SHARP TOOLS
MACHINERY DIVISION
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E-Mail : Sharptools@vsnl.com / since1967@sharptools.com Website:http://www.sharptools.com

**M/S. SHARGH KIA ELECTRODE CO.**
3rd Sanat Sreet, Sanat Blvd, Bidak Industrial State.
Bojnourd, Iran

**Kind Attn: Mr. A. Talebi/ Managing Director**

**Sub: Welding Electrode Manufacturing Machinery**

Greetings.
Many thanks for your interest in our Welding Electrode Manufacturing Machinery.

We wish to introduce ourselves as a leading manufacturer of Welding Electrode Manufacturing Machines in India, with a prestigious customer list, which includes all the leaders in the industry. We have supplied and commissioned more than 100 Extrusion Plants for the manufacture of Welding Electrodes in India. We have exported machineries including turnkey projects to Kenya, Sri Lanka, Bangladesh, France, Taiwan, Philippines, Ivory Coast, Saudi Arabia, Jeddah, Indonesia, Malaysia, Brazil, Iran, Egypt, Singapore, Norway, Libya and Ethiopia. Quality, Reliability, After sales service back up and efficiency are the inherent strengths of our machines. Our Company is ISO 9001 certified by TUV-Suddeutschland AG. Sharp Tools was awarded a trophy by the Engineering Export Promotion Council for achieving the highest growth in exports, among exporters in Southern India. Engineering Export Promotion Council also awarded "All India Certificate of Export Excellence for achieving highest exports among the SSI Units in the Machine Tools Panel".

After detailed study of your requirement, we have quoted for a 8Ton/shift capacity of Mild Steel Electrode Manufacturing Machineries. We have enclosed the technical specifications and terms and conditions.

We assure you that the machinery offered by us will result in international quality end product. Please feel free to contact us, if you require any further details.

We eagerly look forward to hearing from you soon.

Thanking you,
Yours faithfully,
**for Sharp Tools,**

SHARP TOOLS CBE-35 KALAPPATTI

**K.R.Pandian,**
**Partner and Chief Executive Officer**
Gb/vn

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**M/S. SHARGH KIA ELECTRODE CO.**
No.55, 3td Felestine Street, Felestine Bul,
Mashhad, Iran
**Kind Attn: Mr. A. Talbi/ Managing Director**

**Sub: Welding Electrode Manufacturing Machinery**

Greetings.

**MACHINERIES FOR MANUFACTURING 8 M.T/SHIFT OF DIA 4MM X 350MM LENGTH**
**ON THE BASIS OF 6 WORKING HOURS/SHIFT**

| Sl.No | Description | Qty | Unit Price | Total Price EUR |
|---|---|---|---|---|
| 1 | WIRE DRAWING MACHINE MODEL ST4B600 WITH MOTORS | 1 NO | | **67,720.00** |
| 2 | HIGH SPEED WIRE STRAIGHTENING AND CUTTING MACHINE MODEL ST 800 WITH AUTO WIRE COLLECTION UNIT AND WITH ONE SET OF STANDARD TOOLINGS FOR ONE SIZE OF WIRE | 1 NO | | **50,975.00** |
| 2A | EXTRA SET OF TOOLINGS FOR WIRE STRIAGHTENIG AND CUTTING MACHINE MODEL 800 FOR ONE SIZE OF WIRE | 1 SET | | **3,640.00** |
| 3 | WET MIXER MODEL WM500 WITH WATER COOLING JACKET | 1 NO | | **22,184.00** |
| 4 | SLUG PRESS MODEL SP28 | 1 NO | | **13,910.00** |
| 5<br>5A.<br>5B.<br>5C.<br>5D. | EXTRUSION PLANT CONSISTING OF<br>WIRE FEEDER MODEL WFA<br>HYDRAULIC EXTRUSION PRESS MODEL EP260<br>CONVEYOR MODEL CA<br>ELECTRODE PRINTING UNIT MODEL PU1 WITHOUT RUBBER STEREO | <br>1 NO<br>1 NO<br>1 NO<br>1 NO | | **129,340.00** |
| 6 | CONCENTRICITY TESTER MODEL CT1 | 1 NO | | **265.00** |
| 7 | ELECTRODE WIRE AND FLUX RECLAMATION MACHINE MODEL RW1 | 1 NO | | **5,100.00** |
| 8 | CONTINUCE ELECTRODE DRYING OVEN DO150/5000 | 1 NO | | **28,866.00** |
| **TOTAL Price DAP Mashhad in EURO** | | | | **322,000.00** |

