

PART C2.2: PRICING DATA

Price List

Item	Description	Unit	Qty	Rate	Price
	Koekemoer 3 kV DC Traction Substation				
A	INDOOR WORK				
1	Supply and Install AC primary circuit breaker control panel . They must have all their protection relays and associated cables in accordance with. Transnet Freight rail Specification BBB.2721 ver-10	ea	1		
2	Supply and install AC/DC distribution panel with all protection relays and associated cables in accordance with Transnet Freight Rail Specification BBB.2721 ver-10	ea	1		
3	Supply and install 6MW, 3kV DC Rectifier with its associated control equipment in accordance with Transnet Freight Rail specification BBB 0496	ea	1		
4	Supply and install a complete mechanical interlocking system with a set of its mechanical keys in accordance with Transnet Freight rail specification BBB5452 ver 6.	sum	1		
5	Supply and install a 1.83 mH 3kV DC air core Reactor in accordance with Transnet Freight Rail specification BBB 3890	sum	1		
6	Supply and install Wave filter equipment with its cables and busbars.It must be in accordance with Transnet Freight Rail specification BBB 3139 for capacitor, and Specification BBB 3162 for inductor coil.	sum	1		
7	Supply and install 3kV DC Positive isolator and its associated cables in accordance with Transnet Freight Rail specification BBB4724 ver 4	sum	1		
8	Supply and install a 53 cell 110v Planté lead acid battery bank . The capacity of the battery should be 100 ampere hour.	ea	53		
9	Supply and install a 110v Battery charger in accordance with Transnet Freight rail specification 2502 ver 6. Free standing battery charger	ea	1		
10	Supply and install 3kV DC high Speed circuit breaker with FPR in accordance with specification CEE.0099	ea	4		
11	supply and install a 3kV DC undervoltage relay with a high voltage potential divider in accordance with Transnet Freight Rail Specification BBB 3005	ea	1		
12	Supply and install Telecontrol system with its associated control cables and cards	sum	1		
13	Supply and install 3kV DC earth leakage relay in accordance with Transnet Freight Rail specification BBB 2721, and drawing CEE-TBD-0007.	ea	1		
14	Install indoor earthing with all its cables in accordance with Transnet Freight rail drawing CEE-TBD-0007	sum	1		
15	Improve the security features of the substation (cameras, alarms, Clear Vu fence with barbed wire in addition to the wall around the substation, and Distributed Acoustic System on the Fence,etc.)	sum	1		
SUB TOTAL FOR Koekemoer SUBSTATION INDOOR WORK:					

Koekemoer 3 kV DC Traction Substation					
B	OUTDOOR WORK				
16	Supply and install Primary Metal Oxide surge arrester and supporting steel structure in accordance with Transnet Freight Rail specification BBB 0845	ea	3		
17	Supply and install High voltage AC disconnects and supporting steel structure in accordance with Transnet Freight Rail specification BBB 7842	sum	1		
18	Supply and install High voltage SF6 AC primary circuit breaker and supporting steel structure in accordance with Transnet specification BBB 0938 or BBB 1267.	sum	1		
19	Supply and install Main Current Transformers(metering 50/5, protection 50/1 & rating 5-1 kA)and supporting steel structure in accordance with Transnet freight rail specification BBB 0937	ea	2		
20	Supply and install 5 MVA, 88 000/2445 V, 3phase – 6 phase,Step down Main Traction Transformer in accordance with Transnet freight rail specification BBB 5019	ea	1		
21	Supply and install a three phase 150kVA, 635/400 V Auxiliary Step down Transformer with its barrier fence, gate and lock in accordance with Transnet Freight rail specification BBB 2721	ea	1		
22	Supply and fill the Main and Auxiliary transformers with Transformer Oil, around 15 000 litres in accordance with Transnet specification BBB0937	sum	1		
23	Supply and install the AC-earth leakage system complete in the HT outdoor yard as per Specification no. BBB 3059 and drawing no. BBB 3620	ea	1		
24	Re-do complete outdoor/HT earthing. All material to complying with Transnet Freight rail specification BBB 3059 and drawing BBB 3620	sum	1		
25	Construct a security wall around the substation Perimeter (sum of four sides)= 2L+2W =100m+40m = 140m Height= 2.5m to 3m	sum	1		
26	Supply and install a Hot dipped galvanised lockable gates (2*5m sliding gates and 2*1.5m swing gates) in accordance with Transnet Freight Rail specification BBD 9751 and drawing CEE-TDF-0016. gate leading to HT yard should have a spark gap and gate switch	ea	4		
27	Supply and Install new all outdoor Flying busbars/ connecting aluminium conductors in accordance with Specification BBB5452 ver 6.	Sum	1		
28	Supply and install all wall bushings in accordance with Transnet Freight Rail specification BBB 5452	ea	9		
29	Perform Soil rehabilitation, Supply and install new yard stones (19mm). Square meters for Yard stones= 840m²	sum	1		
30	Supply Metal Chequer plates in accordance with Transnet Freight Rail specification BBB 5452 7	Sum	1		
31	Design, Construction & Commissioning of Substation Building with IBR roofing Wall Perimeter=2L+2W =32m+20m = 52m Height = +/-6m	Sum	1		

32	Supply and install Secondary Metal Oxide surge arrester and supporting steel structure in accordance with Transnet Freight Rail specification BBB 0845	ea	6		
33	Supply and install Distribution Box (DB), wiring, indoor and outdoor lights, plugs, sockets and switches	sum	1		
34	Supply and install safety doors (1* double safety door and 3* single safety doors and electronic locks) Transnet spec BBC 2045	sum	1		
35	Supply and install 3 KV DC Busbar Chamber equipment's	sum	1		
36	Supply and install various HV cables and LV cables	sum	1		
37	Supply and install window burglars, building fan and all applicable electrical signs	sum	1		
38	Install negative return system in a form of Rail on sleepers	Sum	1		
39	Supply and install all material needed to connect the substation to the OHTE(construct the overhead flying busbars to the Ohte: material required include: 4* 3KV Wall bushings. Steel structures, 4* track switches, 4* 3KV DC capacitors, 4* 3KV lightning arrestors, insulators, etc.)	Sum	1		
40	Supply and install Earth Switch	Sum	1		
41	Testing and Pre-commissioning.	Sum	1		
42	Provide 24/7 security for the duration of the project	sum	1		
43	Supply and deliver 400V/6.6KV, 100KVA step up transformer, 3 –phase, Star/Star (Yy0)	ea	1		
44	P's & G's	sum	1		
SUB TOTAL FOR KOEKEMOER SUBSTATION OUTDOOR WORK:					
	Total sum for Koekemoer (EXCL VAT)	R			
	VAT	R			
	Total sum for Koekemoer (INCL. VAT)	R			