

Technical Specification (Please refer to Bill No 03)

No.	Required Specification For Energizers	Compliance Yes/Partially/ No	Manufacturer's Specifications & Model Nos.	Comments
1	Energizer : Energizer shall be manufactured to IEC 60335-2-76 Ed.3.0 International Electromechanical Commission standard (or latest) for current limited electric fence Energizers.			
1.1	Make			
1.2	Model			
1.3	Country of origin			
1.4	Country of manufacture			
	Energizer Specification			
1.5	The peak energizer stored energy shall be 18 Joule or higer.			
1.6	The energizer shall maintain atleast 800GV for load resistance above 1k Ohms.			
1.7	The energizer shall incorporate internal adaptive control, so that as the fence is more heavily loaded, the output energy of the controller is automatically increased to compensate, and to maintain effective high energy deterrent pulses of at least 6500V from load resistance of 250 Ohms upwards.			
1.8	The current consumption of the energizer shall not exceed 1.3 Amp under normal working conditions and 2.2 Amps under any circumstance.			
1.9	Energizer shall work with 12 volts DC Battery power and AC 230V with a power adapter.			
1.10	Out put energy of the energizer shall be limited to a maximum of 6.5 Joules at 500 Ohms load resistance.			
1.11	Main Energizer parameters should be configurable (Threshold voltages, Alarm Modes,, Ect.)			

1.12	Energizer shall incorporate a display to indicate necessary parameters. Following parameters of the energizer should be displayed <ul style="list-style-type: none"> ▪ Stored energy/fence current ▪ Output voltage ▪ Earth voltage ▪ Energizer failure 			
1.13	The energizer should visually indicate <ul style="list-style-type: none"> ▪ Whether it is in normal operation or electrical interference mode. ▪ When the Energizer is in failure 			
1.14	The device shall be conforming to IP X4 standard.			
1.15	Spare replaceable modules should be available in market for easy servicing			
1.16	The energizer unit must be able to incorporate lightning protection prescribe by IEC 60335-276(2013V2.2) during installation			
1.17	Certified copy of complete type test certificate from independent third party accredited laboratory confirming to IEC 60335-2-76 should be submitted			
1.18	3 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			

No.	Required Specification	Compliance Yes/Partially/No	Manufacturer's Specifications & Model Nos.	Comments
2	Solar PV array			
2.1	PV array should comply to national standards SLS1544, SLS1546, SLS1553			
2.2	A solar PV array of Between 140W _{peak} and 150W _{peak} Power is required.			
2.3	Type Polycrystalline Silicon			

2.4	Should guarantee 80% peak power performance after 3 years of field operation.		
2.5	Should provide manufacturer type test report.		
2.6	10 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidents)		
3	Solar Array Frame Kit (Galvanized)		
3.1	Hot dipped galvanized frame kit supported by 2" dia 3mm thick GI Pipe 7ft in height from the ground level		
3.2	20 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidents)		
4	Charge Controller		
4.1	Should be a MPPT type Controller		
4.2	Should be indoor offgrid DC control		
4.3	Solar controller shall be capable of handling 16 - 20 Amperes at 12 volts and charging deep cycle gel / acid batteries.		
4.4	Should be capable of Charging & Conditioning 90Ah x 3 Lead Acid battery bank		
4.5	Solar controller shall have battery deep discharging protection		
4.6	Should be able to protect load against short circuit conditions		
4.7	Should have Visual charge indicators and battery voltage indicators		
4.8	Should have manual boost charging facility.		
4.9	Should have reverse polarity protection		
4.10	Charge controller should comply to national standards SLS1542(2016), SLS1543		
4.11	03 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidents)		

5 TECHNICAL SPECIFICATIONS FOR THE SUPPLY of Fence cut-out switches

		Compliance Yes/Partially/No	Manufacturer's Specifications	Comments
01	Brand	Specify		
02	Model	Specify		
03	Country or Origin	Specify		
04	Country of Manufacturer	Specify		
05	Cut-out switches should be designed to isolate fence volages from 0-15kV & Shall be specially made for electric fencing	Specify		
06	Shall have clearly visible ON/OFF positions.	Specify		
07	Shall have protected contacts and terminals to eliminate shocks	Specify		
08	Shall be fully sealed, weather proof, dirt insect resistant.	Specify		
09	Manufacture Experience	Manufacturer should have minimum of 03 Years' experience in manufacturing of the same brand. (Proof document should be attached)		

