPE OF WORK FOR THE REPAIR OF VJ COUPLING A

	Description	Unit	Qty	Unit Price	Total
C	Site establishment and De- establishment	Every Repair	2		
	25 Ton Truck Mounted Crane	Every Repair	2		
	Accommodation	Every Repair	2		
	Travelling / Transport - Truck Mounted Crane	km	5800		
	Travelling / Transport - Kombi for transporting employees	km	13800		
	Travelling / Transport - Truck for tools	km	13800		
	Use attached drawings(Bosloop to Winterhoek pipeline VJCoupling pipeline repair), (Bosloop to Wintershoek pipeline coupling) as reference to produce final and approved drawings and designs for the pipe leak repair.	Every Repair	2		
	Before any wok can commence on site, the design for the temporary supports to be placed at points A and T (on attached drawing) will be Accepted by Eskom. At point A and point T the temporary supports must be able to support the weight of the exististing once it is cut For quotation purposes, the existing pipes dimentions are 1200NB X 16meters long X 15mm thick with 20mm mortar lining	Every Repair	2		
	The Existing pipe must be cut at point B, before the existing support C. At point S the exististing pipe must be cut 100mm after the existing support R	Every Repair	2		
	Fabricate four pipe sections as indicated on drawing points D, F,O, and Q. The pipe should be mortar lined.	Every Repair	2		
	Supply 2X Klamflex couplings for points E and P. refer to "Bosloop to Wintershoek pipeline coupling" drawings Consider ambient temperature while fitting clamps to ensure correct setting gap.	Every Repair	2		
	3 X permanent supports to be cast for point G, J and N as per approved plinth design compiled by contractor and approved by Eskom	Every Repair	2		
	Supply 1200NB pipe , 15mm thick for quotation purposes, 2x6m long with 2X lifting lugs at points I and L. The pipe should be mortar lined	Every Repair	2		
	Prepare pipes and fillet , weld inside and outside at point B, H, M and S on site. Allow an extra 4 welds in case of unplanned conditions on site	Every Repair	2		
	All welds shall comply with the API1104 standard. (8mm fillet weld).	Every Repair	2		
D	All pipe sections to be coated with "2 pack Epoxy" externally with a minimum 250µm dry film thickness plus recoatable polyuratethane brilliant green H10 40µm topcoat	Every Repair	2		
	Include 3rd party for welding test MPI and to use a test report	Every Repair	2		
	Supply 4 X 1200NB smart seals(for quotation purposes, final sizes to be confirmed on site) 2 complete with stainless steel compression rings from Delmon Mining and Civils	Every Repair	2		
	Supply 8 X 500ml EPIDERMIX 365 clear from ABE	Every Repair	2		
	For the duration of the project on site, the contracror will be responsible for the following: - -The supply of the mobile generator suitable for cutting and welding on site -Welding and cutting machines -Lifting machines and lifiting tackle in line with "Driven Machinery Regulation" -Drinking water, portable toilets, tools and consumables -Work would be done at an open veld	Every Repair	2		
	TOTAL COSTS FOR DESIGNS FABRICATION AND INSTALLATION OF THE VJ COUPLING				
	SCOPE OF WORK FOR THE REPAIRS OF THE SCOUR VALVE (B)				
	Description	Unit	Qty	Unit Price	Total
	25 Ton Truck Mounted Crane	Every Repair	2		
	Accommodation	Every Repair	2		
	Travelling / Transport - Truck Mounted Crane	km	4600		
	Travelling / Transport - Kombi for transporting employees	km	4600		
	Refer to the paragraph in 3.1 for repairs to scour pipe. Point A- In order to expose undamaged section of the pipe, cut concrete 1500mm X 1500mm X 200mm depth from the surface of the slab	Every Repair	2		
	Point B- Cut pipe 10mm from the remaining concrete surface Weld 200NB, 15mm thick pipe, 400mm long pipe to extend the pipe concrete surface	Every Repair	2		
	Point C- Weld 200NB, 15mm thick, 90° long radius elbow pipe to extended pipe	Every Repair	2		
	Point D- Weld a flange with a drilling table matching the existing valve. (for quotation purposes, consider it to be BS4504 of 1989 PN40 drilling table) Fabricated pipe sections should be corrosion protected to DWS9900 specifications	Every Repair	2		
	All pipe lining sections to be 400µm minimum and to be coated with "2 pack Epoxy"externally with a minimum 250µm dry film thickness plus recoatable polyurethane Brilliant green H10 40µm topcoat	Every Repair	2		
	Include 3rd party for welding test MPI and to issue a test report	Every Repair	2		
	For the duration of the project on site, the contracror will be responsible for the following: - -The supply of the mobile generator suitable for cutting and welding on site -Welding and cutting machines -Lifting machines and lifiting tackle in line with "Driven Machinery Regulation" -Drinking water, portable toilets, tools and consumables -Work would be done at an open veld	Every Repair	2		
	TOTAL COSTS FOR THE FABRICATION AND INSTALLATION OF THE SCOUR PIPE				

