**ANNEX -`A` TO**
**TENDER NO. 23.27.0000.167.104(ii).3256105.21.22**
**DATED 28 MARCH 2022**

# Bayonet Assembly (Finished)

| Sl No | Nomenclature & Specification | A/U | Qty | Rate FOB | Freight | Total CFR |
|---|---|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| Bayonet Assembly (Finished)<br>Assembly of 10 Independent Components. | | **Set** | **20000** | | | |
| List of Component | | | | | | |
| **1.** | 1. Bayonet body (10-1)<br>Description of material : High Quality Hot Rolled Round Steel<br>Size: Dia 20×4000mm<br>Finished Condition: Hot Rolling,<br>Chemical Composition<br>C = 0.47%~0.54%, Mn=0.60%~0.90%, Si = 0.17%~0.37%,<br>Ti ≤ 0.06%, P = 0.035% (Max) S = 0.030% (Max),<br>Cr = 0.05%~0.25%, Ni =0.05%~0.25%, B = 0.0005%~0.0036%,<br>Mechanical Properties<br>Quenching Temperature: 840°C, Coolant: Oil<br>Tempering Temperature: 600°C, Coolant: Air<br>Tensile Strength 80~100 Kgf/mm$^2$, Yield Point ≥55 Kgf/mm$^2$,<br>Shrinkage Ratio ≥ 40,<br>Extensibility ≥8 % (Coefficient σ10), Impact Value ≥5 Kg-m/cm$^2$<br><br>Heat Treatment Process for Component<br>Hardening/Quenching Temp=830~860°C, Time: 05~07 Minute,<br>Coolant: $KNO_3$, $NaNo_2$<br>Tempering Temp=300~360°C, Time: 25~35 Minute, Coolant: Water,<br>Hardness: HRC/HB: Pos: A 46~52,<br>Tempering Temp=420~480°C,<br>Time: 25~35 Minute, Coolant: Water<br>Hardness: HRC/HB: Pos: B 32~40 | | | | | |
| **2.** | Pin, Bayonet (10-2)<br>Description of material : High Quality cold drawn steel wire<br>Size: Dia 3 mm,<br>Finished Condition: Soft,<br>Chemical Composition<br>C = 0.47~0.55%, Mn = 0.5~0.80%, Si = 0.17~0.37%,<br>P = 0.040% (Max), S = 0.040% (Max), Cr = 0.05~0.25%,<br>Ni = 0.05~0.25%<br>Mechanical Properties<br>Tensile Strength: 65~90 Kgf/mm$^2$, Extensibility: 6% Min,<br>Shrinkage: 30% Min<br>Heat Treatment Process for Component<br>For Pin, Bayonet<br>Hardening/Quenching Temperature: 830~860°C,<br>Time: 18~22 Minute, Coolant: Oil<br>Tempering Temp=380~450°C,Time: 30 Minute, Coolant: Water,<br>Hardness: HRC 37~44 | | | | | |
| **3.** | Bayonet Ring (10-3)<br>Description of material : High Quality hot rolled round steel<br>Size: Dia 20×4000 mm<br>Finished Condition: Hot Rolled.<br>Chemical Composition<br>C = 0.42~0.50%, Mn = 0.5~0.8%, Si = 0.17~0.37%,<br>P = 0.040% (Max), S = 0.040% (Max), Cr = 0.05~0.25%,<br>Ni =0.05~0.25%<br>Mechanical Properties<br>Tensile Strength: 61 Kg/mm$^2$ (Min), Yeild Point: 36 Kg/mm$^2$ (Min)<br>Elongation: 16% (Min), Reduction in area: 40% (Min) | | | | | |