**Terms and conditions are enclosed**

Yours faithfully,
**For Sharp Tools,**

SHARP TOOLS * CBE-35 * KALAPPATTI

**K.R.Pandian,**
**Partner and Chief Executive Officer**
Gb/vn

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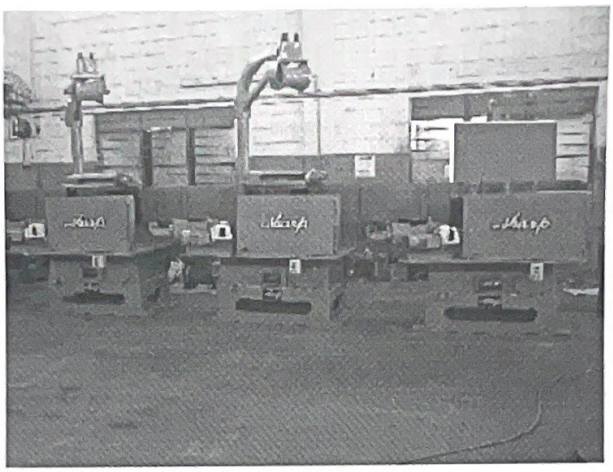
## . WIRE DRAWING MACHINE MODEL STWD/ST3B600



| Description | Unit | |
|---|---|---|
| No. of drafts | Nos | 3 |
| Inlet wire diameter | mm | 5.5/3.2 |
| Finish wire diameter | mm | 3.2/2.0 (in passes) |
| Max. Area of reduction | % | 30 |
| Inlet UTS | Kg/mm.sq | 50 |
| Max Machine speed | m/minute | 120 |
| Arrangement of Blocks | | Vertical, with overhead guiding & accumulating device |
| Drawing die holder | | Dies upto 53 x 35mm adjustable to exact running direction of the wire, combined with lubricant box |
| Block and Die cooling | | Direct water cooling |
| Block Material | | Graded C.I with wear resistant property drawing zone hard faced to 55/60 RC |
| Drive Motors | | 3 Nos. x 30hp A.C Induction Squirrel Cage Motors. |
| Control Panel | | Floor mounted steel Cabinet, Dust and Vermin Proof. ON/OFF Switch, Inching foot switch, overload relay and emergency stop will be provided near each block. |
| Accessories | Nos | 1No-Flipper Type wire payoff stand<br>1No – Mechanical Descaler<br>1No – Pointing Machine<br>1No – Butt Welder<br>1 No – Wire Stripper<br>2 Nos-Pull in dog chain |

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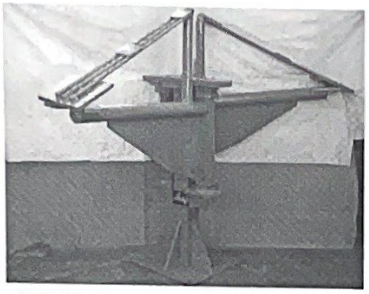
## STANDARD ACCESSORIES

