

**SUMMARY OF BILLS OF QUANTITIES**  
**115,000 LITRES FUEL TANK**

Bill No	Description	Amount
1	PRELIMINARIES	
2	GROUND WORKS	
3	CONCRETE	
4	METAL WORK	
5	PAINTING	
<b>GRAND TOTAL</b>		

Item	Description	Unit	Qty	Rate	Amount
<b>BILL No: 01</b>					
<b><u>PRELIMINARIES</u></b>					
<b>1.1 <u>General Notes</u></b>					
(1) <u>Abbreviations</u>					
m - meter					
No - numbers					
m <sup>3</sup> - cubic meter					
m <sup>2</sup> - square meter					
Lm - Linear meter					
t - tones					
incl - including					
mm - millimeter					
Dia - diameter					
SS - Stainless Steel					
GI - Galvanized Iron					
<b>1.2 <u>Site Management Costs</u></b>					
(1) Allow for all on and off site management cost including costs of foreman and assistants, temporary services, telephone, fax, machineries, tools, scaffolding and other necessary equipment.					
		item	1		
<b>1.3 <u>Clean-up</u></b>					
(1) Allow for clean-up of completed works and site upon completion					
		item	1		
<b>BILL No: 01 PRELIMINARIES</b>					
<b>TOTAL OF BILL No: 01 - Carried over to summary</b>					

Item	Description	Unit	Qty	Rate	Amount
<b>BILL No: 02</b> <b><u>GROUND WORKS</u></b>					
2.1	<b><u>General</u></b> (a) Rates shall include for: levelling, grading, trimming, compacting to faces of excavation, keep sides plumb, backfilling, consolidating and disposing surplus soil.				
2.2	<b><u>Site Clearing</u></b> (1) Clear the whole site according to the direction of the consultant, cut down the necessary trees and throw the wastage to the allocated disposal collecting area of the island.	item	1		
2.3	<b><u>Excavation</u></b> Excavation quantities are measured to the face of concrete members. Rate shall include for all additional excavation required to place the form work.				
(1)	Excavation for foundation beams, floor slab and drain pits	m <sup>3</sup>	18.00		
<b>BILL No: 02 GROUND WORKS</b> <b>TOTAL OF BILL No: 02 - Carried over to summary</b>					

Item	Description	Unit	Qty	Rate	Amount
	<b>BILL No: 03</b>				
	<b>CONCRETE</b>				
<b>3.1 General</b>	(a) Rates shall include for: placing in position; making good after removal of formwork and casting in all required items; additional concrete required to conform to structural and excavated tolerances. (b) Mix ratio for reinforced concrete shall be 1:2:3 and lean concrete shall be 1:2:6 by volume. (c) All concrete works with plasticizer waterproofing chemical to be added.				
(1)	Allow for concrete testing.	item	1		
(2)	Machine compaction with water spray shall be performed before lean works and before slab casting.	item	1		
<b>3.2 Lean Concrete</b>	(a) Quantity is measured to the edges of concrete foundation members. Rates shall be inclusive for any additional concrete required to place the formwork.				
(1)	75mm thick lean concrete to bottom of beams.	m <sup>2</sup>	8.10		
<b>3.3 Reinforced Concrete</b>	In-situ reinforced concrete to:				
(1)	Foundation beam(FBI), 500 x 250	m <sup>3</sup>	3.80		
(2)	Concrete to base slab ( 150mm thick )	m <sup>3</sup>	4.10		
(3)	Concrete to floor slab ( 150mm thick )	m <sup>3</sup>	8.20		
(4)	Concrete to bund walls ( 150mm thick )	m <sup>3</sup>	9.20		
(5)	Stair beam and drain pit	m <sup>3</sup>	0.50		
<b>3.4 Formwork</b>	(a) Rates shall include for: all necessary boarding, supports, erecting, framing, temporary cambering, cutting, perforations for reinforcing bars, bolts, straps, ties, hangers, pipes, removal of formwork and normal practices used.				
(1)	Foundation beam ( FB I )	m <sup>2</sup>	28.30		
(2)	Base slab	m <sup>2</sup>	3.10		
(3)	Bund walls	m <sup>2</sup>	115.00		
(4)	Stair beam and drain pit	m <sup>2</sup>	2.50		

