

**Conveyance System of El Sheikh Gaber El Sabbah Canal
Between KM 108.466 and KM 118.560
El Salaam No.7 (Bir El Abd) Pumping Station
Bill of Quantities**

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
SB-0200	Sand Settling Basin						
SB-0201	Excavation (1), above the level of embankment	Cu.m	452,000				
SB-0202	Excavation (2), below the level of embankment	Cu.m	174,000				
SB-0203	Fill (2), for embankment	Cu.m	109,000				
SB-0204	Backfill (1)	Cu.m	52,300				
SB-0205	Stone Pitching with Mortar Caulking	Cu.m	7,320				
SB-0206	Mortar Lining (0.10m thick)	Sq.m	13,800				
SB-0207	Polyethylene Sheet (1.5mm thick)	Sq.m	13,800				
SB-0208	Concrete Lining (0.25m thick), Portland Cement Type-V	Sq.m	12,000				
SB-0209	Concrete Lining (0.20m thick), Portland Cement Type-V	Sq.m	2,120				
SB-0210	Plain Concrete, 180kgf/cm ² , including formwork	Cu.m	3,550				
SB-0211	Reinforced Concrete (2), for Gate Section and Settling Basin, ck=275kgf/cm ² , Sulfate Resistant Portland Cement (Type-V), including reinforcement bars (deformed bar No.52) (maximum 100 kg/m ³) and formwork	Cu.m	6,750				
SB-0212	Bitumen Coating (Coal Tar Painting)	Sq.m	7,080				
SB-0213	Mortar	Cu.m	26				
SB-0214	Water Stop (w=0.20m) at expansion and contraction joints	m	2,580				
SB-0215	Expansion Joint	Sq.m	1,250				
SB-0216	Contraction Joint	Sq.m	839				
SB-0217	Handrail (H=0.9m)	m	60				
SB-0218	Miscellaneous Steel (Steel Ladder etc.)	t	1				
SB-0219	Additional Reinforcement (deformed bar No.52)	t	34				

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SB-0220	Surface Course of Asphalt Paved Road (Asphalt Concrete of 5cm thick)	Sq.m	9,400				
SB-0221	Prime coat	Sq.m	9,400				
SB-0222	Upper Subgrade (Macadam Layer of 0.30m)	Sq.m	9,710				
SB-0223	Lower Subgrade (0.25m thick Laterite Pavement)	Sq.m	9,710				
SB-0224	Laterite Paved Road (0.25m thick Laterite Pavement)	Sq.m	3,380				
SB-0225	Laterite Pavement of 0.2m thick on Berms, etc.	Sq.m	9,020				
SB-0226	Excavation of Pits for Planting Trees	Km	5				
SB-0227	Supply of Clayey Soil for Pits	Km	5				
SB-0228	Plantation of Gasuarina Tree	Km	3				
SB-0229	Plantation of Acacia Tree	Km	2				
SB-0230	Care of Trees	Km	5				
SB-0231	Drip Irrigation Systems for Pay Item Nos. SB-0228 and SB-0229	L.S.	1				
SB-0232	Roller Gate for sand settling basin (Clear span=10.0m, Long height =3.5m, by the motor operated winch), see Drawing SSB-204 Supply and Install Mechanical Equipment, according to the instructions, specifications and shop drawings. including transportation, field test and spare parts.	unit	2				
SE-0200	Total						

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PC-0300	Pumping Station (Civil Works)						
PC-0301	Excavation (1), above the level of embankment	Cu.m	241,000				
PC-0302	Excavation (2), below the level of embankment	Cu.m	130,000				
PC-0303	Excavation (3); (with Dewatering)	Cu.m	27,400				
PC-0304	Fill (2), for embankment	Cu.m	2,090				
PC-0305	Backfill (1)	Cu.m	91,300				
PC-0306	Backfill (2); (with Dewatering)	Cu.m	7,810				
PC-0307	Stone Pitching with Mortar Caulking	Cu.m	2,600				
PC-0308	Laterite Pavement of 0.20m thick on Berms, etc.	Sq.m	2,040				
PC-0309	Surface Course of Asphalt Paved Road (Asphalt Concrete of 5cm thick)	Sq.m	6,900				
PC-0310	Prim Coat	Sq.m	6,900				
PC-0311	Upper Subgrade (Macadam Layer of 0.30m)	Sq.m	7,000				
PC-0312	Lower Subgrade (0.25m thick Laterite Pavement)	Sq.m	7,000				
PC-0313	Laterite Bedding (for Pipeline)	Cu.m	229				
PC-0314	Laterite and Crushed Gravel Pavement including trimming (for Pipeline)	Sq.m	422				
PC-0315	Excavation of Pits for Planting Trees	km	1				
PC-0316	Supply of Clayey Soil for Pits	Km	1				
PC-0317	Plantation of Gasuarina Trees	Km	0.7				
PC-0318	Plantation of Acacia Trees	Km	0.3				
PC-0319	Care of Trees	Km	1				