**FLIPPER TYPE WIRE PAY OFF STAND**

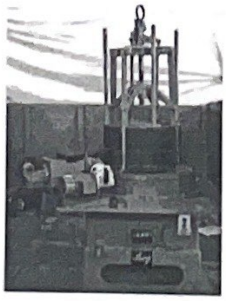


**MECHANICAL DESCALER**

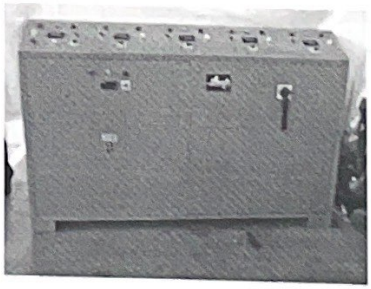
**POINTING MACHINE**

**BUTT WELDING MACHINE**

**WIRE STRIPPER**



**CONTROL PANEL**



SHARP TOOLS C8E-35 KALAPPATTI

Ref: QTN/2425/2024/Rev. 2 dt.16-05-2024 M/S. SHARGH KIA ELECTRODE CO.

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Sharp

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## 2. HIGH SPEED WIRE STRAIGHTENING AND CUTTING MACHINE MODEL ST 800

The drawn wire is loaded on a coil stand of the wire cutting machine. The wire, as it passes through a high speed spinner gets straightened. The wires are cut to standard length within the tolerances and collected in the bin provided in the machine. All the components in contact with the wire are made of wear resistant steels for long life. Precision tolerances ensure continuous high speed operation of machines and least requirement of spare parts.

| Description | Unit | |
|---|---|---|
| Wire Dia | mm | 2.5- 6.35 |
| Length | mm | 300 - 450 |
| Max. feeding speed | m/min | 210 |
| Power | kW | 21.42 |
| Tensile strength of the wire | kg/mm2 | 80 max |

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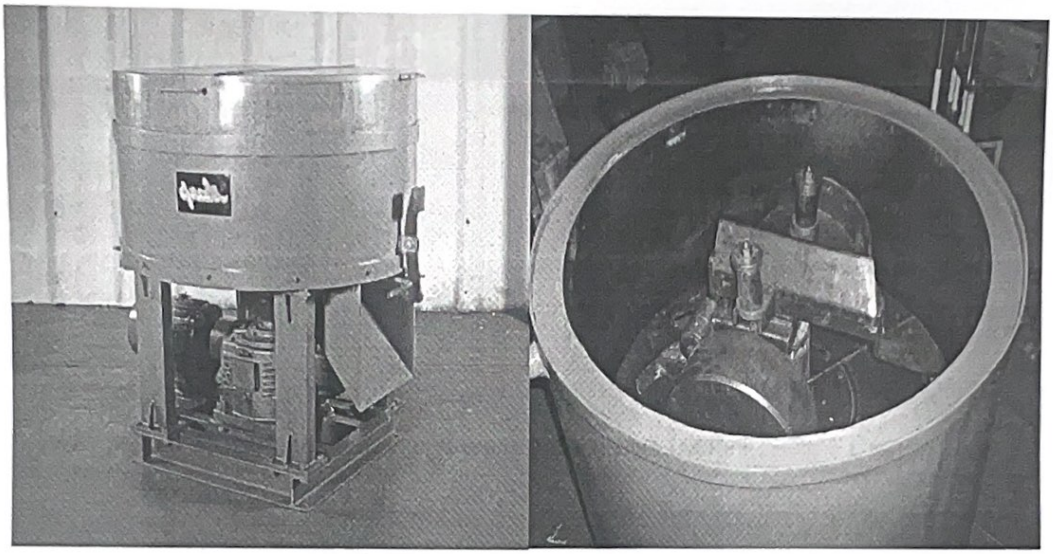
## 3. WET MIXER MODEL WM 250 WITH WATER COOLING JACKET



To the dry mixture, silicate in measured quantity are added and ground to a paste. The mixer has heavy-duty rollers mounted on heavy-duty bearings. A replaceable wear plate will be provided at the bottom surface. Water cooling jacket will be arranged.

| Description | Unit | |
|---|---|---|
| Capacity | Kg | 500 |
| Power | KW | 9.4 |

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## 4. SLUG PRESS (BRIQUETTING PRESS) MODEL SP28


The slug press can be operated either in the AUTO mode or in the MANUAL mode. A selector switch is available in the built in control panel to select the mode of operation.