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| (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| | Heat Treatment Process for Component<br>Hardening/Quenching Temp=840~870°C, Time: 20~24 Minute, Coolant: Oil<br>Tempering Temp=380~440°C, Time: 30 Minute, Coolant: Water,<br>Hardness: HRC/HB: 37~44 | | | | | |
| **4.** | Bayonet Handle (10-4)<br>(i) Description of material: Low forming glass fiber reinforced plastic<br>(ii) Colour: Black | | | | | |
| **5.** | Screw (10-5)<br>Description of material : High Quality cold drawn steel wire<br>Size: Dia 4.50 mm<br>Finished Condition: Annealing.<br>Chemical Composition<br>C = 0.47~0.55%, Mn = 0.60~0.90%, Si = 0.17~0.37%, Ti ≤ 0.05%,<br>B = 0.0005~0.0035%, P = 0.04% (Max), S = 0.045% (Max),<br>Cr = 0.05~0.25%, Ni = 0.05~0.25%<br>Mechanical Properties<br>Quenching Temperature: 840°C, Coolant: Oil<br>Tempering Temperature: 600°C, Coolant: Air<br>Tensile Strength 80~100 Kgf/mm$^2$, Yield Point ≥55 Kgf/mm$^2$,<br>Shrinkage Ratio ≥40<br>Extensibility ≥8% (Coefficient σ10), Impact Value ≥4 Kg-m/cm$^2$<br>Heat Treatment Process for Component<br>Hardening/Quenching Temp=830~860°C, Time: 20~24 Minute, Coolant: Oil<br>Tempering Temp=380~450°C,Time: 30 Minute, Coolant: Water,<br>Hardness: HRC: 37~44 | | | | | |
| **6.** | Bayonet Handle Seat (10-6)<br>Description of material : High Quality Hot Rolled Round Steel<br>Size: Dia 30x4000 mm<br>Finished Condition **:** Hot Rolling.<br>Chemical Composition<br>C = 0.47~0.55%, Mn = 0.60~0.90%, Si = 0.17~0.37%, Ti ≤ 0.05,<br>B = 0.0005~0.0035, P = (Max) 0.04%, S = (Max) 0.045%,<br>Cr = 0.05~0.25%, Ni = 0.05~0.25%<br>Mechanical Properties<br>Quenching Temperature: 840°C, Coolant: Oil,<br>Tempering Temperature: 600°C, Coolant: Air<br>Tensile Strength: 80~100 Kgf/mm$^2$, Yield Point ≥ 55 Kgf/mm$^2$<br>Extensibility ≥8% (Coefficient σ10), Shrinkage Ratio ≥ 40,<br>Impact Value ≥4 Kg-m/cm$^2$<br>Heat Treatment Process for Component<br>For Bayonet Handle Seat (10-6)<br>Hardening/Quenching Temp=830~860°C, Time: 20~24 Minute, Coolant: Oil<br>Tempering Temp=380~440°C, Time: 30 Minute, Coolant: Water,<br>Hardness: HRC: 37~44 | | | | | |
| **7.** | Latch Spring (10-7)<br>Description of material : High Quality Cold Drawn Steel Wire<br>Size: Dia 1 mm<br>Finished Condition: Cold Drawing.<br>Chemical Composition<br>C = 0.85~0.94%, Mn = 0.15~0.30%, Si = 0.15~0.30%,<br>P = 0.030% (Max), S = 0.020% (Max)<br>Mechanical Properties<br>Tensile Strength: 250-285 Kg/mm$^2$, Torsion Time :16 (Min), Repeated Bending Time :9 (Min) | | | | | |

