

**TS SHELL FILLING MACHINE**

- INPUT :-**
1. PREPARED HARDWARE.
  2. PELLET OF SAID MUNITIONS.
  3. P C DISK (DIA 25 MM)
  4. QMS STAND (LENGTH  $125 \pm 5$  MM)
  5. HDPE RING (OUTER DIA  $33.79 \pm 0.50$  MM, THICKNESS 1 MM)
  6. PLUG (OUTER DIA  $36 - 0.20$  MM)

**OUTPUT** SEMI-FINISHED MUNITIONS

**RATE** 500 NOS/ HRS (MINIMUM)

**PROCESS** AS PER FLOW CHART AS APPX-'H-1'

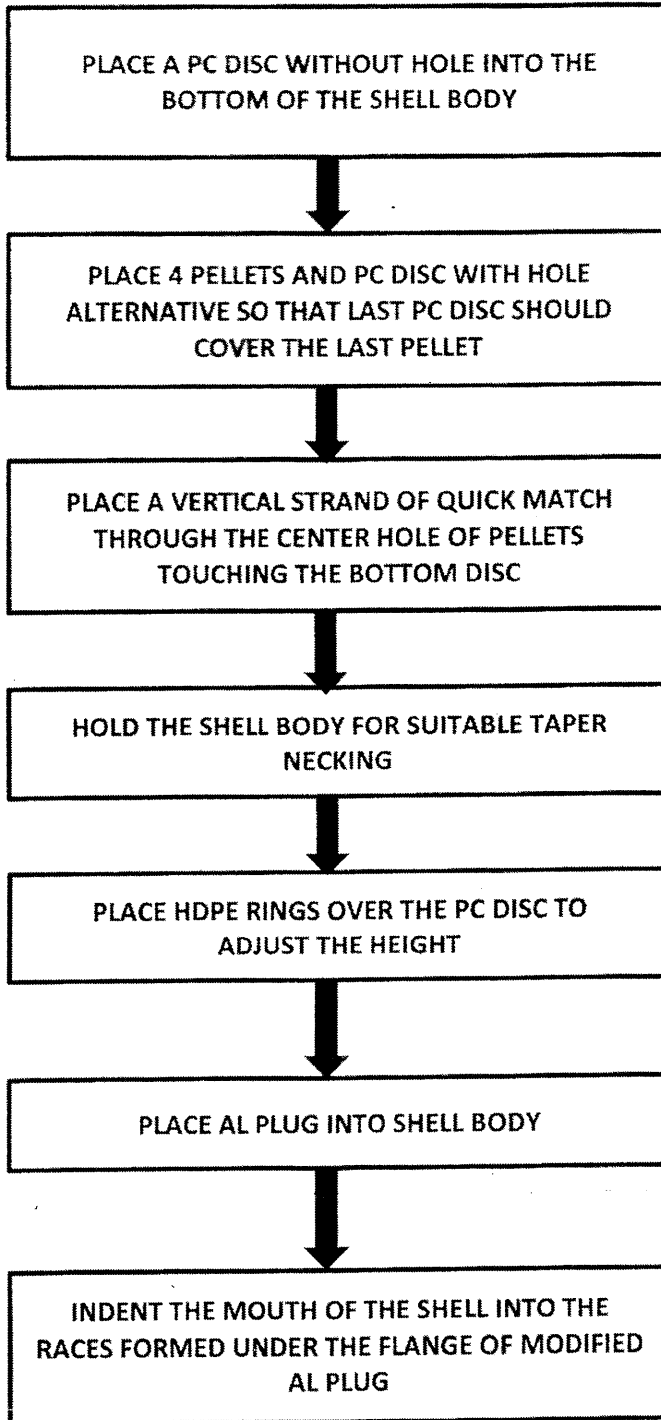
**QUALITATIVE REQUIREMENTS**

1)	ALL MOVING PARTS OF MACHINE SHOULD BE CORROSION RESISTANT, FLAME AND SPARK PROOF AND MADE OF ISI / CLASS APPROVED QUALITY MATERIAL.
2)	MACHINE SHOULD HAVE EARTHED TO DISCHARGE STATIC CHARGE.
3)	IN CASE OF MALFUNCTIONING, THE MACHINE SHOULD HAVE AUTOMATIC TRIPPING SYSTEM ALONGWITH AUDIO AND VISUAL INDICATORS.
4)	ALL ELECTRIC EQUIPEMENTS / COMPONENTS FITTED IN THE MACHINE SHOULD BE OF REPUTED BRAND AND OF ISO CERTIFIED COMPANY .
5)	MACHINE SHOULD HAVE DIGITAL DISPLAY TO INDICATE NUMBER OF SHELLS PREPARED.
6)	THERE SHOULD BE SCOPE FOR IDOLING ANY STATION / SKIPPING ANY STATION.
7)	MACHINE WILL HAVE PROPER SAFEGUARDS FOR THE SAFETY OF THE OPERATOR.
8)	MACHINE SHOULD OPERATE PREFERABLY ON PLC CONTROL OF IEC-61131 STANDARD
9)	SEPARATION GUARD BETWEEN STATIONS SHOULD BE PROVIDED.
10)	THERE SHOULD BE SCOPE FOR EXPANSION BY ADDING FOUR MORE STATIONS. STACKED PC SHEET MAGAZINE STACKED-UP IN PC SHEET CUTTING MACHINE CAN BE UTILIZED FOR FILLING PURPOSE IN THIS MACHINE.
11)	PELLET TO BE FILLED ARE SOFT IN NATURE. FILLING SHOULD BE IN SUCH A MANNER THAT THESE PELLETS DO NOT BREAK.