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Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
PC-0320	Drip Irrigation Systems for Pay Item No. PC-0317 and PC-0318	L.S.	1				
PC-0321	Bitumen Coating (Coal Tar Painting)	Sq.m	4,520				
PC-0322	Green Belt (Width 50m of Planting Trees)	m	560				
PC-0323	Crushed Gravel Bedding	Cu.m	3,410				
PC-0324	Plain Concrete, ck=180kgf/cm ² , including formwork	Cu.m	6,850				
PC-0325	Reinforced Concrete (1), for Intake and Pipe Protector ck=275kgf/cm ² , Sulfate Resistant Portland Cement (Type-V), including reinforcement bars (deformed bar No.52) (maximum 80 kg/m ³) and formwork	Cu.m	2,950				
PC-0326	Reinforced Concrete (2), for Pump Room and Chamber ck=275kgf/cm ² , Sulfate Resistant Portland Cement (Type-V), including reinforcement bars (deformed bar No.52) (maximum 100 kg/m ³) and formwork	Cu.m	7,970				
PC-0327	Reinforced Concrete (1); (with Dewatering) for Intake and Pipe Protector , ck=275kgf/cm ² Sulfate Resistant Portland Cement (Type-V), including reinforcement bars (deformed bar No.52) (maximum 80 kg/m ³) and formwork	Cu.m	1,190				
PC-0328	Reinforced Concrete (2); (with Dewatering) for Pump Room and Chamber , ck=275kgf/cm ² , Sulfate Resistant Portland Cement (Type-V), including reinforcement bars (deformed bar No.52) (maximum 100 kg/m ³) and formwork	Cu.m	6,730				
PC-0329	Secondary Concrete, ck=275kgf/cm ² , including reinforcement bars (deformed bar No.52) and formwork	Cu.m	2,670				
PC-0330	Brick Wall t=0.24m	Sq.m	274				
PC-0331	Mortar Steel Trowel	Sq.m	146				
PC-0332	Non Slip Tile Facing	m	293				

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PC-0333	Hand Rail H=0.90m	m	111				
PC-0334	Hand Rail (Inside) H=1.10m	m	140				
PC-0335	Additional Reinforcement (deformed bar No.52)	t	94				
PC-0336	Checkered Plate Cover	t	9				
PC-0337	Grating Cover	t	8				
PC-0338	Miscellaneous Steel (Steel Ladder, Ladder Rung, etc.)	t	1				
PC-0339	Steel Door	Kg	350				
PC-0340	Multi-blade Fan (100m3/min x1.5kw x 380v)	No.	2				
PC-0341	Duct (Galvanized Steel Plate t=0.5~0.8mm)	Kg	788				
PC-0342	Water Stop (w=0.20m) at expansion joint	m	142				
PC-0343	Expansion Joint	Sq.m	200				
PC-0344	Drain Pit with Gravel Filter and PVC ϕ 100	No.	2				
PC-0345	Steel Pipe ϕ 100mm	m	33				
PC-0346	Steel Pipe ϕ 200mm	m	14				
PC-0347	PVC Pipe ϕ 50mm	m	18				
PC-0348	Stop Valve ϕ 200mm	No.	2				
PC-0300	Total						

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PB-0400	Pumping Station (Building Works)						
PB-0401	Reinforced concrete (3) (Fcu=300kg/cm2) above ground, including reinforcement bars (deformed bar No.52) (maximum 170 kg/m3) and formwork, Ordinary Portland Cement (Type-I)	Cu.m	1,055				
PB-0402	Cinder concrete, using light weight aggregates	Cu.m	14				
PB-0403	Metal decking, t=1.20mm, depth=50mm	Sq.m	1,500				
PB-0404	Masonry brick wall works (cement bricks) including reinforced concrete lintel and bond beams where necessary, t=240mm	Cu.m	1,056				
PB-0405	Masonry brick wall works (lime sand bricks) including reinforced concrete lintel and bond beam where necessary, t=250mm	Cu.m	193				
PB-0406	Cement plastering, t=20mm	Sq.m	8,800				
PB-0407	Structural steel including painting	t	156				
PB-0408	Steel ladders with painting	Kg	500				
PB-0409	Steel handrails with painting	m	111				
PB-0410	Checked plates, t=4.5mm	Kg	174				
PB-0411	Bituminous waterproofing membrane with insulation 50mm, covered with cement mortar 70 mm and cement tiles.	Sq.m	2,050				
PB-0412	Paint on plastered walls, exterior	Sq.m	1,141				
PB-0413	Paint on plastered walls, interior	Sq.m	3,058				
PB-0414	Paint on ceiling	Sq.m	647				
PB-0415	Steel door, including painting	Kg	400				
PB-0416	Steel main access door, including glazing and painting	Kg	1,650				
PB-0417	Aluminum window	Sq.m	528				

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				Unit Price	Amount	Unit Price	Amount
PB-0418	Fixed aluminum louver	Sq.m	11				
PB-0419	Wooden door, including painting	Sq.m	25				
PB-0420	Mirror, W60cm x H 75cm	set	5				
PB-0421	Separate cement floor finishing, with hardener including cement plaster base (H=100mm) with paint	Sq.m	52				
PB-0422	Ceramic floor tiles, 150 x 150 x 10 mm, including cement mortar screeding for adjustment	Sq.m	1,739				
PB-0423	Ceramic wall tiles and skirting, 200 x 200 x 6 mm	Sq.m	553				
PB-0424	Terrazzo floor tiles, 250 x 250 x 25 mm and base (H=100mm) including cement mortar screeding for adjustment	Sq.m	354				
PB-0425	Suspended ceiling, mineral fiber lay in tiles, acoustical types, 600 x 600 x 20 mm, complete suspension system	Sq.m	154				
PB-0426	Kitchen unit for pantry	L.S.	1				
PB-0427	Lighting fixture: Ceiling surface mounted type with metallic low brightness louver IP 51, for fluorescent lamp 32 watt -2 Type: A-FL322	set	22				
PB-0428	Ditto, but for fluorescent lamp 32 watt-2 Type; A-FL323	set	4				
PB-0429	Lighting fixture: Ceiling surface mounted open type IP 51, for fluorescent lamp 32 watt -3 Type: B - FL321	set	67				
PB-0430	Ditto, but for fluorescent lamp 32 watt-2 Type; B-FL322	set	194				
PB-0431	Lighting fixture: High ceiling mounted type with metallic reflector IP 51, for 400 watt high-pressure sodium lamp Type: D-HPS400	set	16				
PB-0432	Lighting fixture; Flood light fixture IP 65, for high-pressure sodium lamp Type; E-HPS400	set	6				