**AUTO mode:** The flux cylinder is filled with the wet mixed flux. Two mushroom buttons provided at the bottom of the tray, on either sides of the tray are operated to activate the AUTO cycle. The top ram moves down to close the flux cylinder. The bottom ram moves up to compress the flux against the top ram. The flux is compacted until the preset level of pressure is reached. A pressure switch is provided which activates the top and bottom rams to move up after the preset level of pressure is reached. The top ram moves to it's original position. The bottom ram also moves up pushing the briquette from the flux cylinder. A timer is provided to control the resident time of the bottom ram at its top most position. After preset time the bottom ram moves down to it's original position and waits for the next cycle to start.

**MANUAL mode:** The flux cylinder is filled with the wet mixed flux. The TOP RAM DOWN push button in the control panel is operated until the top ram moves down to close the flux cylinder. When the BOTTOM RAM UP push button is pressed, the bottom ram moves up to compact the flux against the top ram. When the required level of pressure is reached the TOP RAM UP push button switch is operated to move the top ram up to it's original position. The bottom ram also moves up to deliver the briquette. After the briquette is removed, the BOTTOM RAM DOWN push button is operated to move the bottom ram down to it's original position and the cycle is repeated.
The approximate cycle time in both the modes is 2 minutes.

| Description | Unit | |
|---|---|---|
| Press Capacity | Ton | 28 |
| Flux Cylinder Volume | litres | 6.83 |
| Pump Motor | kW | 9.4 |

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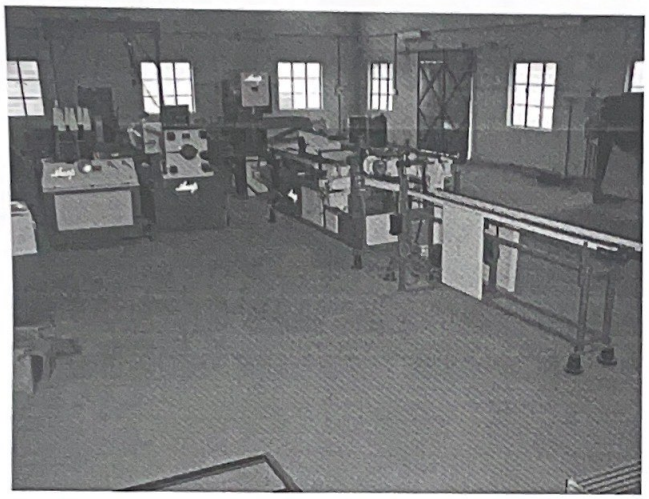
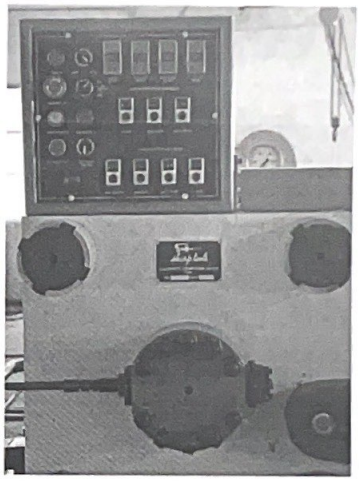
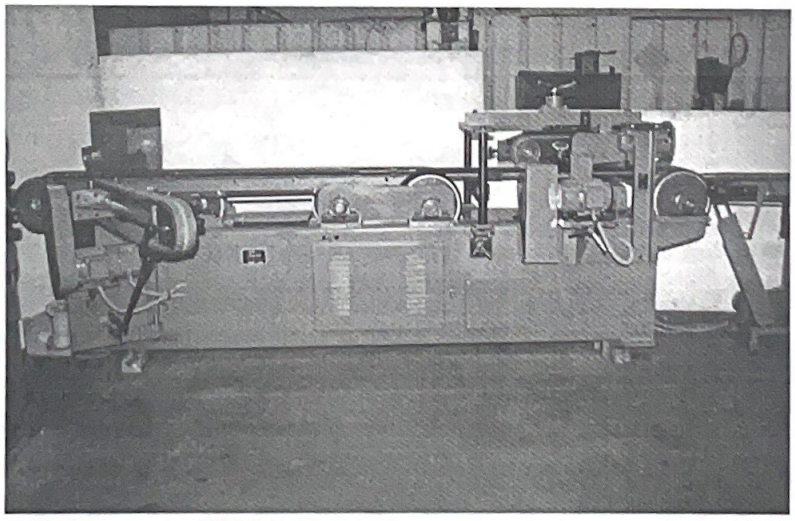
## 5. EXTRUSION PLANT