10	Bidders Experience	The bidder should have successfully sold the same brand for last 03 Year's (Bidder should provide documentary evidence to support the above)				
11	Manufacturer Authorization	Manufacturer authorization letter should be submitted & the certificate should be Original (Scanned copies or any other form of copies will not be Accepted)				
12	Warranty	1 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).				
13	Serviceability	Manufacture authorized service center facilities should be available.				
14	Service and Maintenance	Supplier should be able to provide service and maintenance including genuine spare parts for next 05 years				
Tenderer's Special Notes						
15	Documentation Brochures : (catalogue) of the offered model should be attached to this Bid form & this will be used to check the Specifications)	Brochure attached /not attached to this Bid form				
16	Availability : (Ex-stock/IF not delivery period in weeks)	Specify				

8. Joint Clamp

No	Required Specifications	Compliance Yes/Partially/ No	Manufacturer's Specifications & Model Nos	Comments
8.1	Wire Joining clamps shall be hot dipped galvanized according to BS 729 or similar Standard to ensure good Conductivity at the wire joints			
8.2	Shall be able to clamp all wires up to 4 mm in diameter.			
8.3	Warranty			1 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).

1. Spring Gates

Required Specifications	Compliance Yes/Partially/No	Manufacturer's Specifications & Model Nos.	Comments
1.1 Shall be able to use for 5 m gate spans without over stretching or deforming.			
1.2 Shall have clearly visible insulated handles for safe operation.			
1.3 Shall be corrosion resistance.			
1.4 01 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			

2. Wire Tighteners

Required Specifications			
2.1 Able to avoid damage of galvanize wire when tightening or loosening			
2.2 Shall be strong, lightweight and of rust resistant Construction.			
2.3 Shall have more 12an 10 strain positions.			
2.4 01 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			

9	Fence Wire Tension Springs		
9.1	Permanent Tension Springs shall be designed to achieve and easily maintain the desired fence up to 1700 MPA (max) tensions. Shall be hot dipped galvanized according to BS 729 Standard or similar for long life. Shall be able to be used in conjunction with the Wire Tighteners mentioned in 9.2.		

**Insulator
Technical Specification**

1. Porcelain Strain Insulator

		Compliance Yes/Partially/ No	Manufacturer's Specifications	Comments
1.1	Shall be specially designed for electric fence wire strains on long permanent fences.	Yes		
1.2	Shall be made from high quality 1Commercial grade wet process and Surface is effectively glazed porcelain with zero porosity	Yes		
1.3	Shall be able to with stand fence wire tension above 02 kN	Yes		
1.4	Given 1dimension to larence allow ± 2 mm	Yes		
1.5	Shall be of high quality glaze finish and fire resistant with a life span of more than 10 years	Yes		
1.6	Shall be able to use with galvanized wire with 2.5 mm diameter	Yes		
1.7	Minimum tensile strength shall be 1200 Mpa and 1 minimum breaking strength 600Kg/mm ²	Yes		
1.8	10 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).	Yes		

2. Porcelain Reel Insulator

2.1	Reel Insulator Shall be of reel type and should be made from quality porcelain and must be complete with galvanized anchor clips to pin through fence posts and be riveted from the back of the post.	Yes		
2.2	Given 1 dimension to larence allow ± 2 mm	Yes		
2.3	Shall be fire resistant with a life span of more 1in 10 years	Yes		
2.4	Shall be able to withstand fence wire 1 tension above 02 kN	Yes		
2.5	Shall be made from high quality Commercial grade wet process and surfaces in effectively glazed porcelain with zero porosity	Yes		
2.6	Shall be able to use with galvanized wire with 2.5 mm diameter	Yes		
2.7	Minimum tensile strength shall be 1200 Mpa and 1 minimum breaking strength 600Kg/mm ²	Yes		
2.8	10 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).	Yes		