12)	MACHINE SHOULD BE ABLE TO OPERATE WITHIN OPERATING TEMPERATURE $25 \pm 10^{\circ}$ C AND OPERATING HUMIDITY $40 \pm 15\%$ .
13)	MACHINE SHOULD HAVE FACILITY OF DETECTION OF OMISSION AND MALFUNCTIONING AT ANY STAGES OF PROCESS AND SHOULD HAVE FACILITY TO SEPARATE THE REJECTED / DEFECTIVE HARD WARE.
14)	MACHINE SHOULD HAVE FACILITY FOR DUST COLLECTION.
15)	ALL ELECTRIC WIRING AND ELECTRICAL COMPONENTS SHOULD BE PROPERLY CASED AND FLAME PROOF AND EASILY ACCESSIBLE FOR REPAIR AND MAINTENANCES.
16)	MACHINE SHOULD BE COMPACT TO SAVE SPACE AND EASY TO ACCESS FOR REPAIR AND MAINTENANCES.
17)	BASIC STRUCTURE OF MACHINE SHOULD BE MADE OF ISI / CLASS APPROVED QUALITY METAL, RESISTANT TO CORROSION / RUSTING AND FLAME.
18)	USER MANUAL WITH REQUIRED ILLUSTRATIONS TO BE PROVIDED WITH MACHINE.
19)	INSTRUCTION ON REPAIR & MAINTENANCE TO BE PROVIDED WITH MACHINE.
20)	RUNNING SPARE PARTS WITH ILLUSTRATED LIST SHOULD BE PROVIDED WITH MACHINE.
21)	OPERATIONAL TRAINING SHOULD BE ARRANGED FOR 1 WEEKS FOR MINIMUM 15 PERS.
22)	REPAIR AND MAINTENANCE TRAINING SHOULD BE ARRANGED FOR 1 WEEKS FOR MINIMUM 10 PERS.
23)	SPECIFIC GAUGES AND MAINTENANCE TOOLS SHOULD BE PROVIDED WITH MACHINE.
24)	<b>GUARANTEE / WARRANTY:-</b> i) MACHINE SHOULD HAVE 2 YEARS GUARANTEE / WARRANTY AFTER COMMISSIONING. ii) PREVENTIVE MAINTENANCE ONCE IN 3 MONTH DURING GUARANTEE / WARRANTY PERIOD. iii) GUARANTEE/ WARRANTY WILL BE COMPREHENSIVE i.e INCLUSIVE OF SPARE PARTS.
25)	AMC PERIOD SHOULD BE 05 YEARS AFTER EXPIRY OF GUARANTEE / WARRANTY PERIOD.