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PB-0433	Lighting fixture: Pole top mounted type area lighting fixture IP65, for 125 watt sodium lamp Type: F-SON125	set	10				
PB-0434	Emergency lighting fixture: Ceiling or wall mounted open type IP 51, for incandescent lamp 100 watt powered by DC 100 V Type: H-IL100	set	172				
PB-0435	Socket outlet: Wall surface flush mounted type AC Single Phase 220 V, 2-Pole with earth pole 15 amp double outlet	set	162				
PB-0436	Ditto, but 30 amp single outlet	set	13				
PB-0437	Socket outlet: Wall surface mounted type AC 3-Phase 380 V, 3-Pole with earth pole 30 amp single outlet	set	13				
PB-0438	Lighting switch: Wall surface flush mounted type, one way switch, AC 250 V, 10 amp	set	13				
PB-0439	Ditto, but three way switch AC 250 V, 10 amp	set	4				
PB-0440	Ditto, but three way switch AC 250 V, 10 amp water proofing type	set	2				
PB-0441	Ditto, but remote control switch for magnetic contractor installed in distribution board	set	50				
PB-0442	Distribution board: Wall surface mounted metallic cabinet type DB-PS1	set	1				
PB-0443	Ditto, but DB-PS2	set	1				
PB-0444	Ditto, but DB-PS3	set	1				
PB-0445	Ditto, but DB-PS4	set	1				
PB-0446	Ditto, but DB-PS5	set	1				
PB-0447	Exterior lighting control panel Wall surface mounted metallic cabinet type ELC	set	1				
PB-0448	Lighting main feeder cable from Load Center to DB-PS1, 600V XLPE 3C+N 25 mm ²	m	45				
PB-0449	Ditto, but to DB-PS2 600V XLPE 3C+N 35 mm ²	m	30				
PB-0450	Ditto, but to DB-PS3 600V XLPE 3C+N 25 mm ²	m	90				
PB-0451	Ditto, but to DB-PS4 600V XLPE 3C+N 25 mm ²	m	75				

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PB-0452	Ditto, but to DB-PS5 600V XLPE 3C+N 25 mm ²	m	80				
PB-0453	Steel conduit for lighting main feeders, with all necessary conduit accessories, supporting or fitting devices and pull box 30 mm.	m	320				
PB-0454	Wiring for lighting system, consist of PVC wires of 4 mm ² , steel conduit 20 mm, conduit accessories, cable connections, outlet boxes, mounting fittings and necessary devices.	L.S.	1				
PB-0455	Wiring for socket outlet system, consist of PVC wires of 4 mm ² , steel conduit 20 mm, conduit accessories, cable connections, outlet boxes, mounting fittings and necessary devices.	L.S.	1				
PB-0456	Grounding conductors for distribution board, lighting fixtures and socket outlets	L.S.	1				
PB-0457	Ventilation, wall mounted exhaust fan, 450 mm dia. x 96 CMM x 0.4KW	No.	6				
PB-0458	Ventilation, wall mounted exhaust fan, 400 mm dia. x 82 CMM x 0.4KW	No.	1				
PB-0459	Ventilation, wall mounted exhaust fan, 300 mm dia. x 20 CMM x 50W	No.	2				
PB-0460	Air conditioners, window type, cooling capacity : 3.5 KW	No.	3				
PB-0461	Air conditioners, window type, cooling capacity : 3 KW	No.	2				
PB-0462	Air conditioners, air-cooled split type, cooling capacity : 7.8 KW	No.	2				
PB-0463	Roof water down pipes, cast iron dia. 150 mm	m	95				
PB-0464	Water closet, including flush valves	set	4				
PB-0465	Wall urinals, including flush valves	set	2				

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PB-0466	Lavatories	set	4				
PB-0467	Service sink	set	1				
PB-0468	Personal shower	set	1				
PB-0469	Floor drains 50 mm dia. Including trap as specified.	set	9				
PB-0470	Water supply system including piping works, submergible water pumps, water reservoir & filtration facility, isolation valves, elevated tank and all fittings necessary to complete the works as specified and defined on the shop drawing.	L.S.	1				
PB-0471	Drainage system including piping works, septic tank, evaporation pit, manholes and all fittings necessary to complete the works as specified and defined on the shop drawing.	L.S.	1				
PB-0472	Portable fire extinguishers	set	32				
PB-0473	Lightning Protection	L.S.	1				
PB-0400	Total						

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Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
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PM-0500	Pumping Station (Mechanical Equipment)						
PM-0501	Trash screens (H=9.0m, W=5.5m, Bar pitch=50mm, Bar element=Flat bar 90mm x 9 mm), see Drawing PSM-210. Supply and Install Mechanical Equipment, according to the instructions, specifications and shop drawings. Including transportation, field test and spare parts.	unit	4				
PM-0502	Guard screens (downstream side), (H=9.0m, W=5.5m, Bar pitch=100mm, Bar element: Flat bar 75mm x 9mm), see Drawing PSM-210, the same as PM-0501	unit	4				
PM-0503	Suction pipes, see Drawing PSM-201 the same as PM-0501	unit	4				
PM-0504	Main pumps, see Drawing PSM-202. (vertical shaft, single-suction, centrifugal-type pumps, Q=10.827m ³ per sec. total lifting head =99.60m) the same as PM-0501	unit	4				
PM-0505	Bi-plane check (discharge) valves (φ1,500mm), see Drawing PSM-206, the same as PM-0501	unit	4				
PM-0506	Bi-plane isolating valves (φ1,500mm), see Drawing PSM-206, the same as PM-0501	unit	4				
PM-0507	Discharge pipes, see Drawing PSM-204. the same as PM-0501	unit	4				
PM-0508	Discharge Header pipe, see Drawing PSM-204. the same as PM-0501	unit	1				
PM-0509	Flexible joints (φ2,400mm), see Drawing PSM-202. the same as PM-0501	unit	3				
PM-0510	Delivery pipes (φ2,400mm), the same as PM-0501	unit	3				