Estimate for Truck Mounted Crane for 8 days on site
Estimated 28 days for 10 people - VJ Coupling
Estimated 1300 return trip plus 1600 site travelling for 8 days
Estimated 1300 return trip plus 5600 site travelling for 28 days
Estimated 1300 return trip plus 5600 site travelling for 28 days

Estimate for Truck Mounted Crane for 5 days on site
Estimated 5 days for 5 people - Scour Valve
Estimated 1300 return trip plus 1000 site travelling for 5 days
Estimated 1300 return trip plus 1000 site travelling for 5 days

SCOPE OF WORK FOR THE REPAIRS OF STEEL PIPE SECTION (C)

	Description	Unit	Qty	Unit Price	Total
	25 Ton Truck Mounted Crane	Every Repair	2		
	Accommodation	Every Repair	2		
	Travelling / Transport - Truck Mounted Crane	km	6600		
	Travelling / Transport - Kombi for transporting employees	km	6600		
	Fabricate steel pipe section making attached drawings as reference, once final sizes are confirmed on site	Every Repair	2		

Estimate for Truck Mounted Crane for 10 days on site
Estimated 10 days for 10 people
Estimated 1300 return trip plus 2000 site travelling for 10 days
Estimated 1300 return trip plus 2000 site travelling for 10 days

E	Internal corrosion protect pipe with cement mortar lining 20mm thickness and allow for mortar lining repairs on site after welding	Every Repair	2		
	Apply bitumen primer on pipe external only	Every Repair	2		
	All welds shall comply with the API1104 standard. (8mm fillet weld).	Every Repair	2		
	Include 3rd party for welding test MPI and to issue a test report	Every Repair	2		
	For the duration of the project on site, the contractor will be responsible for the following: - -The supply of the mobile generator suitable for cutting and welding on site -Welding and cutting machines -Lifting machines and lifting tackle in line with "Driven Machinery Regulation" -Drinking water, portable toilets, tools and consumables -Work would be done at an open veld	Every Repair	2		
	Cut and remove pipe section on site to accommodate fabricated pipe section. Note that existing pipe is mortar lined and access point is about 200m from the leaking area	Every Repair	2		
	Prepare pipe ends and fit new pipe section	Every Repair	2		
	Weld pipe in position inside and outside, use 150NB stub for cables and pipes	Every Repair	2		
	Include 3rd party for welding test MPI and to use a test report	Every Repair	2		
	Repair mortar lining and cover welded areas	Every Repair	2		
	TOTAL COSTS FOR FABRICATION AND INSTALLATION ON SITE				
	SCOPE OF WORK WORK FOR REPLACING PRE-CAST CONCRETE PIPE WITH STEEL PIPE (D)				
	Description	Unit	Qty	Rate	Total
F	25 Ton Truck Mounted Crane	Every Repair	2		
	Accommodation	Every Repair	2		
	Travelling / Transport - Truck Mounted Crane	km	6600		
	Travelling / Transport - Kombi for transporting employees	km	6600		
	Fabricate four concrete to steel pipe adaptor as per Eskom drawing number 0.80/6135 Rev.1	Every Repair	2		
	Inspection and release for coating. Note: the face to be welded on site shall have antirust material	Every Repair	2		
	Corrosion protection to DWS 9900. Solvent free epoxy	Every Repair	2		
	Inspect and release for site work	Every Repair	2		
	Cut four sides(allowing for pieces if there are gaps on site) of 1100 nominal bore 15mm thick pipe and prepare for welding	Every Repair	2		
	Provide two lifting lugs and weld them on the pipe	Every Repair	2		
	supply 4 X 1200NB smart seals(for quotation purposes, final sizes to be confirmed on site) each complete with 2 stainless steel compression rings from from Delmon	Every Repair	2		
	Supply 8 X 500ml EPIDERMIX 365 clear from ABE	Every Repair	2		
	Supply 4 X 20mm round bar rolled to 1180 OD steel grade 300WA	Every Repair	2		
	Fit two concrete to steel pipe adaptor on both concrete pipes prepared on site	Every Repair	2		
	Position steel pipe between adaptors and align for welding	Every Repair	2		
	150mm stubs on the adaptor will be used for cable during welding, mobile welding and generator shall be provided by contractor	Every Repair	2		
	Weld both sides of the pipe inside and outside to adaptors (Note: confined space work)	Every Repair	2		
	For the duration of the project on site, the contractor will be responsible for the following: - -The supply of the mobile generator suitable for cutting and welding on site -Welding and cutting machines -Lifting machines and lifting tackle in line with "Driven Machinery Regulation" -Drinking water, portable toilets, tools and consumables -Work would be done at an open veld	Every Repair	2		
	Include 3rd party for welding test MPI and to use a test report	Every Repair	2		
	Include lifting machine and tackles for site work	Every Repair	2		
	TOTAL COSTS FOR FABRICATION AND INSTALLATION ON SITE				
TOTAL COST FOR ONE YEAR					

Estimate for Truck Mounted Crane for 10 days on site
Estimated 10 days for 10 people
Estimated 1300 return trip plus 2000 site travelling for 10 days
Estimated 1300 return trip plus 2000 site travelling for 10 days