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| **8.** | Latch (10-8)<br>Description of material : Cold rolled steel plate<br>Size: 5×77×1000 mm<br>Finished Condition: Hot Rolling.<br>Chemical Composition<br>C = 0.47~0.55%, Mn = 0.5~0.80%, Si = 0.17~0.37%,<br>P = 0.040% (Max), S = 0.040% (Max), Cr = 0.05~0.25%,<br>Ni = 0.05~0.25%<br>Mechanical Properties<br>Extensibility σb : 16% (Min)<br>Tensile Strength σb : 637.5 N/mm$^2$ (Min)<br>Heat Treatment Process for Component<br>Hardening/Quenching Temp=830~860°C,<br>Time: 20~24 Minute, Coolant: Oil<br>Tempering Temp=380~450°C,Time: 30 Minute, Coolant: Water,<br>Hardness: HRC: 37~44 | | | | | |
| **9.** | Latch Pin (10-9)<br>Description of material : High Quality Cold Drawn Round Steel<br>Size: Dia 10.5×4000 mm<br>Finished Condition: Cold Drawn,<br>Chemical Composition<br>C = 0.47~0.55%, Mn = 0.60~0.90%, Si = 0.17~0.37%, Ti ≤ 0.05%,<br>P = 0.04% (Max), S = 0.045% (Max), Cr = 0.05~0.25%,<br>Ni = 0.05~0.25%, B = 0.0005~0.0035%,<br><br>Mechanical Properties<br>Quenching Temperature: 840°C, Coolant: Oil,<br>Tempering Temperature: 600°C, Coolant: Air<br>Tensile Strength: 80~100 Kgf/mm$^2$, Yield Point ≥55 Kgf/mm$^2$,<br>Shrinkage Ratio ≥40,<br>Extensibility ≥8% (Coefficient σ10), Impact Value ≥4 Kg-m/cm$^2$<br>Heat Treatment Process for Component<br>Hardening/Quenching Temperature:830~860°C,<br>Time: 20~24 Minute, Coolant: Oil<br>Tempering Temp=320~380°C,Time: 30 Minute, Coolant: Water,<br>Hardness: HRC 37~44<br>10. Rivet, Bayonet (10-10)<br>Aluminum Wire.<br>Size: Dia 3.50 mm<br>Finished Condition: Soft.<br>Chemical Composition<br>Mn = 0.4~0.8%, Si ≤ 0.50%, Ti ≤ 0.15%, B ≤ 0.10%,<br>Mo = 0.40~0.80%, Cu = 3.8~4.5%, Fe ≤ 0.50%<br>Mechanical Properties<br>State: CZ, Shear Strength ≥ 24.0 Kgf/mm$^2$ | | | | | |

**Condition :**

a. **Before bulk supply 05 x Advance sample to be submitted for functional test.**

b. Country of Origin : Group B

c. Country of manufacturer : Group B

d. Name of Manufacturer : To be mentioned.

e. Port of Shipment : Country of Manufacturer.

f. In case of Country of Origin - China

a. Foreign Principal must be Military Trade Enterprise Authorized by the Government of the People's Republic of China.

b. The quality of Mat/Component/Parts must be Military Grade from enlisted factory.

g. **Pre-Shipment Inspection:**

i. PSI of the stores will be carried out by 03 (Three) members { 02 (Two) members from BOF & 01 (One) member from IA&E} for a period of 05 (Five) working days excluding journey period.

ii. Supplier must submit details plan of PSI (Modus Operandi).

iii. Supplier must also mention PSI cost to be borne by them at their end.

**Terms & Conditions**

Supplier must mention their compliance on the following mentioned points :

1. A principal/manufacturer can submit **only one offer through one local agent** for any individual item. Offers through multiple local agents by same principle/manufacturer will be **treated as rejected**.

2. To ensure unhindered LC handling the principal must provide a certificate to confirm that their LC operating bank has RMA (Relationship Management Agreement) with the local Banks of Bangladesh

3. Supplier must **clearly mention** (in the technical offer) that as principal/manufacturer they poses necessary **export permit** from the concern ministry or any other authority of their country. They must also submit a certificate in this regards as per the attached specimen format at Annex G.

4. Before signing the contract, Performance Guarantee @ 10% of total LC value is to be submitted by the Principal in favour of Commandant, Bangladesh Ordnance Factories, Gazipur Cantonment, Gazipur through any scheduled Bank located in Bangladesh (As per the format at Annex E).

5. A separate **certificate should be provided** by the principal **originally signed** (Computerized or digitally edited signature will not be accepted) stating that they are aware of the requirement of the PG and if the contract is awarded they will be bound to provide the PG as per the format at Annex F, otherwise administrative action will be taken against the principal and local agent.

6. The stores should be supplied to BOF at **supplier's cost.**

7. On arrival of the stores at BOF, the supplier must complete installation, commissioning, trial run & trial production within 01( one) month (from the date of entry at BOF). Otherwise, penalty will be imposed at the rate of 2% but not less than 1% and will not exceed 10% of the total CFR/LC vale (As applicable).

8. If the supplier fails to deliver the stores within the stipulated period, the followings will be applicable:

   a. Cancel the contract and/or,

   b. Decision at the discretion of BOF.

9. Inspectorate is the authority in all matters pertaining to Inspection. Any verdict by the inspectors regarding rejection, acceptance, and /or deviation of machine involving price reduction will be treated as final and will not be subject to arbitration.

10. The Supplier must submit the following **attested documents** with the schedule :

   **a. Trade License b. Tin Certificate c. Up to date VAT Registration certificate.**