The Extrusion Plant consists of Wire Feeder, Extrusion Press, Conveyor and Printing Unit.







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## 5A WIRE FEEDER MODEL WFA/8

The cut wires are loaded into a hopper. The pick up rollers of the hopper feed the wires into two pairs of feed rollers which feed the wire into the die block. The drive to the pickup rollers and the feed rollers are given by two separate electric motors controlled independantly by two seperate A.C frequency variable drives. The motors are connected to the rollers through timing belts and are very silent. The controls for the roller speeds are provided in the main operator panel. The pick up rollers are common for all wire diameters. The feed rollers have four feeding grooves to suit the wire diameter to extract maximum life of the rollers.

| Description | Unit | |
|---|---|---|
| Range of wire size | mm | 2.5 - 6.35 |
| Wire Length | mm | 300 - 450 |
| Hopper capacity | kg | 300-400 |
| Power | kW | 9.48 |

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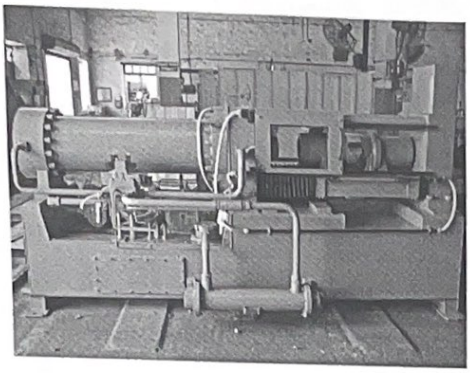
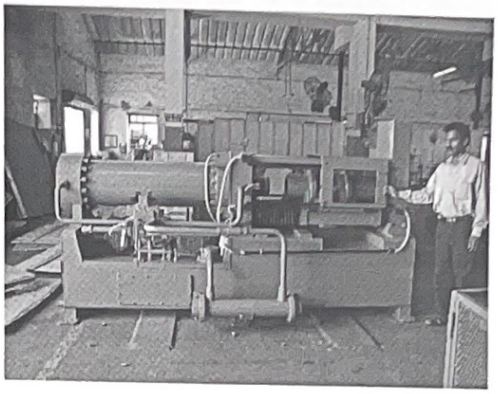
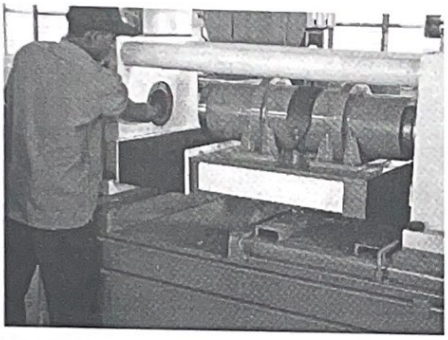
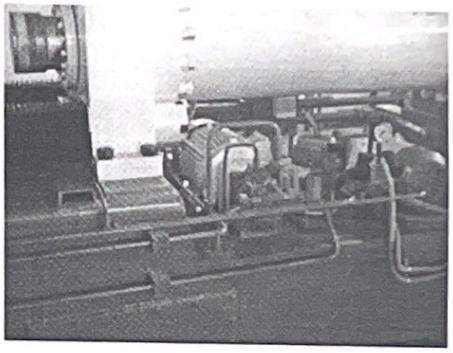
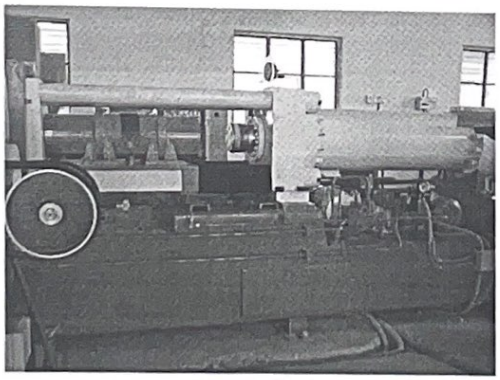
## 5B. HYDRAULIC EXTRUSION PRESS MODEL EP 260/8