11. 2.5 mm Lead out Cable

No	Required Specifications	Compliance Yes/Partially/ No	Manufacturer's Specifications	Comments
11.1	Shall be designed for lead-out underground application withstanding 15 kV voltage Should be attached the test report			
11.2	Shall be 2.5 mm galvanized single Strand Cable.			
11.3	Shall have heavy-duty, high impact double XLPE or PVC insulation.			
11.4	Shall be abrasion resistant. Cables should be supplied as rolls of 100 m or higher.			
11.5	1 years warranty			

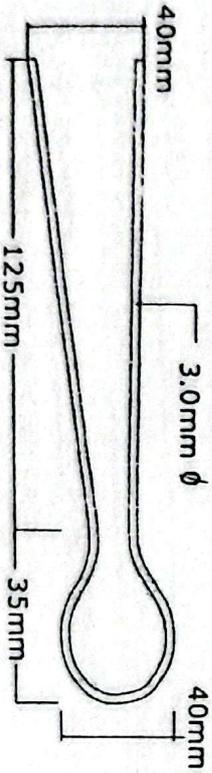
12. Porcelain Reel Insulator with Anchor Clip (Short)

No	Required Specifications	Compliance Yes/Partially/ No	Manufacturer's Specifications	Comments
12.1	Reel Insulator Shall be of reel type and should be made from quality porcelain and must be complete with galvanized anchor clips to pin through fence posts and be riveted from the back of the post.			
12.2	Given 44 dimension to reliance allow = 2 mm			
12.3	Shall be fire resistant with a life span of more 44in 10 years			
12.4	Shall be able to withstand fence wire 44 tension above 02 kN			

12.5	Shall be made from high quality Commercial grade wet process and surfaces in effectively glazed porcelain with zero porosity			
12.6	Shall be able to use with galvanized wire with 2.5 mm diameter			
12.7	Minimum tensile strength shall be 1200 Mpa and 45 minimum breaking strength 600Kg/mm ²			
12.8	10 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			

13. Anchor Clip (Short)

No	Required Specifications	Compliance Yes/Partially/ No	Manufacturer's Specifications	Comments
13.1	Shall be made as drawing and shall be hot dipped galvanized for rust prevention. 1 years warranty			



15. TECHNICAL SPECIFICATIONS FOR THE SUPPLY OF LIGHTNING DIVERTER

Required Specification		Compliance Yes/Partially/No	Manufacturer's Specifications	Comments
01	Brand	Specify		
02	Model	Specify		
03	Country or Origin	Specify		
04	Country of Manufacturer	Specify		

05	Lightning diverter shall divert lightning from the fence to the earth to protect the Energizer and related equipment.	Specify			
06	It may be adjustable (manually at site) to suit any fence voltage.	Specify			
07	Shall be able to withstand multiple strikes.	Specify			
08	Shall have protected terminals to eliminate shocks	Specify			
09	Manufacturer Experience (Proof document should be attached)	Manufacturer should have minimum of 03 Years' experience in manufacturing of the same brand.			
10	Bidders Experience	The bidder should have successfully sold the same brand for last 03 Year's (Bidder should provide documentary evidence to support the above)			
11	Manufacturer Authorization	Manufacturer authorization letter should be submitted & the certificate should be Original (Scanned copies or any other form of copies will not be Accepted)			
12	Warranty	1 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			
13	Serviceability	Manufacturer authorized service center facilities should be available.			
14	Service and Maintenance	Supplier should be able to provide service and maintenance including genuine spare parts for next 05 years			
15	Tenderer's Special Notes				

16	Documentation Brochures : (catalogue) of the offered model should be attached to this Bid form & this will be used to check the Specifications)	Brochure attached /not attached to this Bid form			
17	Availability : (Ex-stock/IF not delivery period in weeks)	Specify			