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PM-0511	Bi-plane control (pipeline) valves (ϕ 2,400mm), see Drawing PSM-207. the same as PM-0501	unit	3				
PM-0512	Supersonic flow meters, see Drawing PSM-212 the same as PM-0501	unit	3				
PM-0513	Bulkhead gate, (H=4.1m, W=5.5m), see Drawing PSM-208. the same as PM-0501	unit	1				
PM-0514	Stop log (Clear span=5.5m, Long height =1.55m x 5), see Drawing PSM-209. the same as PM-0501	unit	1				
PM-0515	Gantry crane, (Hoisting capacity=13 tons, Span=3.5m, Lifting height=14.0m, Power source=AC380V, 3 Phase, 50Hz), see Drawing PSM-211. the same as PM-0501	unit	1				
PM-0516	Trash rake (Mobile weed screen cleaning machine), (Rake length=2000mm, Hoisting speed=10m/min, Raking capacity per unit=0.5m ³ , Traveling speed=10m/min, Power source=AC380V, 3 Phase, 50Hz) the same as PM-0501	unit	1				
PM-0517	Cooling water system for Main pumps, consisting of water supply pumps, pipe and valves. the same as PM-0501	unit	1				
PM-0518	Lubrication and pressure oil system, see Drawing PSM-203. the same as PM-0501	unit	1				
PM-0519	Dewatering system, see Drawing PSM-202 the same as PM-0501	unit	1				
PM-0520	Main pipeline water filling system, see Drawing PSM-202 and PSM-207. the same as PM-0501	unit	1				
PM-0521	Overhead traveling crane, (Hoisting capacity=100 tons, Auxiliary hoist=20 tons, Span=17.9m, Lifting height=30m, Power source= AC380V, 3 Phase, 50Hz) see Drawing PSM-205. the same as PM-0501	unit	1				

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PM-0522	Other miscellaneous items (machines for repairing such as electric saw, disc-sander, oil pressure press, grinder, lathe, drill machine, baby compressor, welding machine and thread-cutting machine etc.) Supply and Install Machines, according to the instructions and specifications. Including transportation, field test and spare parts.	lot	1				
PM-0500	Total						

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PE-0600	Pumping Station (Electrical Works)						
PE-0601	Main Pump Motor Synchronous type, 13 MW, 11 KV, 375 rpm, 50 Hz	set	4				
PE-0602	Main Motor Starting Panel (VCB-1) (See DWG No. PSE-202) VCB, 11 KV, 1200 A	unit	4				
PE-0603	Main Motor Starting Panel (VCB-2) (See DWG No. PSE-202) VCB, 11 KV, 1200A	unit	4				
PE-0604	Main Motor Starting Panel (VCB-3) (See DWG No. PSE-202) VCB, 11 KV, 1200A	unit	4				
PE-0605	Exciter Transformer Panel (See DWG No. PSE-202) 20 KVA, 11 KV/380V, 1 Phase	unit	4				
PE-0606	Exciter Panel AC Exciter (See DWG No. PSE-202)	unit	4				
PE-0607	Main Pump Unit Control Panel (See DWG No. PSE-207) 1: Programmable Control Panel and 1: Relay Panel	unit	4				
PE-0608	Auto-transformer Panel 11 KV, 3 min. rating: 57,000 KVA at 80% tap	unit	4				
PE-0609	DC Power Source: DC 110 V (See DWG. No. PSE-210) Ni-Cd Alkaline Batteries: 200 Ah	set	1				
PE-0610	Load Center: 380/220 V, 3 Phase, 4 wire system (See DWG No. PSE-203)	unit	1				
PE-0611	Motor Control Center for main pump (MCC) (See DWG No. PSE-203)	unit	1				

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PE-0612	Motor Control Center for common use (MCC Common A), (See DWG No. PSE-204)	unit	1				
PE-0613	Motor Control Center for common use (MCC Common B) (See DWG No. PSE-204)	unit	1				
PE-0614	Central Supervisory Console, Desk top mount type (See DWG No. PSE-208 and 209) with SCADA system (Supervisory Control and Data Acquisition) Consist of: CPU, CRT display, printer, cables and accessories	set	1				
PE-0615	Printer Desk (See DWG No. PSE-208)	set	1				
PE-0616	Un-interrupt Power Supply Unit (UPS) 5 KVA, 220V 1 Phase (See DWG No. PSE-210)	set	1				
PE-0617	Emergency Diesel Generator system: AC 100 KVA, 3-Phase 380/220 V (See DWG No. PSE-211)	set	1				
PE-0618	Emergency Generator Control Panel	unit	1				
PE-0619	Power Source Change-over Switch Panel (See DWG No. PSE-203)	unit	1				
PE-0620	Cubicle type Substation: IP 55 Vertical self standing, unit enclosed type 3000A, Copper, Double busbar system (See DWG No. PSE-215), GPT panel 3-GPTs, Under voltage relay and Over voltage relay	unit	2				
PE-0621	Ditto, but Pump Motor Feeder Panel-A VCB: 12kV, 1250A, 40 kA	unit	4				
PE-0622	Ditto, but Pump Motor Feeder Panel-B VCB: 12kV, 1250A, 40 kA	unit	4				
PE-0623	Ditto, but Station Transformer Feeder Panel VCB: 12kV, 1250A, 40 kA	unit	2				