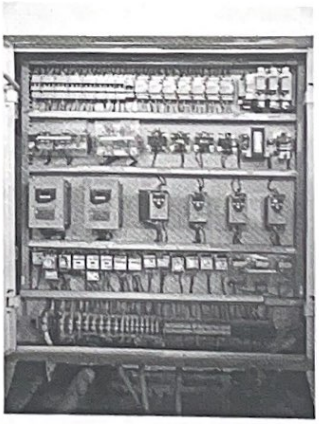












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The slugs are transported to the extruder and loaded into the Flux Cylinder. The hydraulic cylinder ram presses the flux through the coating die. The wire guided through the coating die is coated with flux. This horizontal type extruder has oil and flux cylinders mounted on a robust fabricated frame. The flux cylinder is hardened for longer life. The pressure control knob will be provided near the operator panel. The die head houses the profile die contoured so as to provide smooth flux distribution with least pressure loss.

All the components coming into contact with the wire are made of wear resistant steel. The coating die is of Tungsten Carbide and is adjustable very easily in 4 planes to ensure concentricity between wire and flux coating. The die holder assembly can be easily assembled & dismantled with least changeover/cleaning time. A water cooled die head cooling system will be provided.

| Description | Unit | |
|---|---|---|
| Extrusion Cylinder Capacity | litres | 35.46 |
| Flux Output (Max) | lpm | 15.7 |
| Oil Tank Capacity | lit | 1100 |
| Power | kW | 22 |

The hydraulic system is designed for continuous operations at high levels of specific flux pressure to obtain high quality of extrusion. An efficient power saving hydraulic power pack is used which contains highly reliable and easy to maintain elements. The power pack is accommodated in the main frame of the extruder thus saving space and eliminating complicated piping and leakage of oil. The control for flux flow is provided near the main operator panel. A heat exchanger suitable for oil flow required will be provided for maintaining oil temperature.

**5C. CONVEYOR MODEL CA/8**

**Transfer Conveyor:**

The transfer conveyor mounted on the main conveyor carries coated electrodes from the extrusion die and transfers them on to the main conveyor. The speed of the transfer conveyor is continuously variable through an A.C Frequency Variable Drive. The control is provided in the main operator panel. The belt is made of special rubber material.

| Description | Unit | |
|---|---|---|
| Maximum speed | m/min | 400 |
| Power | kW | 0.75 |

**Tip end cleaning and holding end brushing conveyor:**

The electrodes on the main conveyor are conveyed through the brushing station where the holder end and the striking tip are formed. The se units are driven by seperate electric motors. The conveyor speed can be varied continuously through an A.C Frequency Variable Drive. The caterpillar belt on top of the brushing station is driven by a seperate motor controlled through an AC Frequency Variable Drive. The belts are made of special rubber material which are soft and also give long life. The unloading conveyor is driven by a separate motor and controlled through an A.C Frequency Variable Drive. The control is