16. TECHNICAL SPECIFICATIONS FOR THE SUPPLY OF DIGITAL VOLT METER

No	Item	Minimum Specification	Compliance/Partially/No	Manufacturer's Specifications	Comments
	Digital Voltmeter (Multi Mode fault Finding Tool) (15 Kv)				
01	Shall have easy to read LCD display	Should be Internationally reputed Brand (Specify)			
02	Model	Specify			
03	Country or Origin	Specify			
04	Country of Manufacturer	Specify			
05	Size	Length 6" X Width 3" Less than			
06	Current Meter modes should be supported along with fault	Specify			

	direction identification.				
07	Shall be water proof & impact resistant	Specify			
08	Device should be able to use with any energizer/ fence conforming to IEC 60335-2-76	Specify			
	Digital Voltmeter Mode				
09	Shall be specially made for electric fencing application and shall measure up to 15kV.				
	Digital Current Meter Mode				
10	Shall facilitate locating of faults by showing the direction of the fault.				
11	Manufacture Experience	Manufacturer should have minimum of 03 Years' experience in manufacturing of the same brand. (Proof document should be attached)			
12	Bidders Experience	The bidder should have successfully sold the same brand for last 03 Year's (Bidder should provide documentary evidence to support the above)			
13	Manufacturer Authorization	Manufacturer authorization letter should be submitted & the certificate should be Original (Scanned copies or any other form of copies will not be Accepted)			
14	Warranty	1 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			

15	Serviceability	Manufacture authorized service center facilities should be available.				
16	Service and Maintenance	Supplier should be able to provide service and maintenance including genuine spare parts for next 05 years				
17	Tenderer's Special Notes					
18	Documentation Brochures : (catalogue) of the offered model should be attached to this Bid form & this will be used to check the Specifications)	Brochure attached /not attached to this Bid form				
19	Availability : (Ex-stock/FF not delivery period in weeks)	Specify				

17. Wire tightner handle

No	Required Specifications	ComplianceYe s/Partially/No	Manufacturer's Specifications	Comments
17.1	This tool shall be designed to tension or loose 2.5 mm diameter galvanized for wire and to be made of steel.			
17.2	01 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			

18. Wire Cutting Plier

No	Required Specifications	Compliance Yes/Partially y/No	Manufacturer's Specifications	Comments
18.1	Brand (Should be Internationally Reputed Brand)			
18.2	Country Of Manufacture /Assembly			
18.3	Country Of Origin			
18.4	Model			
18.5	Year Of manufacture			
18.6	Length between 15 - 20 CM			
18.7	Shall be of parallel jaws with wire grip to minimize wire damage.			
18.8	Knurled Jaw Side Cutting plier with PVC Sleeves			
18.9	Shall be able to used for heavy-duty work and be able to cut high tensile wires from gauge (SWG) 10 to 15 and 2.5mm leadout cables with insulations.			
18.10	Shall be specially made for fencing applications.			
18.11	Warranty			
	1 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			

19. Spanner

No	Required Specifications	Compliance Yes/Partially / No	Manufacturer's Specifications	Comments
19.1	Spanners of opening span of 1 inches or more shall be provided to tighten or loosen the joint clamps, earth clamps, etc.			
19.2	minimum length 8"			
19.3	1 years warranty			

20. Wire Dispenser

No	Required Specifications	Compliance Yes/Partially/ No	Manufacturer's Specifications	Comments
20.1	Shall facilitate free flow of fence wire for tangle free rapid installation.			
20.2	Shall hold 50 kg galvanized iron electric fencing wire.			
20.3	1 years warranty			

21. High tensile Galvanized wire

No	Required Specifications	Compliance Yes/Partially/ No	Manufacturer's Specifications	Comments
1	Galvanized Wire Should be made out of hot dipped galvanized high tensile steel.			
2	Minimum Zinc coating shall be 260g/m ²			
3	Minimum tensile strength shall be 1200 MPa and minimum breaking strength 600kg/mm ²			
4	DC electrical resistance shall not exceed 35 Ohms/1000 meters at 200C° temperature.			
5	Should be supplied as 25kg rolls with a label indicating the length of wire per each roll.			
6	Should be 2.5 mm			