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PE-0624	Ditto, but Station Transformer panel Mold type power transformer: 1000 kVA 11 kV/380-220V, 3-Phase and MCCB 3P 1600A (Non trip)	unit	2				
PE-0625	Power cables consist of cables, connectors, fittings, etc. Main pump motor feeder cables 11 kV XLPE, 1C-400 mm2	m	960				
PE-0626	Ditto, but between Main motor and Starting Panel 11 kV XLPE 1C-400 mm2	m	960				
PE-0627	Ditto, but between Auto-transformer and Starting Panel 11 kV XLPE 1C-400 mm2	m	1,080				
PE-0628	Ditto, but 380/220 V Feeder cables 600 V XLPE 1C-800 mm2	m	240				
PE-0629	Ditto, but 380 V Branch to Pipe line filling up pump 600 V XLPE 1C-240 mm2	m	330				
PE-0630	Ditto, but 380 V Branch to Change over switch Panel 600 V XLPE 1C-150 mm2	m	40				
PE-0631	Ditto, but Emergency Generator Feeder 600 V XLPE 1C-70 mm2	m	145				
PE-0632	Ditto, but 380 V Branch for 100 ton Crane 600 V XLPE 1C-50 mm2	m	30				
PE-0633	Ditto, but 380 V Branch for Gantry Crane etc. 600 V XLPE 1C-10 mm2	m	710				
PE-0634	Ditto, but 380 V Branch for equipment 600 V XLPE 1C-6 mm2	m	1,760				
PE-0635	Ditto, but 380 V Branch for equipment 600 V XLPE 1C-2.5 mm2	m	420				
PE-0636	Control and Signal cables consist of cables, fittings, connection terminals etc. For all control and supervising systems	L.S.	1				

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PE-0637	Underground grounding conductor Bare stranded copper, 120 mm2	m	200				
PE-0638	Indoor grounding conductor Bare stranded copper, 70 mm2	m	100				
PE-0639	Grounding rod, Copper rod: 14mm dia, 3m length	set	17				
PE-0640	Grounding plate Copper plate: 900mm x 900mm, thickness: more than 1.5mm	set	5				
PE-0641	Grounding conductor in Cable pit Bare stranded copper, 70 mm2	m	50				
PE-0642	Cable tray, Galvanized steel Included with support fittings, accessories and earth Width: 1000 mm	m	105				
PE-0643	Ditto, but Width: 500 mm	m	30				
PE-0644	Wall penetration for cable installation 350 mm diameter, include with steel conduit of 300 mm x 2.5 m and mortar filling	set	28				
PE-0645	Manhole: (MH-7) inside dimension 2 x 2 x 2.5 m Made of reinforced concrete include with cable supports brackets, steps, drainage system and heavy weight withstand type cast iron manhole cover	set	1				
PE-0646	Underground conduit lines PVC 300 mm conduit with couplings, concrete encase	m	120				
PE-0600	Total						

**Conveyance System of El Sheikh Gaber El Sabbah Canal
Between KM 108.466 and KM 118.560
El Salaam No.7 (Bir El Abd) Pumping Station
Bill of Quantities**

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
PP-0700	Delivery Pressured Pipeline Works						
	Main Pipe Works						
PP-0701	Steel Pipe, D=2,400mm, t=22mm including supply and installation of pipe with interior mortar lining and exterior asphalt vinyl cloth coating, Weight=1.308 t/m	m	27,867				
PP-0702	Flexible Joint, D=2,400mm (t=22mm), L=1,600mm, Working Pressure P=4kg/cm ²	No.	3				
	Air Valve Works						
PP-0703	Manhole Pipe D=2,400mm (t=22mm), D=900mm (t=8mm), L=4,700mm	No.	27				
PP-0704	Air Valve D=200mm including sluice Valve (D=200 and D=50mm) with T-shape flange Joints	No.	27				
	Blow Off Works						
PP-0705	Blow Off Pipe D=2,400mm (t=22mm)×D=400mm, L=2,000mm	No.	9				
PP-0706	Steel Pipe D=400mm,t=6mm	m	730				
PP-0707	Stop Valve with loose flange D=400mm	No.	9				
PP-0708	Flexible Joint D=400mm (t=6mm), L=800mm	No.	18				
	Surge Tank No.1						
PP-0709	T-shape Joint, D=2,400mm(t=22mm) × D=1,500mm×L=3,500mm	No.	6				
PP-0710	Flexible Joint, D=1,500mm(t=12mm)× L=1,450mm	No.	6				
PP-0711	Steel Pipe, D=1,500mm (t=12mm) ×L=16,300mm	No.	6				

Bill of Quantities

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
PP-0712	Butterfly Valve, D=1,500mm	No.	6				
PP-0713	Loose Flange, D=1,500mm	No.	6				
PP-0714	Man-hole Pipe, D=1,500mm (t=12mm) with blind flange, D=600mm	No.	6				
PP-0715	Swing Type Check Valve, D=1,500mm	No.	6				
PP-0716	Steel Pipe, D=200mm, t=5.8mm	m	95				
PP-0717	Stop Valve D=200mm	No.	12				
PP-0718	Strainer, D=200mm	No.	4				
PP-0719	Float Valve, D=200mm	No.	4				
PP-0720	Steel Pipe, D=200mm, t=5.8mm Spillway	m	11				
PP-0721	PVC Pipe, D=200mm Spillway	m	11				
PP-0722	PVC Pipe, D=300mm Drain Pipe	m	33				
PP-0723	Stop Valve, D=300mm	No.	3				
PP-0724	Steel Pipe for Vent, D=400mm	m	16				
	Surge Tank No.2						
PP-0725	T-shape Joint, D=2,400mm (t=22mm)×D=700mm (t=7mm)×L=3,500mm	No.	6				
PP-0726	Flexible Joint, D=700mm L=1,000mm	No.	6				
PP-0727	Steel Pipe, D=700mm, t=6mm×L=11,700mm	No.	6				
PP-0728	Butterfly Valve, D=700mm	No.	6				
PP-0729	Loose Flange, D=700mm	No.	6				
PP-0730	Man-hole Pipe, D=700mm(t=6mm) with blind flange, D=600mm	No.	6				
PP-0731	Swing Type Check Valve, D=700mm	No.	6				
PP-0732	Steel Pipe D=100mm, t=4.5mm	m	65				