Item	Description	Unit	Qty	Rate	Amount
<b>3.5</b>	<b><u>Reinforcement</u></b> (a) Rates shall include for: cleaning, fabrication, placing, the provision for all necessary temporary fixings, and supports including tie wire and chair supports, laps, distribution bars and wastage. (b) All reinforcing bars shall be high strength bars.				
	(1) 16 mm dia. bars in foundation beams (FBI)	t	0.270		
	(2) 6 mm dia. bars in foundation beams (FBI)	t	0.203		
	(3) 10 mm base slab and floor slab. (T10 @ 150 c/c b/w bottom only)	t	0.672		
	(4) 10 mm bund walls (T10 @ 150 c/c b/w one layer)	t	0.810		
<b>3.6</b>	<b><u>Water Proofing</u></b> Rates shall include for dressing around and sealing to penetrations.				
	(1) Apply bituminous type waterproofing to all surfaces of concrete below ground level in accordance with the specifications and manufacture's instructions.	item	1		
<b>3.7</b>	<b><u>Damp Proof Material</u></b>				
	(1) Damp proof material through base slab ( Polythene sheet )	m <sup>2</sup>	83		
<b>3.8</b>	<b><u>Drain valve</u></b> Rates shall include for pipe connection, valve installation and cement valve pit.				
	(1) Valve chamber	item	1		
	(2) Drain pit	item	1		
	(3) 6mm metal cover for outer drain pit	item	1		
<b>3.9</b>	<b><u>Gap filling</u></b> Rates shall include edge preparation, gap cleaning from cement etc.,				
	(1) gap filled with foam up to 25mm from the top surface,	item	1		
	(1) top finishing filled with sealant	item	1		
<b>BILL No: 03 CONCRETE WORKS</b>					
<b>TOTAL OF BILL No: 03 Carried over to summary</b>					

Item	Description	Unit	Qty	Rate	Amount
	<b><u>BILL No: 04</u></b> <b><u>METAL WORKS</u></b>				
<b>4.1</b>	<b><u>General</u></b> (a) Rates shall include for: all fabrication work, welding, marking, drilling for bolts including those securing timbers, steel plates, bolts, nuts and any type of washer, riveted work, counter sinking and tapping for bolts or machine screws. (b) Rates shall include for fabrication and erection and temporary supports and fixing into position.				
<b>4.2</b>	<b><u>STEEL TANK</u></b> Complete construction of steel tank as per drawings, including:				
	(1) Base plate 9 mm	m <sup>2</sup>	23.67		
	(2) Metal sheeting 6 mm (walls)	m <sup>2</sup>	84.16		
	(3) Roof 6 mm	m <sup>2</sup>	26.40		
	(4) Angle 50 x 50 mm	item	1		
	(5) Handrails	item	1		
	(6) Manhole as per drawings	item	1		
	(7) Ladders as per drawings ( in side )	item	1		
	(8) Ladder as per drawing ( out side )	item	1		
	(9) Column G I pipe 100 mm	item	1		
	(10) Float Gauge	item	1		
	(11) Sounding Pipe	item	1		
	(12) Ventilation	item	1		
	(13) Over flow	item	1		
	(14) Drain	item	1		
<b>4.3</b>	<b><u>OUTLETS AND INLETS</u></b> (1) Complete construction of outlets and inlets including valves and other accessories	item	1		
<b>4.4</b>	<b><u>GROUNDING</u></b> (1) 32sqmm Earth connection to the tank body connected to the ground with 3 numbers of earth rods. (Cable lug connection to the tank must be provided)	item	1		
<b>4.5</b>	<b><u>STAIRS</u></b> (1) Supply and installation of GI pipe stair fixed to the bund wall as in the drawing	item	1		
<b>BILL No: 04 - ROOFING</b>					
<b>TOTAL OF BILL No: 04 Carried over to summary</b>					

Item	Description	Unit	Qty	Rate	Amount
	<b>BILL No: 5</b>				
	<b><u>PAINTING</u></b>				
<b>5.1</b>	<b><u>General</u></b>				
	(a) Rates shall include for: the provision, erection and removal of scaffolding, preparation, rubbing down between coats and similar work, the protection and/or masking floors, fittings and similar work, removing and replacing door and window furniture.				
	(b) All painting work shall be carried in accordance with the manufacturers recommendation and manuals. The brand for paint shall be Sigma or Nippon. Colors will be decided by the consultant				
<b>5.2</b>	<b><u>PAINTING</u></b>				
	(1) Painting on the inner surface of the tank:				
	(a) 1 coat F/C Sigma Universal Primer	m <sup>2</sup>	135.00		
	(b) 1 coat F/C Sigma Guard EHB Grey	m <sup>2</sup>	135.00		
	(c) 1 coat F/C Sigma Guard EHB White	m <sup>2</sup>	135.00		
	(2) Painting on the outer surface of the tank and stairs:				
	(a) 1 coat F/C Sigma EP Universal Primer	m <sup>2</sup>	145.00		
	(b) 1 coat F/C Sigma CM Micro coating Grey or Light green	m <sup>2</sup>	145.00		
	(c) 1 coat F/C Sigma CM coating	m <sup>2</sup>	145.00		
<b>5.3</b>	<b><u>PAINTING</u></b>				
	(1) Painting on the outer surface of the bund walls				
	(a) 1 coat of wall sealer.	m <sup>2</sup>	63.00		
	(b) 2 coats of finishing color	m <sup>2</sup>	63.00		
<b>BILL No: 05 - PAINTING</b>					
<b>TOTAL OF BILL No: 05- Carried over to summary</b>					