22. 12V-90 Ah Batteries

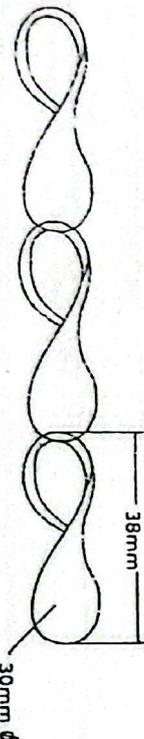
No	Battery	Minimum Specification	Compliance Yes/Partially/No	Manufacturer's Specifications	Comments
1.1	Brand	Specify			
1.2	Model	Specify			
1.3	Country or Origin	Specify			
1.4	Country of Manufacturer	Specify			
1.5	Manufacture Experience	Manufacturer should have minimum of 03 Years' experience in manufacturing of the same brand. (Proof document should be attached)			
1.6	Bidders Experience	The bidder should have successfully sold the same brand for last 03 Year's (Bidder should provide documentary evidence to support the above)			
1.7	Manufacturer Authorization	Manufacturer authorization letter should be submitted & the certificate should be Original (Scanned copies or any other form of copies will not be Accepted)			
1.8	Warranty	Minimum 02 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			
1.9	Availability: (Ex-stock/IF not delivery period in weeks)	Specify			
1.10	12Volt - 90 Ahr maintenance Free deep Cycle batteries with thicker Lead plates shall be provided.				
1.11	Shall be suitable for nominal operation temp from 30 +/- 10 °C				
1.12	Tender's Special Notes				

Signature Of the Tenderer -
Date and Company seal -

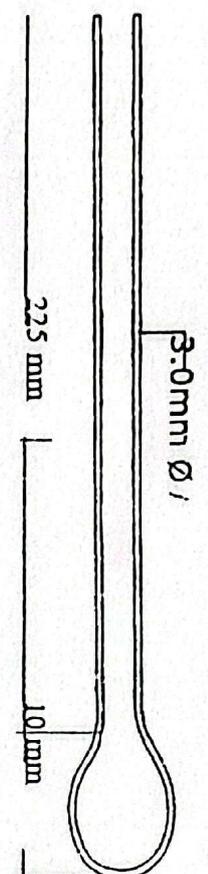
23. Battery inter Connector set

No	Required Specifications	Compliance Yes/Partially/No	Manufacturer's Specifications	Comments
2	Battery inter Connector Sets			
2.1	Battery inter connector sets shall be able to connect the batteries as a parallel bank			

24. Chain links for Flood Gates

No	Required Specifications	Compliance Yes/Partially/No	Manufacturer's Specifications	Comments
3.1	3.0 mm (Diameter) hot dipped galvanized chain links shall be provided. Please refer diagram of figure 1 years warranty			
<p>Paste Figure</p>  <p style="text-align: center;">Fig 2.1</p>				

25. Anchor Clip for earth wire

Required Specifications				
4.1	Shall be made as drawing diagram and all be hot dipped galvanized (3mm diameter) for rust prevention 1 years warranty			
				

26. 2.5 mm² - 2 core flexible wire

	Required Specifications	Compliance Yes/Partially/ No	Manufacturer's Specifications	Comments
5.1	2.5 mm ² PVC insulated 2 core cable with PVC sheath			
5.2	Purpose is to carry DC power from solar panel to the charge controller			
5.3	Cables should be supplied as rolls of 100 m or higher.			
5.4	1 years warranty			

3. Wire tightener handle

	Required Specifications			
3.1	This tool shall be designed to tension or loose 2.5 mm diameter galvanized for wire and to be made of steel.			
3.2	01 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			

4. Flood Gate controller with all equipment

	Required Specifications	Compliance Yes/Partially/ No	Manufacturer's Specifications & Model Nos	Comments
4.1	Flood gate controller shall prevent energy discharge to the ground (through water) during flood by shutting off the floodgates automatically.			
4.2	01 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).			