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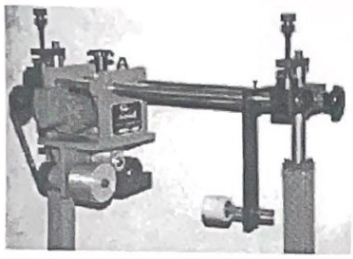
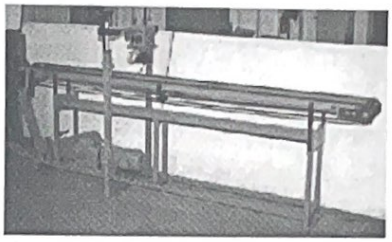
provided near the unloading conveyor. A pneumatic tray lifting arrangement will be provided for easy removal of trays.

| Description | Unit | |
|---|---|---|
| Range of wire size | mm | 2.5 - 6.35 |
| Length | mm | 300 - 450 |
| Power | kW | 4.28 |

## 5D. PRINTING MACHINE MODEL PU1





Printing Unit is used to print the name and type of electrodes, length wise on the coated electrodes. The unit is mounted independantly and is adjustable in three planes. The rubber stereo consisting of the print blocks is pasted on to an easily detachable drum. The printing unit is driven by a D.C motor and the speed control is provided near the printing unit.

| Description | Unit | |
|---|---|---|
| Range of wire size | mm | 2.5 - 6.35 |
| Length of wire | mm | 300 - 450 |
| Length of printing | mm | 50 |
| Power | kW | 0.37 |

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## 6. CONCENTRICITY TESTER MODEL CT1

The concentricity tester is used to measure the concentricity of flux coating on the wire. This is a destructive type of testing instrument and not a magnetic type (Non-Destructive). Hence it can be used for stainless steel electrodes also. The green (wet) electrode when placed on the anvils and a mild pressure is applied, the flux will be removed till the wire sits on the anvils. Now the wire should be rotated and the outer edge of the coating should be viewed through the microscope against the graduations in the eye piece. This will indicate the variation in thickness of coating with reference to the wire diameter. The concentricity values are read through the microscope. This tester can be used for electrodes with core wire dia 2.5mm to 6.35mm

| Description | Unit | |
|---|---|---|
| Range of core wire size | mm | 2.5 - 6.35 |
| Magnification | x | 50 |

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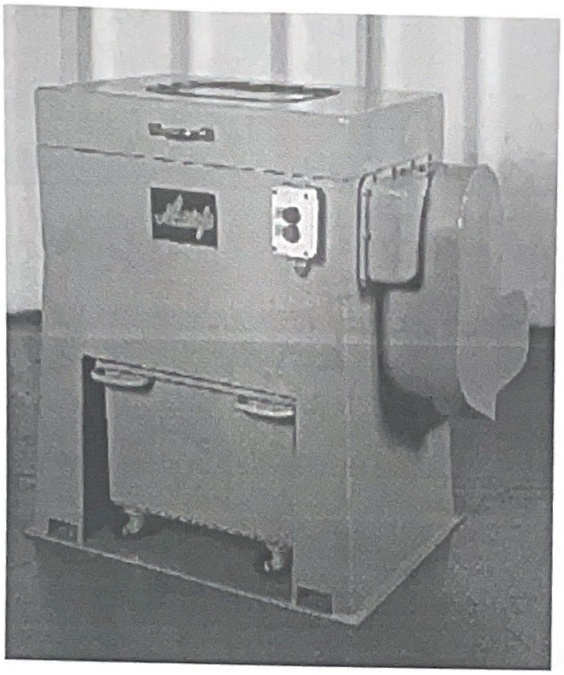
## 7. ELECTRODE WIRE AND FLUX RECLAMATION MACHINE (WET) MODEL RW1



The wet flux reclamation consists of 1 eccentric and 3 concentric shafts on which discs are mounted. These discs while rotating throw the wet electrodes upwards and when the electrodes fall down the same discs remove the flux coating. The stripped wire remains inside the machine and has to be removed manually after the batch is complete. The stripped flux falls through the gap between the discs and is collected in a tray below the discs.

| Description | Unit | |
|---|---|---|
| Electrode dia | mm | 2.5 - 6.35 |
| Length | mm | 300 - 450 |
| Weight/charge | kg | 10 |
| Power | kW | 2.2 |

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# TERMS AND CONDITIONS

1. **PRICE**
   Prices offered are DAP Mashhad/Iran

2. **SPECIFICATIONS**
   Specified in the enclosed leaflets/ specifications.