Bill of Quantities

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
PP-0733	Stop Valve D=100mm	No.	12				
PP-0734	Strainer D=100mm	No.	4				
PP-0735	Float Valve D=100mm	No.	4				
PP-0736	Steel Pipe D=200mm, t=5.8mm Spillway	m	7				
PP-0737	PVC Pipe D=200mm Spillway	m	10				
PP-0738	PVC Pipe D=200mm Drain Pipe	m	35				
PP-0739	Stop Valve D=200mm	No.	3				
PP-0740	Steel Pipe for Vent, D=200mm, including steel pipes at Air Valve Box	m	50				
	Sub-Total (PP-0701 ~ PP-0740)						
	Cathodic Protection System						
PP-0741	Insulating Flange Accessories including Installation and Testing	set	1				
PP-0742	Drilling Holes, D=200mm, L=6.3m with 5.0m length of steel casing pipe	set	96				
PP-0743	Transformer Rectifier (50Vx50A) DC, including related Earth works, Concrete Works, Fence and Incidentals	unit	6				
PP-0744	High Silicone Anode including FEP-PE Cable of approx. 80m long and Carbonaceous Backfill	set	98				
PP-0745	Positive Junction Box TB-12 (SUS) including Related Earth Works, Concrete Works, Fence and Incidentals	unit	20				
PP-0746	Negative Junction Box TB-11 (SUS) including Related Earth Works, Concrete Works, Fence and Incidentals	unit	7				
PP-0747	Test Box TB-10 (SUS) including Related earth works, Concrete Works and Incidentals	unit	7				

Bill of Quantities

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
PP-0748	Reference Electrode SRE-007-CU including Installation and Testing	No.	13				
PP-0749	Standard Probe (Cu/CuSO4) including Installation and Testing	No.	7				
PP-0750	Switch Board including Related Earth Works, Concrete Works, Fence and Incidentals	No.	6				
PP-0751	Cable 0.6/1kv XLPE/Steel Armoured Type 1C-35mm ²	m	900				
PP-0752	Cable 0.6/1kv XLPE/Steel Armoured Type 1C-6 to 14mm ²	m	900				
PP-0753	Negative and Test Terminals with Lead Cable	set	20				
PP-0754	Bond Accessories for Flexible Pipe	L.S.	1				
PP-0755	Supply of Insulation Checker	No.	1				
PP-0756	Cable AC 0.6/1kv XLPE/Steel Armoured Type 3C-70mm ²	m	9,500				
PP-0757	Corrosion Test Set	set	1				
	Sub-Total (PP-0741 ~ PP-0757)						
	Civil Works (KM108.985 to KM118.360)						
PP-0758	Stripping	Cu.m	162,000				
PP-0759	Excavation (1), above the level of embankment	Cu.m	1,870,000				
PP-0760	Excavation (2), below the level of embankment	Cu.m	500,000				
PP-0761	Fill (2), for embankment	Cu.m	850,000				
PP-0762	Fill (3), around pipeline at embankment site.	Cu.m	113,000				
PP-0763	Laterite Bedding	Cu.m	62,800				
PP-0764	Backfill (3), around pipeline at excavation site.	Cu.m	336,000				
PP-0765	Stone Pitching with Mortar Caulking	Cu.m	57,900				

Bill of Quantities

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
PP-0766	Laterite and Crushed Gravel Pavement including trimming	Sq.m	321,000				
PP-0767	Surface Course of Asphalt Paved Road (Asphalt Concrete of 5 cm thick)	Sq.m	125,000				
PP-0768	Prime Coat	Sq.m	125,000				
PP-0769	Lower Subgrade (0.25m thick Laterite Pavement)	Sq.m	130,000				
PP-0770	Upper Subgrade (Macadam Layer of 0.30 m)	Sq.m	130,000				
PP-0771	Laterite Pavement of 0.20m thick on Berms, etc.	Cu.m	34,800				
PP-0772	Excavation of Pits for Planting Trees	Km	19				
PP-0773	Supply of Clayey Soil Pits	Km	19				
PP-0774	Plantation of Gasuarina Trees	Km	10				
PP-0775	Plantation of Acacia Trees	Km	9				
PP-0776	Care of Trees	Km	19				
PP-0777	Drip Irrigation Systems for Pay Item No. PP-0774 and PP-0775	L.S.	1				
PP-0778	Crushed Gravel Bedding for Structures	Cu.m	280				
PP-0779	Plain Concrete, 180kgf/cm ² , including formwork	Cu.m	200				
PP-0780	Reinforced Concrete (1), for Surge Tank and Air Valve Chamber, 275kgf/cm ² , Sulfate Resistant Portland Cement (Type-V), including reinforcement bars (deformed bar No.52) (maximum 80 kg/m ³) and formwork	Cu.m	3,380				
PP-0781	Reinforced Concrete (2), for Valve Pit, Blow Off Chamber, 275kgf/cm ² , Sulfate Resistant Portland Cement (Type-V), including reinforcement bars (deformed bar No.52) (maximum 100 kg/m ³) and formwork	Cu.m	230				
PP-0782	Bitumen Coating (Coal Tar Painting)	Sq.m	2,860				