1. Technical Specification

Technical Specification for the Supply and Delivery of Iron Pieces

	Required Specifications	Compliance Yes/Partially/No	Manufacturer's Specifications	Comments
1	Iron Pieces and			
1.1	Length of a piece should be 3' - 6" Flat Iron width 2', thickness 5.5mm			
1.2	Length of a piece should be 3' Flat Iron width 2', thickness 5.5mm			

**Technical Specifications
Nut & Bolt**

Required Specifications		Compliance Yes/Partially/No	Manufacturer's Specifications
1	According to drawing and 1/2" x 8" Nut & half screw Bolt with 1/2" dia 02 nos washers (Diagram is attached)		
2	12 mm 5" nut & Bolt 02 nos washers (Diagram is attached)		
3	16 mm nut 9" & Bolt 02 nos washers (Diagram is attached)		

All Nut & Bolt, washers Should be mild Steel Long 50 Microns Hot Dip Galvanized

Test Report Should be Submitted For Conforming Hot dip GI Nut & washers

Signature Of The Tenderer -

Date & Company Seal -

Technical Specification

1. 1/2" Dia PVC Pipe

Required Specifications	Compliance Yes/Partially/No	Manufacturer's Specifications & Model Nos.	Comments
1.1 Shall be SLS certified PVC pipes of 1000 Type <u>1/2"</u> diameter suitable for under ground electrical cable laying.			
1.2 Shall be 19minimum 03 (three) mm thickness.			

2. 1/2" Dia PVC Bends

Required Specifications	Compliance Yes/Partially/No	Manufacturer's Specifications & Model Nos.	Comments
2.1 PVC Bends suitable for above pipes should be provided			
2.2 It should be suitable for electrical applications			

3. Fence warning signs

	Required Specifications			
3.1	The size of the warning sign (As per the attached drawing A). At a minimum they need to be 100mm x 200mm.			
3.2	Their background colour must be yellow and all writing must be in black.			
3.3	The inscription on the sign is to be black and shall be either the symbol shown below, or the words "WARNING - ELECTRIC FENCE" "අයි බලනී ඩිදුලි වැටීම" "Property of DWC" The size of the writing must be at least 25mm.			
3.4	Advertising is prohibited			

3. Fence warning signs

	Required Specifications			
3.1	The size of the warning sign (As per the attached drawing A). At a minimum they need to be 100mm x 200mm.			
3.2	Their background colour must be yellow and all writing must be in black.			
3.3	The inscription on the sign is to be black and shall be either the symbol shown below, or the words "WARNING - ELECTRIC FENCE" "අයි බලැති වැලි වැට්" "Property of DWC" The size of the writing must be at least 25mm.			
3.4	Advertising is prohibited			

27. Galvanized Earth stake with clamp

TECHNICAL SPECIFICATIONS FOR THE SUPPLY OF GALVANIZED EARTH STAKE WITH WIRE FIXING BRACKET				
No.	Item	Minimum Specification	Bidders Compliance	
			Yes/ No	If No, Bidders Response
01	Earth stakes shall be made as Drawing, 4' 08" in length and made of 50 mm Diameter and gage 3.6 mm G.I pipes, one end cut in wedge shape with wire Fixing Bracket bolted according to the drawing.	Should be Internationally reputed Brand (Specify)		
02	Manufacture Experience	Manufacturer should have minimum of 15 Years' experience in manufacturing of the same brand. (Proof document should be attached)		
03	Bidders Experience	The bidder should have successfully sold the same brand for last 10 Year's (Bidder should provide documentary evidence to support the above)		
04	Manufacturer Authorization	Manufacturer authorization letter should be submitted & the certificate should be Original (Scanned copies or any other form of copies will not be Accepted)		
05	Warranty	1 years comprehensive on-site manufacturer authorized warranty (labor, parts and other incidentals).		
06	Warranty Information	Should fix a sticker with the following information		
07	Tenderer's Special Notes			
08	Documentation Brochures : (catalogue) of the offered model should be attached to this Bid form & this will be used to check the Specifications)	Brochure attached /not attached to this Bid form		
09	Availability :(Ex-stock/IF not delivery period in weeks)			
10	Supplier Name & Address			
11	Telephone No.			
12	Fax No			
13	Name of the Authorized Officer			
14	Signature of the Tenderer & Date			
15	Common seal of the company			

1. Technical Specifications

Technical Specification For the GI Mesh for Electric Fences

No.	Required Specifications	Compliance Yes/Partially/No	Manufacturer's Specifications	Comments
1	2"x2" GI Square Mesh. Mesh should be made up of Gauge 10 wire. Size of each piece should be 2'x8' (feet). Sharp wire rod edges should be avoided.			

