

DIRECTORATE GENERAL, CRPF
BLOCK NO.1, CGO COMPLEX, LODHI ROAD, NEW DELHI-03
(Bharat Sarkar/Grih Mantralaya)
Tele- 011-24360155/Fax-011-24360155)

No.L.VII-45/2022-23-Prov-DA-5

Dated, the 26 /12/2022

Expression Of Interest Notice

Tender No. :: L.VII-41/2022-23-Prov-DA-5
Publish Date :: 27th Dec, 2022
Last date of submission :: 10th Jan, 2023

Description :: Expression of interest for procurement of “Anti Climbing Fence for Open ground Perimeter Fencing” in CRPF. QRs/Specifications at Directorate General, CRPF, Lodhi Road, New Delhi vide L.VII-45/2022-23-Prov-DA-5 published dated 27th Dec, 2022, last receipt date 10th Jan, 2023 at 1600 hrs. E-mail:digprov@crpf.gov.in, Fax: 24360155 as per details given at attached proposal.

Attachments :- Copy of EOI, scanned copy of draft QRs/Specifications of the subject item.



DIG (Prov) Dte.

'EXPRESSION OF INTEREST'

CRPF is in a process of framing QRs of "Anti Climbing Fence for Open Ground Perimeter Fencing".

2. The draft QRs/Specification of said items are attached herewith.
3. The firms/parties dealing in subject matter are invited to submit their views by 10/01/2023(10th Jan, 2023)

Contact Person:-

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DY. INSPECTOR GENERAL OF POLICE (Provisioning)
DTE. GENL., CRPF,
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Description/Nomenclature of Anti Climb Fence

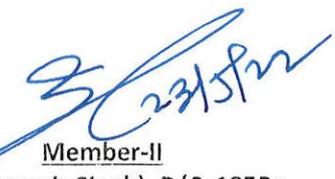
1. **Foundation:** Size of excavation: 600x600x700mm depth. M20 grade of Cement Concrete **1:1½:3 (1 Cement: 1½ coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size)** shall be used up to plinth level to erect the CHS post in position.
2. **Weld Mesh Panel with Accessories:** Weld Mesh Panels with two V-bends along the length of the panel should produced by electrical resistance welded galvanized wires and subsequently powder coated as per spec.. **Mesh Wire (Fig. 4): Horizontal wire Dia 4.0 mm (+/- 0.05mm) : Vertical Wire Dia 4.0mm (+/- 0.05mm) Mesh Size: Mesh size of 76.2 x 12.7mm along Mesh (Mesh Wire: IS:280-2006). Panel size: 2667x955mm. Weight: 24.05 Kg (+/- 5%). Metallic Coating:** The wires should be Galvanized and the min zinc weight for the Horizontal and Vertical wires are zinc coated, 40 to 50 GSM. **Powder Coating:** The galvanized panels are subsequently thermoplastic coated after welding with minimum thickness of 250 microns to meet high corrosion protection standards. **Colour:** Green RAL 6005 **Powder Coating.** **Weld Shear Strength:** The average weld shear strength of 4 welds taken at random shall not be less than 50% of the breaking strength of the vertical wire.
- **Omega Clamp:** (Fig. 5 & 6) 'Omega' clamps **76.1mm dia, 35mm width, 3mm thickness** with profile cover plate (MS strip as per IS 1730) . manufactured from Pre galvanized MS Strip (275 GSM) After fabrication the clamps and cover plates are thermoplastic powder coated with min. thickness 250 microns to meet high corrosion protection standards. **Colour:** Green RAL 6005 Powder Coating.
 - **Mushroom Head Bolt Nut with Washer (For Omega Clamps) :** (Fig. 9) Each clamp will be supplied with two sets of mushroom headed, square necked bolts and security nuts **M8x50 (SS-304 IS:8535-1987)**. Washer Specification **Material: SS 304, OD: 15.89mm, ID: 8.38mm, thickness: 1.60-2.00mm.**
 - **Inter Panel Binder:** (Fig. 9) To provide greater strength to prevent opening of unsecured overlap between two horizontal panels so that these are not opened up even with use of crowbars. It consists of front and back plates of **160x25mm** galvanized strip (275 GSM) of **3mm thickness**, with two holes for bolts, Thermoplastic powder coated with coating of min. 250 microns of **Colour:** Green RAL 6005 Powder Coating. Clamps to be fixed with 2 sets of Bolts of size **M8x35mm** along with Mushroom Head square necked bolts and security nuts and washers.
 - **Mushroom Head Bolts with Security Nuts with washer (For Inter Panel Binder) (Fig. 10) -** Each Binder shall be supplied with two sets mushroom headed, square necked bolts with security nuts **M8x35 (SS-304 IS-8535-1937)** and washers (**SS-304, OD: 15.85mm, ID: 8.38mm, thickness: 1.60-2.00mm**).
 - **Corner Clamp:** These clamps are used to fix the mesh on the poles by using Cody clamps and suitable fasteners when fence line has corners/turns. **Material: MS Flat 35mm width and 3mm thick** as per IS:1730, weight of each corner clamp: 0.35 kg (+/- 10%). The galvanized clamps (275 GSM) are subsequently Thermoplastic powder coated after fabrication with a min. Thickness of 250 microns to meet high Corrosion protection standards. **Colour:** Green RAL 6005 Powder Coating.


Presiding Officer

(Sh. Arun Kr Bharati), Comdt-185Bn


Member-I

(Sh. Sanjeev Kr Singh), 2-I/C, 180Bn

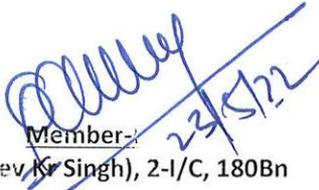

Member-II

(Sh. Premvir Singh), D/C, 185Bn

- **Cody Clamps:** These clamps are used to fix the mesh on poles by using corner clamps and suitable fasteners when fence line has corners/turns. **Material: MS flat 32.5mm width and 2.8mm thick** as per IS:1730, Weight of each Cody clamp 0.05 kg (+/- 10%). The galvanized clamps (275 GSM) are subsequently Thermoplastic powder coated after fabrication with a min. Thickness of 250 microns to meet high Corrosion protection standards. Colour: Green RAL 6005 Powder Coating.
- **Mushroom Head Bolts with Security Nuts:** (Fig. 10) with washer (For Corner Clamps) : Each corner clamp shall be supplied with two sets of mushroom headed, square necked bolts with security nuts **M8x50** (IS: 8535-1937) and washers (**SS-304, OD: 15.85mm, ID: 8.38mm, thickness: 1.60-2.00mm**).
- 3. **Fence Post:** (Fig. 1) Type: Circular Hollow Section. **Material: MS Steel Tube** (Medium Grade) (IS:1161-2014). **Outer Diameter: 76.1mm** (+/- 1%), **Thickness 3.6mm** (+/- 10%), weight: 6.42kg/m (+/-10%), **Length: 3345mm** (+/- 5%) (2745 mm above ground level + 600mm under the ground level). Coating: Hot Dip galvanized to min 360 GSM as per IS:4736/ IS:4759/ASTM A 123 with Thermoplastic powder coating after fabrication with min. thickness of 250 microns to meet high corrosion protection standards. Colour: Green RAL 6005 Powder Coating.
- **Anchor Rod:** (Fig. 7) **10mm dia, 300mm long** GI Rod anchored with fence post at bottom using tie wire (2 Nos per fence post).
- 4. **Straining Y-Arm for supporting top PTCC:** **Material:** (Fig. 2) **MS Angle. Size: 50x50x5mm** as per IS:808 /IS:1852, **Length: 750mm of each arm**, Wt 6.6 Kg +5%/-3%. **120 degree angle of Y**, Straining Y-Arm is for supporting top PTCC. Sleeve cap of outer diameter 63mm is bolted on the top of the fence post. Straining post will be installed at every 30 meters. Coating: Hot dip galvanized to 460 GSM as per IS:2629/IS:4759/ASTM A 123. After galvanizing Y-Arms are subsequently Thermoplastic powder coated after fabrication with min thickness of 250 microns to meet high corrosion protection standards. Colour: Green RAL 6005 Powder Coating.
- **Eye Bolt for Staining Y-Arm:** Material: SS-304, Size: **M8x100mm**, Weight of Eye Bolt, Nut and Washer: 0.1 kg (+/- 10%). Each Straining Y-Arm shall be supplied with 6 sets of Eye Bolts with security nuts and washers.
- **Fitting Accessories for Straining Y-Arm:** Mushroom Head Bolt with breakable head safety nuts (M8x120) (Fig. 10). Each Y-arm shall be supplied with two sets mushroom headed bolts with security nuts and washers. Material –SS 304.
- 5. **Intermediate Y-Arm for supporting top PTCC:** **Material:** (Fig. 3) **MS angle size : 40x40x3 mm** as per IS:808/ IS:1852. **Length: 750mm of each arm**, Wt Min. 3.7 kgs (+/- 5%), **120 degree angle of Y**, with support **steel strip of 25x5 mm and length 600 mm** (galvanized as per IS 4759), Sleeve cap of inner diameter 79 mm is bolted on the top of the fence post. Intermediate Y-Arm will be installed at every 2500mm. Coating: Hot Dip galvanized to 460 GSM, as per IS:2629/IS:4759. Powder Coating : The galvanized intermediate Y Arms to subsequently Thermoplastic Powder Coated after fabrication with min. thickness of 250 microns to meet high corrosion protection standards. Colour: Green RAL 6005 Powder Coating.


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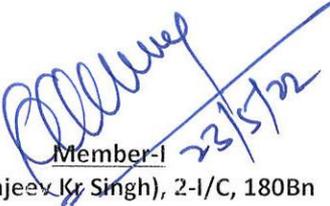

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- **Fitting Accessories for Intermediate Y-Arm:** Mushroom Head Bolt with breakable head safety nuts (Fig. 10) (M8x120) SS -304 material. Each Intermediate Y-Arm shall be supplied with two sets of mushroom headed bolts with security nuts and washers for fixing steel strips.
- 5. **Punched Tape Concertina Coil:** (Medium Blade Profile) **1050mm dia** (+/- 50mm) with 50 turns, having a **Core Wire, of dia 3.5mm** (+/-0.035mm), of high carbon strip steel (0.4mm) of high tensile strength. The punched tape and core wire electro galvanized to provide protection against outdoor exposure. The punched tape is mechanically crimped over the core wire and then formed into a coil at various parts of the periphery of the coil; steel clips SS304 "total 129 Nos per coil equally spaced" to connect the individual turn of the coil to each other so that it opens up like an accordion. The width of strip as 19 mm and spacing of blades 35.00 mm (+/-0.5) C/C. the weight of each coil will be 20.2 Kgs (+/-5%) without packing material and coil length 15 mtr when opened up with an effective height of 915 mm.
- 7. **Galvanized Steel Barbed Wire, ISI marked A-5** designation for Galvanized steel barbed wire for fencing shall conform to IS 278-1978. The barbed wire shall consist of **two line wire 2.24 mm dia** (+/-0.08mm) (Tensile strength 390 – 590 N/mm² minimum breaking load of complete barbed wire 3kN), **one or both containing 2.00 mm dia** (+/-0.08mm) **barbs at 75 mm** (+/-12mm) centre to centre and weighing 97 to 106 Kg per Km. **The barbs shall have a length of not less than 13 mm and not more than 18 mm.** the line wire shall be circular in section, free from scales and other defects and shall be uniformly galvanized. The line wire shall be in continuous length and shall not contain any welds other than those in the rod before it is drawn. The galvanising shall conform to the requirement as laid down for light – coated wire of IS 4826-1968 Specification for galvanized coating on round steel wires. **Barbing wire(line) shall be hard type heavy coated (230 gm/sq m) and barbing wire(point) shall be hard type light coated (70 gm/sq m).** The galvanized barbed wire will be in bundles of 25 to 30 Kgs each and the bundles will be packed in hessian cloth, the bundles should be strong enough to withstand rough handling during transportation. Every reel of barbed wire shall be marked legibly with BIS standard make the name for manufacturer, the type barbed wire, the diameter of the line & point wires, barb spacing and length and/or mass of the reel. Strands: 6 Rows
- **Hog Rings:** (Fig. 8)Hog Rings are used to secure Punched Tape Concertina Coils (PTCC) to the barbed wire and also to secure consecutive PTCCs. Hog Rings material: SS-304 in 3mm dia and weighs 0.004 kg (+/- 8%).


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QR/SPECIFICATION OF ANTI CLIMB FENCE (ANTI INTRUSION FENCE)

SN	COMPONENETS	QRs/SPECIFICATION
1.	Weld Mesh Panel a) Omega Clamp b) IP Binder c) Corner Clamp d) Cody Clamp	Panel Height 955mm, Panel Width 2667mm, Mesh 76.2mmx12.7mm, Wire Dia 4mm, 2 'V' Bend. (Fig. 4) a) Omega Clamp (Fig. 5) 76mm(dia), 180mm(length), 35mm(width), 3mm(thickness), with Profile Cover Plate (Fig. 6) (Mushroom Head Bolt (M8x50) With Security Nut & Washer). b) IP Binder, 160x25x3mm Thk with Mushroom Head Bolt (M8x35mm) & Security Nut With Washer. c) MS Flat 35mm width, 3mm Thk (Mushroom Head Bolt(M8x50) With Security Nut, Washer). d) MS Flat 32.5mm Width, 2.8mm Thk (Mushroom Head Bolt With Security Nut, Washer M8x50).
2.	Straining Post a) Anchor Rod	CHS OD 76.1x3.6mm Thk, 2745mm Above Ground Level & 600mm buried in to the ground. (Fig. 1) a) Dia 10mm, 300mm length
3.	Intermediate Post a) Anchor Rod	CHS OD 76.1x3.6mm Thk, 2745mm Above Ground Level & 600mm buried in to the ground. (Fig. 1) a) Dia 10mm, 300mm length
4.	Straining Y-Arm a) Mushroom head bolt with breakable nut	Made Out Of 50x50x5mm Equal Angles, 120° angle of Y, Length 750mm, sleeve cap OD 63mm, Bolted on top of the Straining Post, (Fig. 2) a) M8x120(Dia 8mm, 120mm length)
5.	Intermediate Y-Arm a) Mushroom head bolt with breakable nut b) Steel strip	Made Out Of 40x40x3mm Equal Angle, 120° angle of Y, Length 750mm, sleeve cap ID 79mm, Bolted On Top Of The Intermediate Post.. (Fig. 3) a) Two sets for each post of M8x120(Dia 8mm, 120mm length) b) (flat bar) 600x25x5mm
6.	Concertina Coil a) Hog ring	Coil Dia 1050mm, Blade Profile Medium, Core Wire 3.5mm Dia, Heavy Galvanised, Strip 0.4mm Thk & 19mm width, blades spacing 35mm C/C. a) 3mm Dia
7.	High Tensile Barb Wire	6 Rows, Line Wire 2.24mm Dia, Two Line Wire, Barbed Wire 2mm Dia, Barbed at every 75mm C/C, 13mm≤ barb length ≤18mm.



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TRIAL DIRECTIVES OF ANTI CLIMB FENCE (ANTI INTRUSION FENCE)

Sr. No.	QRs/SPECIFICATION	TRIAL DIRECTIVES
1.	Weld Mesh Panel Panel Height 955mm, Panel Width 2667mm, Mesh 76.2mmx12.7mm, Wire Dia 4mm, 2 'V' Bend.	Specifications shall be Checked physically by the BOO and also the board of Officer will check the type Test Certificate provided by the manufacturer/vender/supplier. Tests for item shall conform the requirements of: IS:1608 IS:1755 IS:280
2.	Straining Post CHS OD 76.1x3.2mm Thk, 2745mm Above Ground Level & 600mm buried in to the ground.	Specifications shall be Checked physically by the BOO and also the board of Officer will check the type Test Certificate provided by the manufacturer/vender/supplier. Tests for tensile strength, ductility & coating of item shall conform the requirements of: IS:1161 IS:2328 IS:4736 IS:4759 ASTM A 123
3.	Intermediate Post CHS OD 76x3.2mm Thk, 2745 Mm Above Ground Level & 600mm buried in to the ground.	Specifications shall be Checked physically by the BOO and also the board of Officer will check the type Test Certificate provided by the manufacturer/vender/supplier. Tests for tensile strength, ductility & coating of item shall conform the requirements of: IS:1161 IS:2328 IS:4736 IS:4759 ASTM A 123
4.	Straining Y-Arm Made Out Of 50x50x5mm Equal Angle, Length 750mm, Bolted on top of the Straining Post.	Specifications shall be Checked physically by the BOO and also the board of Officer will check the type Test Certificate provided by the manufacturer/vender/supplier. Testing & Inspection shall conform the requirements of: IS:2629 IS:4759 ASTM A 123
5.	Intermediate Y-Arm Made Out Of 40x40x3mm Equal Angle, Length 750mm, Bolted On Top Of The Straining Post. (Fig. 3)	Specifications shall be Checked physically by the BOO and also the board of Officer will check the type Test Certificate provided by the manufacturer/vender/supplier. Testing & Inspection shall conform the requirements of: IS:2629 IS:4759 ASTM A 123
6.	Concertina Coil	Specifications shall be Checked physically by the BOO and also


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	Coil Dia 1050mm, Blade Profile Medium, Strip 0.4mm Thk, Core Wire 3.5mm Dia, Heavy Galvanised.	the board of Officer will check the type Test Certificate provided by the manufacturer/vender/supplier. Testing & Inspection shall conform the requirements of: IS:4826 IS:6745
7.	High Tensile Barb Wire 6 Rows, Line Wire 2.24mm Dia, Two Line Wire, Barbed Wire 2mm Dia, Barbed at every 75mm C/C.	Specifications shall be Checked physically by the BOO and also the board of Officer will check the type Test Certificate provided by the manufacturer/vender/supplier. Testing & Inspection shall conform the requirements of: IS:4826 IS:278
8.	Clamp Omega Clamp with Profile Cover Plate (Mushroom Head Bolt With Security Nut, Washer M8x50), Corner Clamp- MS Flat 35mm width, 3mm Thk (Mushroom Head Bolt(M8x50) With Security Nut, Washer), Cody Clamp- MS Flat 32.5mm Width, 2.8mm Thk (Mushroom Head Bolt With Security Nut, Washer M8x50).	Specifications shall conform to the requirements of IS:1730 and shall be Checked physically by the BOO and also the board of Officer will check the type Test Certificate provided by the manufacturer/vender/supplier.
9.	IP Binder IP Binder, 160x25x3mm Thk with M8x35mm Long Mushroom Head Bolt & Security Nut With Washer.	Specifications shall conform to the requirements of IS:1730 and shall be Checked physically by the BOO and also the board of Officer will check the type Test Certificate provided by the manufacturer/vender/supplier.


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RESEARCH/STUDY CONDUCTED BEFORE PROPOSING THE QRs

IS : 278 2009 - GALVANIZED STEEL BARBED WIRE FOR FENCING — SPECIFICATION

IS : 4826 1979 - SPECIFICATION FOR HOT-DIPPED GALVANIZED COATINGS ON ROUND STEEL WIRES

IS : 4454 (PART-1) 2001 - STEEL WIRE FOR MECHANICAL SPRINGS — SPECIFICATION

IS : 280 2006 - MILD STEEL WIRE FOR GENERAL ENGINEERING PURPOSES

IS : 1730 1989 Supersedes IS 1731 (Reaffirmed 2004) - STEEL PLATES, SHEETS, STRIPS AND FLATS FOR STRUCTURAL AND GENERAL ENGINEERING PURPOSES-DIMENSIONS

IS : 8535 1987 ISO 1891- 1979 (Superseding IS : 8537 -- 1977) (Reaffirmed 2001) - BOLTS, SCREWS, NUTS AND ACCESSORIES TERMINOLOGY AND NOMENCLATURE

IS : 2629 1985 (Reaffirmed 1994) - RECOMMENDED PRACTICE FOR HOT-DIP GALVANIZING OF IRON AND STEEL

IS : 4759 1996 (Reaffirmed 2001) Edition 4.1 (2002-05) - HOT-DIP ZINC COATINGS ON STRUCTURAL STEEL AND OTHER ALLIED PRODUCTS — SPECIFICATION

IS : 1852 1985 - SPECIFICATION FOR ROLLING AND CUTTING TOLERANCES FOR HOT-ROLLED STEEL PRODUCTS

IS : 808 1989 (Reaffirmed 1999) Edition 4.1 (1992-07) - DIMENSIONS FOR HOT ROLLED STEEL BEAM, COLUMN, CHANNEL AND ANGLE SECTIONS

IS : 4736 1986 (Reaffirmed 1998) – SPECIFICATION FOR HOT-DIP ZINC COATINGS ON MILD STEEL TUBES

IS : 1161 1998 - STEEL TUBES FOR STRUCTURAL PURPOSES – SPECIFICATION

IS : 4826 - SPECIFICATION FOR HOT-DIP ZINC COATINGS ON MILD STEEL TUBES

IS : 6745 (Reaffirmed 2001) - METHODS FOR DETERMINATION OF MASS OF ZINC COATING ON ZINC COATED IRON AND STEEL ARTICLES

ASTM A 123 - STANDARD SPECIFICATION FOR ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS


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Member-I

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Member-II

(Sh. Premvir Singh), D/C, 185Bn

ANNEXURE-"A"**PROFORMA/CHECKLIST FOR FRAMING QRs AND TRIAL DIRECTIVES BY REQUIRED TO BE RECEIVED FROM OTHER FORCE/INDENTOR**

SL. No.	PARTICULARS	REMARKS
1.	Description/Nomenclature of store/item.	Anti Climb Fence (Anti Intrusion Perimeter Fence).
2.	Use of Store/item.	The item will be used to fence the perimeter of CRPF unit locations.
3.	Whether the store/item is user specific?	This item will be used by the CRPF to secure the perimeter of its camp located in critical areas.
4.	Is it a fresh QR or revision of existing QR's?	This is a fresh QR's.
5.	If a case of revision, need for revision and comparative statement of old and new QR's to be provided.	-
6.	If revision, copy of existing QR's and fresh/revised QR/TD be enclosed.	-
7.	Whether trial directives are being proposed along with QR's?	Yes, Trial Directives are proposed along with QR's.
8.	Details of research/ study conducted before proposing the new QR's.	Different Indian Standard Codes (page no.- 7) were studied before proposing this Fresh QR's.
9.	Whether QR's/specification are genetic in nature?	Yes, QR's/specification are genetic in nature.
10.	Whether adequate tolerance range have been provided to make these competitive?	Yes
11.	Whether the store/item confirming to QR's are available in market?	Yes
12.	Self life of store.	Up to 15 years.
13.	Whether technical details/drawings, if necessary, are included with the QR's?	Drawings of elevation, 358 fence, CHS post, Y-arms, Omega clamp with profile plate and other necessary accessories are included with QR's.
14.	Confirmation to the effect that the proposed QR's have been prepared with the adoption of the latest technology.	Proposed QR's have been prepared with the adoption of the latest technology.
15.	Whether QR's meet the actual and essential needs of the user because over specifications may increase the cost and may stifle competition.	The QR's proposed meet the essential needs of the user and further improve the user safety.



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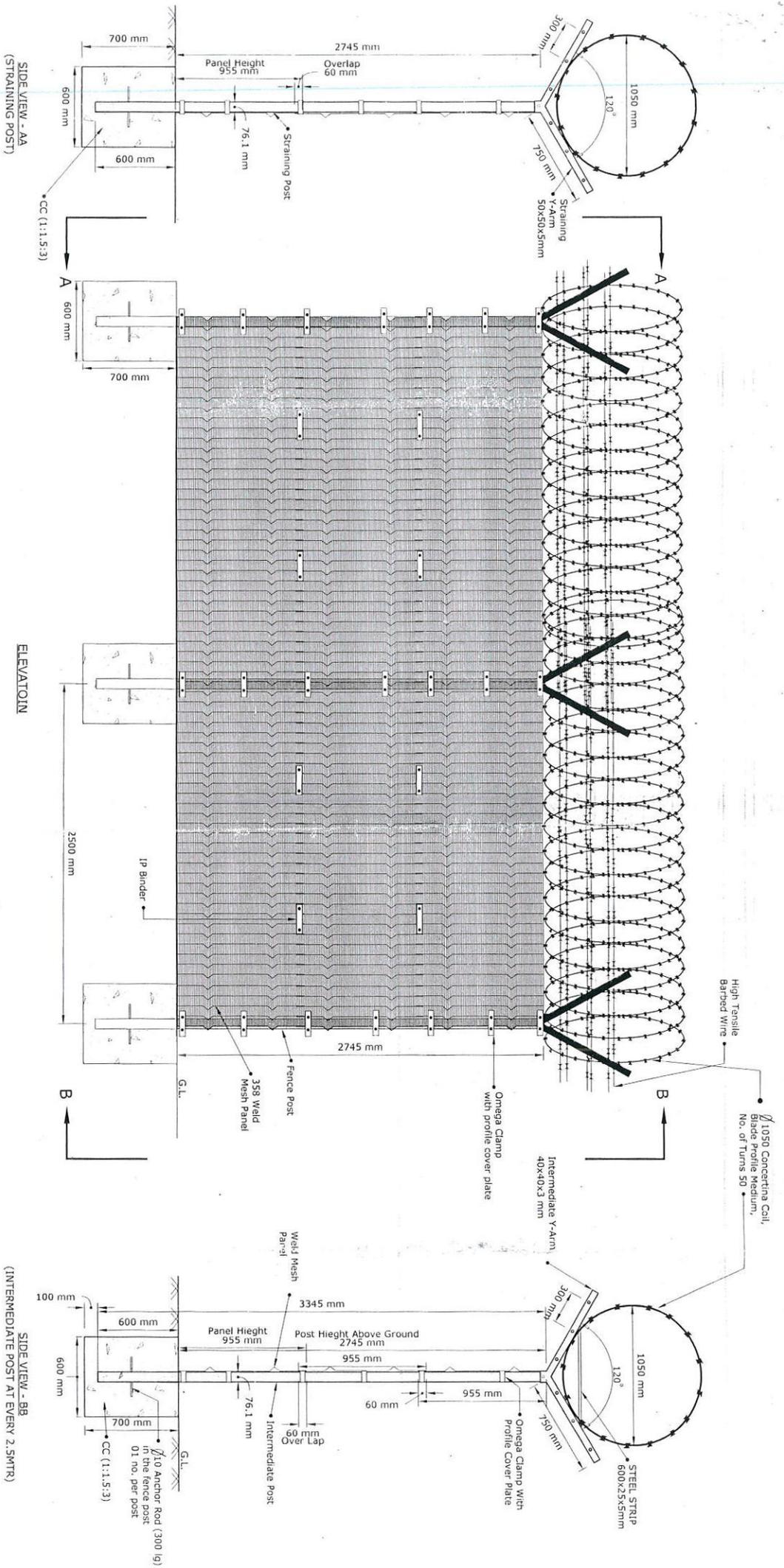
Member-I

(Sh. Sanjeev Kr Singh), 2-I/C, 180Bn



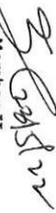
Member-II

(Sh. Premvir Singh), D/C, 185Bn

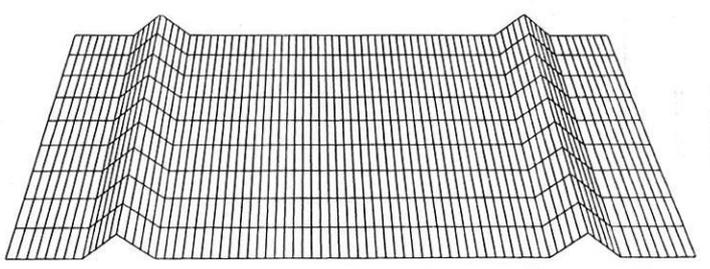
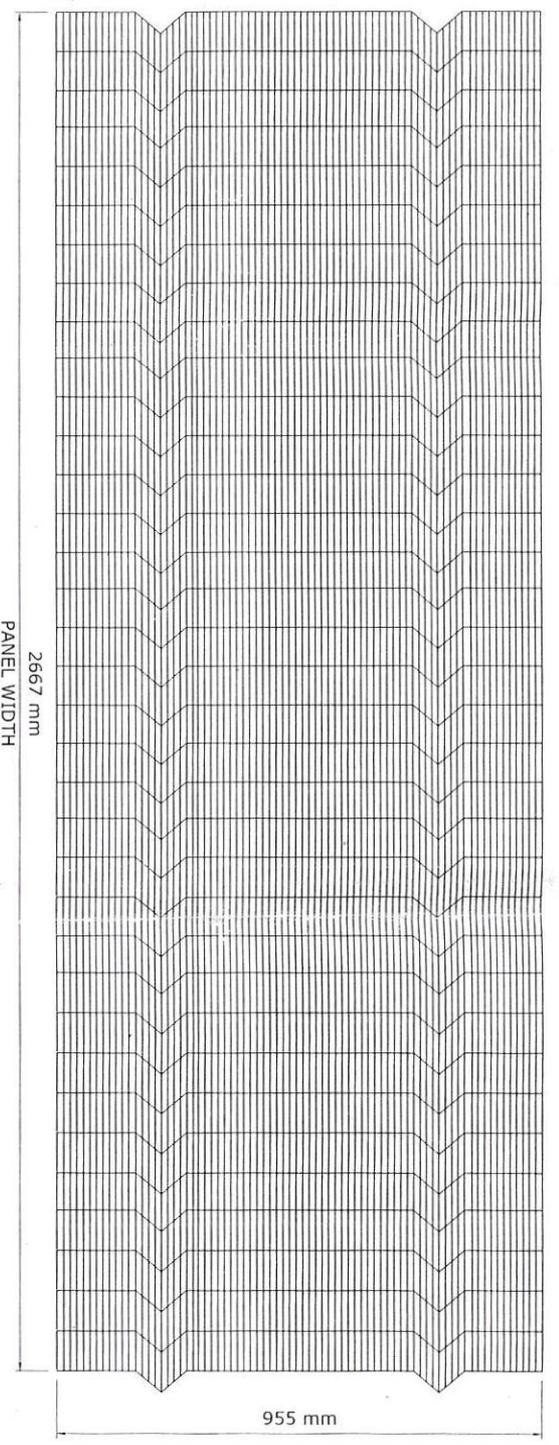
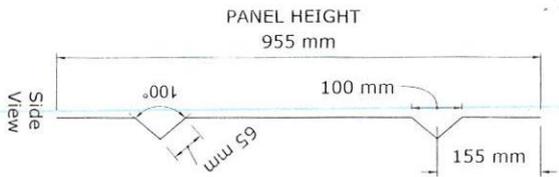



 Member-I
 (Sh. Arun Kr. Bhargava), Condt-1858B

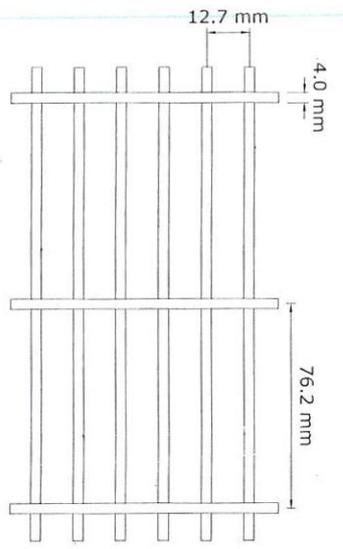

 Member-I
 (Sh. Sanjay Singh), 2-I/C, 1808B


 Member-II
 (Sh. Premvir Singh), D/C, 1858B

ITEM	DESCRIPTION	DETAILS
STEEL MESH PANEL	PANEL HEIGHT 955mm, PANEL WIDTH 2667mm, MESH 76.2mmx12.7mm, WIRE DIA 4mm, 2 V BEND	
STRAINING POST	CHS OD 76.1x3.6mm THK, 2745 mm ABOVE GROUND LEVEL & 600mm BURIED IN TO THE GROUND	
INTERMEDIATE POST	CHS OD 76.1x3.6mm THK, 2745 mm ABOVE GROUND LEVEL & 600mm BURIED IN TO THE GROUND	
STRAINING Y-ARM	MADE OUT OF 50x50x5mm EQUAL ANGLES, 120° ANGLE OF Y, LENGTH 750MM, SLEEVE CAP OD 63MM, BOLTED ON TOP OF THE STRAINING POST.	
INTERMEDIATE Y-ARM	MADE OUT OF 40x40x3mm EQUAL ANGLE, 120° ANGLE OF Y, LENGTH 750MM, SLEEVE CAP ID 79MM, BOLTED ON TOP OF THE INTERMEDIATE POST	
CONCERTINA COIL	COIL DIA 1050mm, BLADE PROFILE MEDIUM, CORE WIRE 3 mm DIA, HEAVY GALVANISED, STRIP 0.4mm THK & 19mm WIDTH, BLADES SPACING 35mm C/C.	
HIGH TENSILE BARB WIRE	6 ROWS, LINE WIRE 2.24mm DIA, TWO LINE WIRE, BARBED WIRE 2mm DIA, BARBED AT EVERY 75mm C/C, 13mm BARB LENGTH 518mm.	
CLAMP	OMEGA CLAMP WITH PROFILE COVER PLATE (M/F) HEAD BOLT WITH SECURITY NUT, WASHER (18X50)	
P BINDER	IP BINDER, 160X25X3mm THK WITH M8X35mm LONG MASHROOM HEAD BOLT & SECURITY NUT WITH WASHER	



WELD MESH PANEL
 WIRE DIA. : 4.0mm
 MESH SIZE : 76.2x12.7mm
 PANEL HEIGHT : 2667mm
 V BEND : 2 NOS.



358 WELD
 MESH PANEL
 Fig. 4

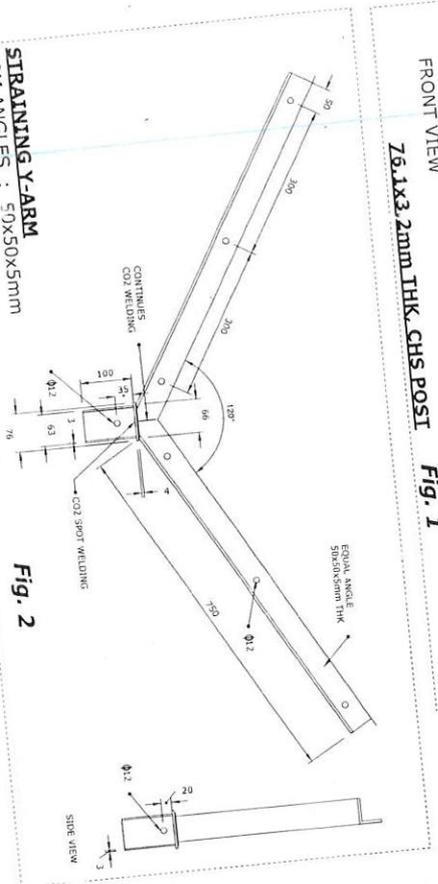
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 Presiding Member
 (Sh. Arun Kr Bharati), Comdt-1858n

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 Member-I
 (Sh. Sanjeev Kr Singh), 2-I/C, 1808n

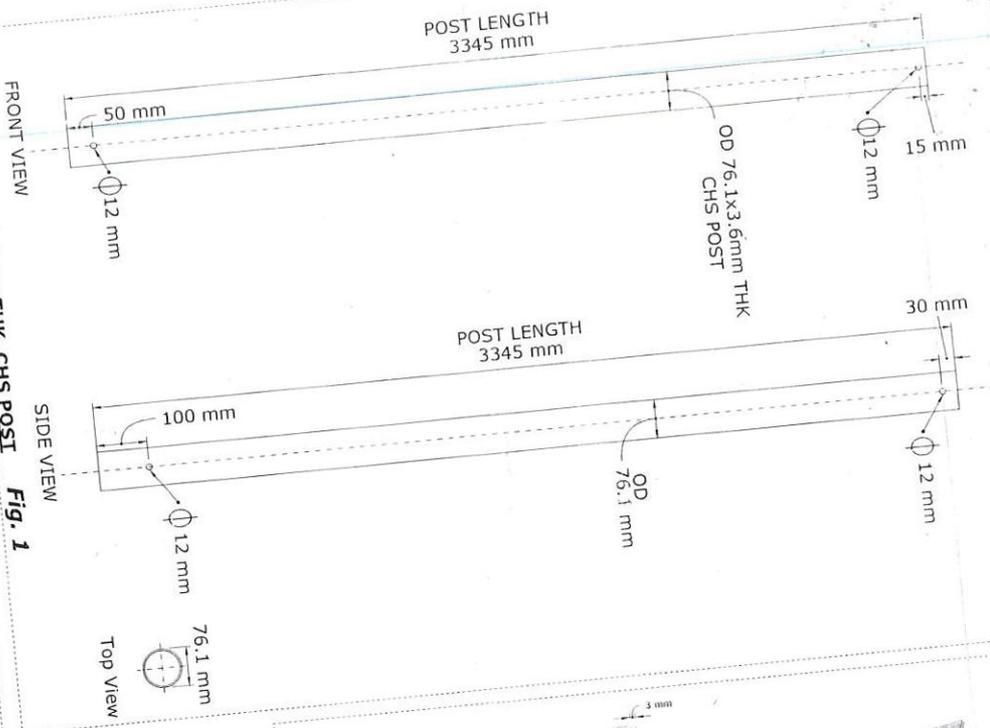
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 Member-II
 (Sh. Premvir Singh), D/C, 1858n

STRAINING Y-ARM
 ANGLES : 50X50X5mm

Fig. 2

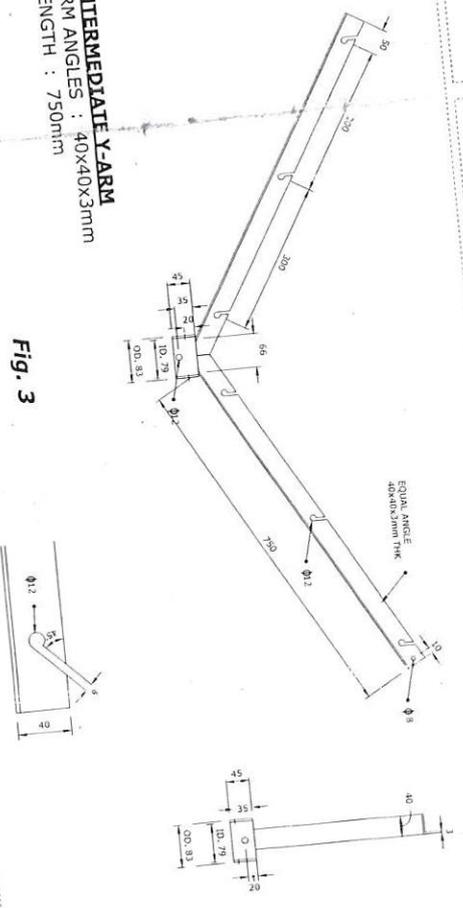


76.1x3.2mm THK. CHS POST
 Fig. 1

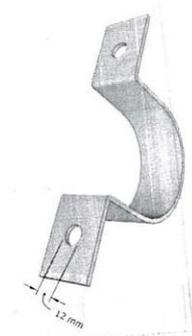
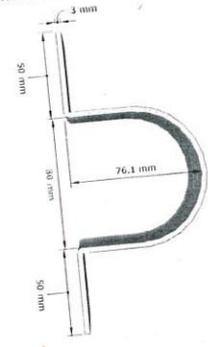
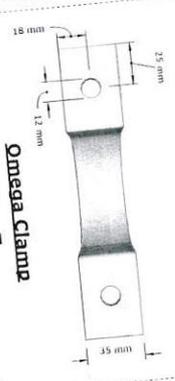


INTERMEDIATE Y-ARM
 ARM ANGLES : 40X40X3mm
 LENGTH : 750mm

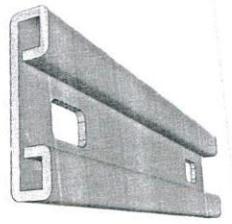
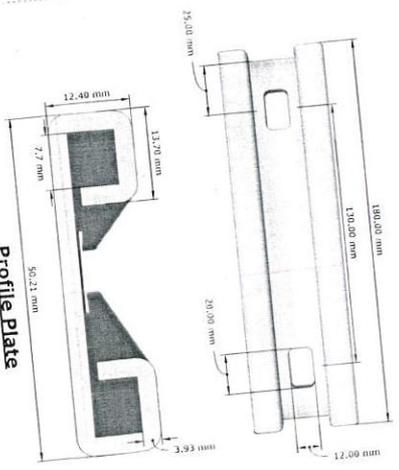
Fig. 3



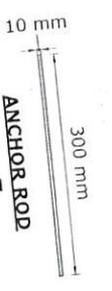
Omega Clamp
 Fig. 5



Profile Plate
 Fig. 6



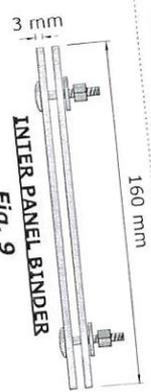
ANCHOR ROD
 Fig. 7



HOG RING
 Fig. 8



INTER PANEL BINDER
 Fig. 9



MUSHROOM HEAD BOLTS WITH
 SECURITY NUT & WASHER
 Fig. 10



Presiding Member
 (Sh. Arun Kr Bhafati), Condt-1858n

Member-I
 (Sh. Sanjeev Singh), 2-1/C, 1808n

Member-II
 (Sh. Premvir Singh), D/C, 1858n