Bill of Quantities

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
PP-0783	Concrete Lining (t=0.10m)	Sq.m	580				
PP-0784	Stone Pitching for Blow Off	Sq.m	850				
PP-0785	Laterite Bedding for Blow Off	Cu.m	1,500				
PP-0786	Clayey Soil for Blow Off Cut Off	Cu.m	12				
PP-0787	Miscellaneous Steel (Steel Plate Cover, Steel Ladder, Ladder Rung, etc.)	t	8				
PP-0788	Additional Reinforcement (deformed bar No.52)	t	18				
PP-0789	Drain Pit at Surge Tanks and Air Valve Box	No.	24				
PP-0790	Concrete Column with Kilometer Sign	No.	19				
PP-0791	Green Belt (Width 50m of Planting Trees)	m	500				
	Sub-Total (PP-0758 ~PP-0791)						
PP-0700	Total						

Conveyance System of El Sheikh Gaber El Sabbah Canal
Between KM 108.466 and KM 118.560
El Salaam No.7 (Bir El Abd) Pumping Station
Bill of Quantities

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
DT-0800	Discharge Tank						
DT-0801	Stripping	Cu.m	12,500				
DT-0802	Excavation (2), below the level of embankment	Cu.m	24,000				
DT-0803	Fill (1), for the canal	Cu.m	18,500				
DT-0804	Fill (2), for embankment	Cu.m	107,000				
DT-0805	Backfill (1), for structure	Cu.m	892				
DT-0806	Stone Pitching with Mortar Caulking	Cu.m	4,290				
DT-0807	Mortar Lining (0.10m thick)	Sq.m	7,710				
DT-0808	Polyethylene Sheet (1.5mm thick)	Sq.m	7,710				
DT-0809	Concrete Lining (0.25m thick)	Sq.m	5,910				
DT-0810	Concrete Lining (0.20m thick)	Sq.m	1,800				
DT-0811	Plain Concrete, ck=180kgf/cm2, including formwork	Cu.m	52				
DT-0812	Reinforced Concrete (2), ck=275kgf/cm2, Sulfate Resistant Portland Cement (Type-V), including reinforcement bars (deformed bar No.52) (maximum 100 kg/m3) and formwork	Cu.m	749				
DT-0813	Bitumen Coating (Coal Tar Painting)	Sq.m	526				
DT-0814	Water Stop (w=0.20m) at expansion and contraction joints	m	24				
DT-0815	Expansion Joint	Sq.m	142				
DT-0816	Contraction Joint	Sq.m	106				
DT-0817	Handrail (H=0.9m)	m	64				
DT-0818	Miscellaneous Steel (Steel Ladder, etc.)	t	1				
DT-0819	Additional Reinforcement (deformed bar No.52)	t	4				

Bill of Quantities

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
DT-0820	Surface Course of Asphalt Paved Road (Asphalt Concrete of 5cm thick)	Sq.m	3,450				
DT-0821	Prime coat	Sq.m	3,450				
DT-0822	Upper Subgrade (Macadam Layer of 0.30m)	Sq.m	3,580				
DT-0823	Lower Subgrade (0.25m thick Laterite Pavement)	Sq.m	3,580				
DT-0824	Laterite Paved Road (0.25m thick Laterite Pavement)	Sq.m	4,150				
DT-0826	Laterite Pavement of 0.2m thick on Berms, etc.	Sq.m	5,690				
DT-0827	Excavation of Pits for Planting Trees	Km	1.4				
DT-0828	Supply of Clayey Soil for Pits	Km	1.4				
DT-0829	Plantation of Gasuarina Tree	Km	0.9				
DT-0830	Plantation of Acacia Tree	Km	0.5				
DT-0830	Care of Trees	Km	1.4				
DT-0831	Drip Irrigation Systems for Pay Item No. DT-0829 and DT-0830	L.S.	1				
DT-800	Total						

**Conveyance System of El Sheikh Gaber El Sabbah Canal
Between KM 108.466 and KM 118.560
El Salaam No.7 (Bir El Abd) Pumping Station
Bill of Quantities**

Pay Item	Description	Unit	Quantity	Local Currency Egyptian Pound		Foreign Currency	
				Unit Price	Amount	Unit Price	Amount
OR-0900	No.3 Access Road						
OR-0901	Stripping	Cu.m	77,200				
OR-0902	Excavation	Cu.m	20,200				
OR-0903	Fill	Cu.m	333,000				
OR-0904	Stone Pitching with Mortar Caulking	Cu.m	13,700				
OR-0905	Surface Course of Asphalt Paved Road (Asphalt Concrete of 5cm thick)	Sq.m	65,800				
OR-0906	Prime coat	Sq.m	65,800				
OR-0907	Upper Subgrade (Macadam Layer of 0.30m)	Sq.m	68,300				
OR-0908	Lower Subgrade (0.25m thick Laterite Pavement)	Sq.m	68,300				
OR-0900	Total						

**APPENDIX A
DAYWORKS SCHEDULES**

A1. LABOR

In addition to the list below, the Contractor shall enter all other categories of labor to be employed on the Works and shall insert the appropriate rates as described in the Preambles.

Labor Category	Rate LE/hr
Laborer Unskilled	
Laborer Semi-skilled	
Steel Fixer	
Steel Helper	
Carpenter	
Carpenter Helper	
Fitter	
Fitter Helper	
Electrician	
Electrician Helper	
Road Vehicle Drivers	
Plant Operators	
Chargehands	
Working Gangers	
Trade foremen	

A2. PLANT

The Contractor shall enter all major items of Constructional Plant to be employed on the Works and shall insert appropriate rates as described in the Preamble.