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TS SHELL FILLING MACHINE



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APPENDIX-'AH'

**TS SHELL FILLING MACHINE**

SL NO	QUALITATIVE / REQUIREMENTS	METHODOLOGY	COMPLIED / NOT COMPLIED
1	ALL MOVING PARTS OF MACHINE SHOULD BE CORROSION RESISTANT, FLAME AND SPARK PROOF AND MADE OF ISI / CLASS APPROVED QUALITY MATERIAL.	The firm should submit national / International accredited Lab test report for this aspect	
2	MACHINE SHOULD HAVE EARTHED TO DISCHARGE STATIC CHARGE.	Physical Verification by BOOs	
3	IN CASE OF MALFUNCTIONING, THE MACHINE SHOULD HAVE AUTOMATIC TRIPPING SYSTEM ALONGWITH AUDIO AND VISUAL INDICATORS.	The firm should submit national / International accredited Lab test report for this aspect & Physical Verification by BOOs	
4	ALL ELRECTRIC EQUIPEMENTS / COMPONENTS FTTED IN THE MACHINE SHOULD BE OF REPUTED BRAND AND OF ISO CERTIFIED COMPANY .	The firm should submit national / International accredited Lab test report for this aspect.	
5	MACHINE SHOULD HAVE DIGITAL DISPLAY TO INDICATE NUMBER OF SHELLS PREPARED.	Physical Verification by BOOs	
6	THERE SHOULD BE SCOPE FOR IDOLING ANY STATION / SKIPPING ANY STATION.	Physical Verification by BOOs	
7	MACHINE WILL HAVE PROPER SAFEGUARDS FOR THE SAFETY OF THE OPERATOR.	Physical Verification by BOOs	
8	MACHINE SHOULD OPERATE PREFERABLY ON PLC CONTROL OF IEC 61131 STANDARD	The firm should submit national / International accredited Lab test report for this aspect.	
9	SEPARATION GUARD BETWEEN STATIONS SHOULD BE PROVIDED.	Physical Verification by BOOs	
10	THERE SHOULD BE SCOPE FOR EXPANSION BY ADDING FOUR MORE STATIONS. STACKED PC SHEET MAGAZINE STACKED-UP IN PC SHEET CUTTING MACHINE CAN BE UTILIZED FOR FILLING PURPOSE IN THIS MACHINE.	Physical Verification by BOOs	
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PO AM M-1 AM M-2 AM M-3 AM M-4 AM Co-M-1 AM Co-M-2 AM Co-M-3 AM Co-M-4 AM

14	MACHINE SHOULD HAVE FACILITY FOR DUST COLLECTION.	Physical Verification by BOOs
15	ALL ELECTRIC WIRING AND ELECTRICAL COMPONENTS SHOULD BE PROPERLY CASED AND FLAME PROOF AND EASILY ACCESSIBLE FOR REPAIR AND MAINTENANCES.	The firm should submit national / International accredited Lab test report for this aspect & Physical Verification by BOOs
16	MACHINE SHOULD BE COMPACT TO FIT IN TO SAVE SPACE AND EASY TO ACCESS FOR REPAIR AND MAINTENANCES.	Physical Verification by BOOs
17	BASIC STRUCTURE OF MACHINE SHOULD BE MADE OF ISI / CLASS APPROVED QUALITY METAL, RESISTANT TO CORROSION / RUSTING AND FLAME.	The firm should submit national / International accredited Lab test report for this aspect.
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25	AMC PERIOD SHOULD BE 05 YEARS AFTER EXPIRY OF GUARANTEE / WARRANTY PERIOD.	Physical Verification by BOOs

PO

M-1

M-2

M-3

M-4

Co-M-1

Co-M-2

Co-M-3

Co-M-4