

**ESKOM ROTEK INDUSTRIES PROJECT
ELECTRICAL INSTALLATION BILL OF QUANTITIES
BILL NO0 :PRELIMINARY & GENERALS: ELECTRICAL
INSTALLATION**

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
NOTE:	The complete installation must comply SANS 10142 specifications and the Quality specification in this document. Therefore Tenders are advised to study the specification and drawings before the Bill is to be price.				
1.1	In accordance with the Conditions of Contract, provide for all expenses, obligations and general items pertaining to such conditions and all items not specifically specified or mentioned to enable the works to be completed in a satisfactory manner.				
1.1.1	Fixed Portion	Item	1		
1.1.2	Variable with contract period	Item	1		
1.1.3	Variable with contract price	Item	1		
1,2	SECURITY Security for the full contract period	Item	1		
1,3	STAFF CLOTHING hard hats at all times on site, for the duration of the contract, name tags must be provided to all the employees on site, whether in work clothes or not.	item	1		
1,4	HEALTH AND SAFETY PLAN Provide a Health and Safety Plan in accordance with the OHS Act Construction Regulations, attend H&S meetings as required, report on compliance with H&S Plan, Provision for Special Lighting in the Assembly Hall	item	1		
1,5	CONTRACT MANAGEMENT Full time contract management and supervision of the works including liaison with Principal Contractor, other Subcontractors, meetings and submission of installation programme including weekly revisions thereto from time to time or as may be required by the Principal Contractor or Employer.	item	1		
1,6	Provide print outs of all devices, device addresses, type of devices, zones, and quantities, etc. for each zone per fire panel of the existing installation before the works start, for all existing fire panels.	item	1		

1,7	Provide print outs of all devices, device addresses, type of devices, zones, and quantities, etc. for each zone per existing PA/Evacuation panel of the existing installation before the works start.	item	1		
1,8	<p>AS-BUILT DRAWINGS with OPERATIONS AND MAINTENANCE MANUALS</p> <p>Provide a complete set of As-build drawings and provide three sets of O&M</p> <p>The Sub Contractor must mark a complete set of drawing with all changes made on the latest revised drawings issued by the Electrical Engineer. The contractor must arrange for a meeting with the Electrical Engineer to discuss the mark-up drawings. The Electrical contractor as well as the Foreman on site that was responsible for the works on site.</p>				
1,9	<p>All devices, device addresses, isolator positions and cable configuration must be indicated in the drawings</p> <p>CLEAN AND RESTORATION OF SITE</p> <p>Cleaning and restoration of the site during construction and after completion to the satisfaction of the Engineer and client.</p>	item	1		
1,10	<p>COC CERTIFICATES</p> <p>On completion of each distribution board installation etc. as required in terms of the regulations, issue a Certificate of Compliance for each of the installations provided.</p>	item	1		
1,11	<p>GUARANTEE and MAINTENANCE PERIOD</p> <p>Allow for free maintenance during the guarantee period of 12 months for all defects in equipment, material and workmanship excluding wear and tear and normal maintenance. (excluding replacement of lamps)</p>	item	1		
TOTAL CARRIED TO SUMMARY PAGE					