Plant Category	Rate
Truck mixer 7.2 m3	
Batching plant for grout 10 m3/h	
Batching plant 60 m3/h	
Gantry crane 55 m - 3 T	
Fixed tower crane 55 m 1.7 T	
Mobile telescopic crane 45 T - 3 m	
Stationary concrete pump 50 M3/H	
Concrete distributor 3 M3	
Concrete distribution boom 22 m	
Forklift 5 T	
Tipper truck 4x2 12 T/6 m3	
Fiat truck 15 T	
Workshop truck 15 T	
Dumper Volvo 25 T	
Load excavator JCB 4x4 1000 L	
Pump for water delivery	
Compressor XAS 125 7.15 M3	
Generator 630 KVA	
Generator 325 KVA	
Generator 250 KVA	
Generator 150 KVA	
Laboratory equipment	
Workshop equipment	
Welder generator 400 A	
Steel cutting machine	
Steel bending machine	
Mesh bending machine 10 mm	
Circular saw 400 mm	
Level wild nk2	
Theodolite wild t2	
Pick up	
Cars	

A3. MATERIALS

The Contractor shall enter in the space provided below the percentage required for all overheads and profit which percentage is to be added to the net cost of materials all as described in the Preambles.

Overhead and Profit.....%

APPENDIX B

SPARE PARTS SCHEDULES No. B1

FOR GATES

Applicable Section of the Technical specification: 7000, 7006

No.	Description	Quantity	Unit Price		Amount	
			Foreign	Local	Foreign	Local
A	Required Spare parts					
1	Set of seals for a bulkhead gate for suction sump (with set bolts)	1				
2	Set of seals for a roller gate for sand settling basin (with set bolts)	1				
3	Set of seals for one complete stoplog (5 leaves) for suction sump (with set bolts)	1				
B	Other recommendable Spare parts					

Signature:

Date:

APPENDIX B
SPARE PARTS SCHEDULES **No. B2**

FOR BUTTERFLY VALVES OF SURGE TANKS

Applicable Section of the Technical specification: 7100, 7104

No.	Description	Quantity	Unit Price		Amount	
			Foreign	Local	Foreign	Local
A	For Surge tank No. 1 (Diameter 1500 mm)					
1	Valve seat(with set of screws or bolt)	2				
2	Set of hydraulic packing for stuffing box	2				
3	Set of bearings	2				
4	Set of flange gaskets (only special one)	1				
5	Set of float valve D=200mm	3				
B	For Surge tank No. 2 (Diameter 700 mm)					
1	Valve seat (with set screws or bolts)	2				
2	Set of hydraulic packing for stuffing box	2				
3	Set of bearings	2				
4	Set of flange gaskets (only special one)	1				
5	Set of float valve D=100mm	3				
C	Other recommendable Spare parts					

Signature:

Date:

APPENDIX B
SPARE PARTS SCHEDULES No. B3

FOR CHECK VALVES OF SURGE TANK No. 1

Applicable Section of the Technical specification: 7100, 7104

No.	Description	Quantity	Unit Price		Amount	
			Foreign	Local	Foreign	Local
A	Diameter 1500 mm					
1	Set of disc seats (with set of screws or bolts)	2				
2	Set of bearings	2				
3	Set of flange gaskets (only special one)	1				
4						
5						
6						
7						
8						
9						
10						
B	Other Recommendable Spare Parts					

Signature:
Date:

APPENDIX B
SPARE PARTS SCHEDULES No. B5

FOR MAIN PUMPS

Applicable Section of the Technical specification: 8100, 8105

No.	Description	Quantity	Unit Price		Amount	
			Foreign	Local	Foreign	Local
A	Required Spare Parts					
1	Set of babbitt bearing shell for pump guide bearing	4				
2	Set of sleeve for pump shaft	4				
3	Set of wearing rings for impeller	4				
4	Set of wearing rings for stationary (Casing cover and suction cover) with set of screws or bolts	4				
5	Set of hydraulic packing for stuffing box	4				
6	Set of lantern ring for stuffing box	4				
7	Complete impeller	1				
8	Set of babbitted bearing shell for intermediate guide bearing	4				
9	Set of flange gaskets (only special one)	4				
10						
11						
12						
13						
B	Other recommendable Spare parts					

Signature:
Date:

APPENDIX B
SPARE PARTS SCHEDULES **No. B6**

FOR BUTTERFLY VALVES

Applicable Section of the Technical specification: 8200, 8205

No.	Description	Quantity	Unit Price		Amount	
			Foreign	Local	Foreign	Local
A	Cylinder/counter weight operated bi-plane type (Diameter 1500 mm)					
1	Valve seat (with set screws or bolts)	1				
2	Set of hydraulic packing for valve shaft	1				
3	Set of bearings	1				
4	Set of seals and gaskets for oil cylinder	1				
5	Set of flange gaskets (only special one)	1				
6	Set of limit switch for each type	1				
7	Oil pump with motor	1				
8	Set of solenoid valve for each type	1				
9	Flow control valve	1				
10	Pressure relieve valve	1				
11	Pressure switch	1				
12	Oil level switch	1				
B	Other recommendable Spare parts					

Signature:

Date:

APPENDIX B
SPARE PARTS SCHEDULES **No. B9**

FOR AUXILIARY PUMPS

Applicable Section of the Technical specification: 8300, 8304

No.	Description	Quantity	Unit Price		Amount	
			Foreign	Local	Foreign	Local
A	Sump pump Submersible volute type					
1	Complete impeller	1				
2	Set of liner rings for impeller	1				
3	Set of bearings	1				
4	Liner ring for impeller	1				
5	Set of seals and gaskets (only special one)	1				
6						
7						
8						
9						
10						
B	Pipeline fill pump Horizontal centrifugal split casing type					
1	Set of seals and gaskets (only special one)	1				
2						
3						
4						
5						
6						
7						
8						
9						
C	Other recommendable Spare parts					

Signature:
Date:

