

Government of India  
Ministry of Home Affairs  
**Directorate General National Security Guard**  
(Provisioning Branch/Ord Section)  
Mehram Nagar, Palam, New Delhi – 110 037  
Fax No. 011-25663258/25671639

No. P/604/18(389)/Telescopic/Prov (Ord)/NSG/247 Dated, the 15 Jan 2018

**QUALITATIVE REQUIREMENTS (QRs) AND TRIAL DIRECTIVES (TDs)**  
**OF TELESCOPIC MANIPULATOR**

1. The QRs and TDs in respect of Telescopic Manipulator as per Annex-I and Annex-II respectively have been approved by the competent authority are forwarded herewith.
2. For your information and further necessary action please.



**(Rakesh Kumar)**  
Group Commander (Proc)

*OK*

**Distribution:-**

1. JS (PM), MHA, Jaisalmer House, New Delhi - for information please.
2. IG/ Director (R&D), BPR&D, 4th Floor, Block No 11, CGO Complex, New Delhi.
3. DIG (Prov), CRPF, CGO Complex, New Delhi.
4. DIG (Prov), CISF, CGO Complex, New Delhi.
5. DIG (Prov), ITBP, CGO Complex, New
6. DIG (Prov), SSB, R.K. Puram, New Delhi.
7. DIG (Prov), BSF, CGO Complex, New Delhi
8. DIG (Prov), Assam Rifles (Through LOAR)
9. Ops (WE), HQ NSG

**REVISED TRIAL DIRECTIVES OF TELESCOPIC MANIPULATOR (Contd...)**

| <u>Ser No</u> | <u>Revised QRs</u>   | <u>Revised Trial Directives</u>   |
|---------------|--|---|
| 5.            | <b>Battery</b>   |   |
| (a)           | It should be operational with commercially available rechargeable and disposable batteries.  | To be checked physically by the BOO.  |
| (b)           | Batteries should have a minimum of 60 minutes continuous operating time.   | To be checked physically by the BOO.  |
| (c)           | The equipment should be provided with one set of spare rechargeable battery with a charger.  | To be checked physically by the BOO.  |
| (d)           | The battery compartment should be inside the telescopic pole.  | To be checked physically by the BOO.  |
| 6.            | <b>Shoulder strap</b>  |   |
| (a)           | It should have a comfortable and adjustable shoulder strap for operator to wear and handle it while wearing a Bomb Suit.   | To be checked physically by the BOO.  |
| 7.            | <b>Material</b>  |   |
| (a)           | The equipment pole should be made of high strength light weight and non corrosive material with a shelf life of min 10 yrs.  | Firm/OEM to provide certificate from a National/International accredited lab. Certificate to be checked by the BOO.   |
| 8.            | <b>Misc</b>  |   |
| (a)           | The telescopic manipulator should have a breakaway tip arrangement, so that in case of a possible explosion, only the tip is damaged and reduce the recoil effect almost to nil. | Firm/OEM to provide certificate from a National/International accredited lab as per applicable Test Std. (Giving the details/ parameters checked of the test conducted) Certificate to be checked by the BOO. |
| (b)           | The equipment should be able to function at extreme range of temperature ie -20 degree C to +55 degree C.  | Firm/OEM to provide certificate from a National/International accredited lab as per applicable Test Std. (Giving the details/ parameters checked of the test conducted) Certificate to be checked by the BOO. |
| (c)           | The equipment should be water resistant and should comply to IP 65 std.  | Firm/OEM to provide certificate from a National/International accredited lab. Certificate to be checked by the BOO.   |
| (d)           | It should have a safety switch mechanism to open the claw so that it does not open accidentally.   | To be checked physically by the BOO.  |
| (e)           | It should be easily operationally collapsible and extendable by single operating bomb tech wearing bomb suit.  | To be checked physically by the BOO.  |
| (f)           | It should be possible to deliver water jet disrupter using this manipulator.   | To be checked physically by the BOO.  |

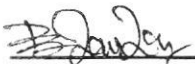
**APPROVED/ NOT APPROVED**

  
 (Sudeep Lakhtakia)  
 DG, NSG

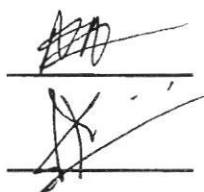
## REVISED QRs : TELESCOPIC MANIPULATOR

| Ser No | Revised QRs  |
|--------|--|
| 1.     | <p><b>Dimensions</b></p> <p>(a) It should have minimum length of 4.5 mtrs when fully extended.</p> <p>(b) It should provide a minimum stand-off distance of 3mtr from the tip of the claw when fully extended.</p> <p>(c) It should have a min stand-off distance of 1.5 mtrs when telescopic pole is in collapsed position.</p> <p>(d) Dimension of carrying case length 125 cm (max), width 45 cm (max) height 20 cm (max).</p> <p>(e) The carrying case should be ruggedized, water proof and wheeled with handle to carry.</p>   |
| 2.     | <p><b>Weight</b></p> <p>(a) It should not weigh more than 22 Kgs when assembled and ready for operation including wheel assembly &amp; complete counter weight attached.</p> <p>(b) It should not weigh more than 9 Kg when assembled &amp; ready for operations without wheel assembly &amp; counter weight.</p> <p>(c) Total transportable weight of the equipment should be less than 32 Kgs.</p> <p>(d) Carrying case should not weigh more than 10 Kgs. It should have wheels to drag it easily while transporting. It should be a ruggedized water proof carrying case with handle to hold it.</p> <p>(e) It should have provision of using either single or varying counter weights in combination.</p> |
| 3.     | <p><b>Lifting Capacity</b></p> <p>It should be able to lift 6 kgs(without wheels) and 10 Kgs (with wheels) of weight without any imbalance or toppling effect when fully extended ensuring easy mobility for Bomb Tech in a Bomb Suit.</p>   |
| 4.     | <p><b>Claw</b></p> <p>(a) The claw should have 360 degree rotation in both clock and anti-clock wise direction.</p> <p>(b) The claw and rod/pole must be stable in all directions and should not slip or rotate during the operation. It should hold suspected device intact to facilitate easy carriage by the Bomb Tech.</p> <p>(c) The Telescopic pole/ rod should extend and collapse smoothly.</p> <p>(d) L-shaped and straight rubber grip pads must be provided as attachments for claw to pick up or hold tightly circular, smooth, flat and rectangular objects.</p> <p>(e) Claw should open to a min of 20 cm.</p>   |
| 5.     | <p><b>Battery</b></p> <p>(a) It should be operational with commercially available rechargeable and disposable batteries.</p> <p>(b) Batteries should have a minimum of 60 minutes continuous operating time.</p> <p>(c) The equipment should be provided with one set of spare rechargeable battery with a charger.</p> <p>(d) The battery compartment should be inside the telescopic pole.</p>   |
| 6.     | <p><b>Shoulder strap</b></p> <p>(a) It should have a comfortable and adjustable shoulder strap for operator to wear and handle it while wearing a Bomb Suit.</p>   |

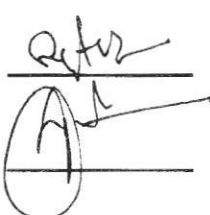




\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

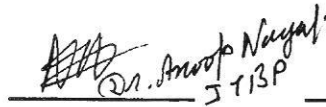


\_\_\_\_\_

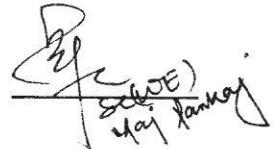
REVISED QRs OF TELESCOPIC MANIPULATOR (Contd...)

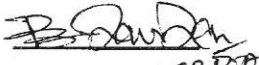
| <u>Ser No</u> | <u>Revised QRs</u>   |
|---------------|--|
| 7.            | <b>Material</b>  |
| (a)           | The equipment pole should be made of high strength light weight and non corrosive material with a shelf life of min 10 yrs.  |
| 8.            | <b>Misc</b>  |
| (a)           | The telescopic manipulator should have a breakaway tip arrangement, so that in case of a possible explosion, only the tip is damaged and reduce the recoil effect almost to nil. |
| (b)           | The equipment should be able to function at extreme range of temperature ie -20 degree C to +55 degree C.  |
| (c)           | The equipment should be water resistant and should comply to IP 65 std.  |
| (d)           | It should have a safety switch mechanism to open the claw so that it does not open accidentally.   |
| (e)           | It should be easily operationally collapsible and extendable by single operating bomb tech wearing bomb suit.  |
| (f)           | It should be possible to deliver water jet disrupter using this manipulator.   |

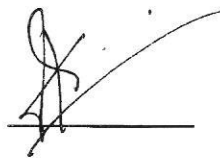
  
Lt R Dhankhar  
DC&A

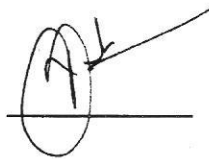
  
Dr. Anoop Nayal  
JTBSP

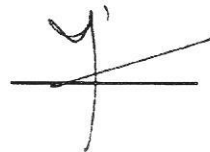
  
Sudeep  
PO2

  
S(CTE)  
May Kanwar

  
S. S. B.  
FHR SSB







APPROVED/ NOT APPROVED

  
(Sudeep Lakhtakia)  
DG, NSG