ESKOM ROTEK INDUSTRIES PROJECT

**SWITCHGEAR INSTALLATION BILL OF QUANTITIES
BILL NO1: SWITCHGEAR CIRCUIT BREAKERS AND
PROTECTION DEVICES**

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL	LABOUR	TOTAL
NOTE:	The complete installation must comply SANS 0142 specifications and the Quality specification in this document. Therefore Tenders are advised to study the specification and drawings before the Bill is to be price.					
1	DISTRIBUTION BOARDS (Refer to schematic diagr:					
	Supply and install main distribution boards as per the schematic diagram. The distribution boards will be a floor mounted type. The distribution board doors must have a neat and professionally manufactured cut-out, with reinforced and properly finished edges, so that the main isolator of the distribution board can be switched without opening the door in case of emergency. . Distribution boards must be lockable and padlocks must be supplied with the distribution board					
1,1	LV Distribution Panel - Sand Blast Plant	each	1			
2	CIRCUIT BREAKERS					
2,1	Supply and install Circuit Breakers					
2.1.1	800 A X 50 kA Triple Pole Circuit Breaker (Moulded Case Breaker)	No	1			
2.1.2	400 A X 36 kA Triple Pole Circuit Breaker (Moulded Case Breaker)	No	3			
2.1.3	350 A X 35 kA Triple Pole Circuit Breaker (Moulded Case Breaker)	No	6			
2.1.4	300 A X 35 kA Triple Pole Circuit Breaker (Moulded Case Breaker)	No	3			
2.1.5	250 A X 36 kA Triple Pole Circuit Breaker (Moulded Case Breaker)	No	3			
2.1.6	200 A X 36 kA Triple Pole Circuit Breaker (Moulded Case Breaker)	No	9			
2.1.7	63 A x 10 kA SP CB Single Pole Circuit Breaker (DIN rail Circuit Breaker)	No	6			
2.1.8	60 A X 6 kA Single Pole Circuit Breaker (Samite Circuit Breaker)	No	6			
2.1.9	40 A X 6 kA Single Pole Circuit Breaker (Samite Circuit Breaker)	No	6			
2.1.10	30 A X 6 kA Single Pole Circuit Breaker (Samite Circuit Breaker)	No	30			
2.1.11	25 A X 6 kA Single Pole Circuit Breaker (Samite Circuit Breaker)	No	16			
2.1.12	20 A X 6 kA Single Pole Circuit Breaker (Samite Circuit Breaker)	No	28			
2,2	Supply and install Surge Protection					



2.2. 1	Dehnventil/Dehnguard SPD Surge Protection (Class 1 and 2 Surge Arrestor)	No	2			
2,3	Supply and install Earth Leakage Circuit Breaker					
2.3. 1	Earth Leakage Current Circuit Breaker - 4P - 63 A - 30 mA - AC Type - 400 V	No	2			
2.3	GLANDS AND SHROUDS					
2.3. 1	300mm ² 4 x core PVC insulated copper cable	each	6			
2.3. 3	240mm ² 4 core PVC insulated copper cable	each	18			
2.3. 4	185mm ² 4 core PVC insulated copper cable	each	22			
2.3. 5	150mm ² 4 core PVC insulated copper cable	each	30			
2.3. 7	10mm ² 4 core PVC insulated copper cable	each	48			
3	ELECTRICAL CABLE MANAGEMENT & TRUNKING					
	Supply, Install, Test and Commission					
3,1	Galvanised unistrut suspended from structure in the roof. Fixings not to exceed 4m including galvanized steel cover (Rates to include: Tees, Bends, 4 ways, ends and all other accessories) .					
2.1. 1	P9000 Unistrut	m	20			
2.1. 2	P8000 Unistrut	m	20			
4	PERFORATED CABLE TRAY WITH RETURN FLANGE					
	Supply and install galvanized metal cable wire ways including all fixing material, trapeze hangers for single threaded rod , splices, bonding conductors and other accessories required. Prices to include items such as cable ties, nuts, bolts, earthing and bonding, cold galvanising raw cuts, etc.					
4,1	Cabstrut or O-line 300mm wide medium duty perforated cable tray with return flanges (50mm rail height, 1,6mm thickness and 375mm rung spacing) medium duty cable ladder including all bolts, screws, clips, P4000 trapeze hanger, threaded rod and other material necessary for fixing:	meter	20			
5,0	TESTING AND COMMISSIONING					
5,10	Testing and comissioning of the entire low voltage network and area					
	lighting including the provision of all test equipment required and					
	issuing of a certificate of compliance for the installation.	sum	1			



5,20	Testing and certification of the earthing and lighting protection system	sum	1			
	including all test equipment required as well as the issuing of an					
	earthing certification by a qualified person and as per SANS 10313					
5,3	Provide as built drawings, operating and maintenance manuals	set	3			
	and documentation to the engineer					
5,4	Allowance for safe demolition and legal disposal of existing services	sum	1			
5,5	Provisional sum for replacement of cables that will be found identified non-compliant, including all associated termination and or joining kits.	sum	1			
	TOTAL CARRIED TO SUMMARY PAGE					