1. Technical Specification

Technical Specification for the Supply and Delivery of 9fts Heavy duty G.I. Pipe 3" dia Fence Posts and necessary Fence Accessories for Electric Fences

Required Specifications		Compliance Yes/Partially/No	Manufacturer's Specifications	Comments
1	Heavy duty G.I. Pipe 3"			
1.1	Length 9fts			
1.2	3" External diameter			
1.3	2.9 mm Thickness			
1.4	Zinc coating thickness minimum 50 µm			
1.5	Minimum Tensile Strength of pipe 320 N/mm ²			
1.6	Upper Yield strength min 195N/mm ²			
1.7	Hole Diameter 14mm			
1.8	All measurements and Drill Hole dimensions are according to the drawing attached (dwc/eng/2020/242)			
1.9	Dimensional tolerances (+/-mm) max			
	Height 10mm			
	Other Dimensions 2mm			
	Holes 1mm			
1.10	Chemical Composition (max)			
	C %	0.20		
	Si %	0.20		
	Mn %	1.40		
	P %	0.04		
	S %	0.04		
2	The letters "DWC" shall be impressed or marked with a permanent ink on the finished product (GI pole) at a height not less than 3' from the Anchored end of the pipe.			
2	12mm dia 5" long GI nut and bolt with 12mm dia 02 Nos washers			
3	PVC End cap 3" dia			
3.1	Shall fit with 3" diameter GI pipe.			

Technical Specifications for The Timber Line Posts

No.	Discription	Conformity		Re-maks
		Yes/ No		
01	Timber Coner Post (relevant drawing no 02)			
	Lenh	9'		
	Girth	16" - 19"		
02	Timber Support Post (relevant drawing no 03)			
	Lenh	10'		
	Girth	19" - 22"		
03	General Shape	Generally round in shape and shall be free from heart rot and crooks		
04	Fabrication	The post shall be provided with holes as indicated in the fabrication drawing (According to drawing no. 01, 02 & 03)		
05	Type of timber species	Micro (<i>Eucalyptus microcorys</i>) Teak (<i>Tectona grandis</i>) Camalduiensis (<i>Eucalyptus camalduiensis</i>) Tereticornis (<i>Eucalyptus tereticornis</i>) Blue gum (<i>Eucalyptus globulus</i>)	Should be submitted report for confirmation of timber species from relevant government institution	
06	Method of Timber Treatment	preservative (The coal tar creosote) comply with BS 144:1990 part 1: Specification for preservative Part 11:Methods for timber treatment	ITI (Industrial Technology Institute) certificate should be submitted to confirm the preservative comply with BS 144:1990	
		Preparation for treatment	All drilling, notching, cutting or other fabrication and marking required shall be carried out before preservative treatment	
		Treatment process	The posts are to be pressure treated by the	

Technical Specifications for The Timber Line Posts

No.	Discription	Conformity		Re-maks
		Yes/ No		
01	Timber Concer Post (relevant drawing no 02)			
	Lenh 9'			
	Girth 16" - 19"			
02	Timber Support Post (relevant drawing no 03)			
	Lenh 10'			
	Girth 19" - 22"			
03	General Shape			
	Generally round in shape and shall be free from heart rot and crooks			
04	Fabrication			
	The post shall be provided with holes as indicated in the fabrication drawing (According to drawing no. 01, 02 & 03)			
05	Type of timber species	Micro (<i>Eucalyptus microcorys</i>) Teak (<i>Tectona grandis</i>) Camalduiensis (<i>Eucalyptus camalduiensis</i>) Tereicornis (<i>Eucalyptus tereicornis</i>) Blue gum (<i>Eucalyptus globulus</i>)	Should be submitted report of timber species from relevant government institution	
06	Method of Timber Treatment	preservative (The coal tar creosote) comply with BS 144:1990 part 1: Specification for preservative Part 11:Methods for timber treatment	ITI (Industrial Technology Institute) certificate should be submitted to confirm the preservative comply with BS 144:1990	
	Preparation for treatment	All drilling, notching, cutting or other fabrication and marking required shall be carried out before preservative treatment		
	Treatment process	The posts are to be pressure treated by the		