3. **PAYMENT**
   a) The amount of Euro 70,000.00 in advance via TT.
   b) Whereas the goods is ready for delivery in Iran so the balance of payment shall be COD via banking international Transaction method.

4. **DELIVERY SCHEDULE**
   Ready In Iran stock

5. **VALIDITY**
   This offer is valid until 25-05-2024 only.

6. **CERTIFICATE OF ORIGIN**
   SHARP will provide the certificate of origin issued by the local Chamber of Commerce at the time of shipment.

7. **JURISDICTION**
   According to the International Court of Law procedures adopted in Indian Court premises only.

8. **FACTORY INSPECTION AND TESTING**
   a) SHARP will offer the machinery and accessories for inspection at least one week before the date of delivery.
   b) The inspection will be carried out by representative of customer or by international inspection agency before dispatch of the goods from SHARP Works at customer's cost.
   c) SHARP will obtain a Certificate of Inspection and approval of machinery and accessories from the inspection agency prior to dispatch.

9. **PACKING AND MARKING:**
   a) The machine, spare parts & accessories to be supplied under this order will be packed in suitable standard seaworthy packing and all bearings, sliding and unpainted surface will be coated with antirust coatings.
   b) The marking particulars should be forwarded to SHARP at least 30 days before dispatch from their factory.

10. **GUARANTEE AND WARANTEES**
    SHARP will guarantee that the machines or part thereof are brand new and are guaranteed against any manufacturing defect for a period of 12 months from the date of Bill of Lading. However the guarantee will not hold good for moving parts and parts subject to wear and tear.



TÜV ISO 9001

SHARP TOOLS CBE-35 KALAPPATTI

SHARP TOOLS
MACHINERY DIVISION
9/10,Sitra Road,Sharp Nagar,Kalappatti,Coimbatore - 641 035, South India
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E-Mail : Sharptools@vsnl.com / since1967@sharptools.com Website:http://www.sharptools.com

In any case, the liability of Sharp will be limited to repairing or replacing the components at the discretion of Sharp and Sharp will not be liable for any consequential losses of whatsoever nature.

11. **ERECTION AND COMMISSIONING**

The quoted prices are exclusive of assistance in supervising of erection and commissioning. If Sharp's assistance is required, the number of technicians required for erection and commissioning and their duration of stay will be mutually decided between SHARP and the customer. The customer will have to arrange for To and Fro Air Ticket, Boarding, Lodging, Local Conveyance, Medical expenses and service charge of US$100 per day per person.

In addition, the customer will also have to arrange for local labour/material handling facilities, utilities and raw materials required for erection and commissioning and trial runs.

12. **AFTER SALES SERVICE**

In case of any manufacturing defect noticed during the guarantee period, the customer has to send the defective component, freight paid to SHARP. If the defect is proven to be due to manufacturing defect, SHARP will repair or replaces the component at the discretion of SHARP, free of cost and return it to the customer on C&F Basis. If the fault is not due to manufacturing defect, SHARP will supply the necessary spare parts after getting the quotation approved by the customer. For any service required by the customer at their site, the customer has to arrange for to and Fro Air tickets, boarding and lodging in a good hotel, local conveyance, local medical expenses and pay service charges of US$100 per day per person.

The liability of SHARP will be limited to the repair or replacement of the components only and SHARP will not be responsible for any consequential losses of whatsoever nature.

We eagerly look forward to hearing from you soon.

Thanking you,
Yours faithfully,
**For Sharp Tools,**

SHARP TOOLS CBE-35 KALAPPATTI

**K.R.Pandian,**
**Partner and Chief Executive Officer**
Gb/vn