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STEEL PIPE CUTTING MACHINE

MODEL:CG2-11C

Technical Support and E-Warranty Certificate
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This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

INSTRUCTIONS

Thank you very much for choosing this tube cutting machine. tube cutting machine are precision instruments that should always be handled with care. Please read all of the instructions before using it.The information will help you achieve the best possible results.

IMPORTANT SAFEGUARDS

WARNING: Read all safety warnings, instructions, illustrations and specifications provided with this tube cutting machine. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

1. Do not use this product in areas where it may be exposed to water or other liquids.

2. Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

3. To reduce the risk of electric shock, do not disassemble this product. Take it to qualified service personnel when service or repair work is required. Opening or removing covers -like the rear cover plate- may expose you to dangerous voltages or other risks. Incorrect re-assembly can cause electric shock when the appliance is subsequently used.

4. If the supply cord is damaged, it must be replaced by a special cord or assembly available from the manufacturer or its service agent. Only use the cable provided with the unit. The use of other cables may result in electric shock, fire or cause serious damage to the unit.

5. Do not operate the unit in areas with high temperature or high humidity since it may prevent it from working correctly.

6. When unplugging the power plug, do not pull it by the cord but rather grip the plug to pull it out. Not following these instructions may result in electric shock, fire or damage to the unit.

7. Do not use the unit if the power cord is damaged or if the plug socket contact is loose. Not following these instructions may result in electric shock, fire or other hazards.

8. Do not place heavy objects over the cord and do not bend it excessively since it could get damaged. Not following these instructions may result in electric shock, fire or other hazards.

9. When not using the unit for a long period of time, remove the power plug from the wall outlet.

10. This equipment is not suitable for use in locations where children are likely to be present.

10. The product should by means of a power cord connected to a socket-outlet with earthing connection.

SAVE THESE INSTRUCTIONS

APPLICATION:

The CG2-11C type tube cutting machine is applicable for the seamless steel tube cutting and bevel cutting for such industries as petroleum, chemical, ship manufacture, electric power generation, machinery, building and installation.

TECHNICAL PERFORMANCE AND CHARACTERISTIC

CG2-11 type tube cutting machine possesses four permanent magnetic wheels, which can stick to the tube and go round it automatic cutting. Adapted Oxygen-Ethyne flame or Oxygen-Propane flame, it is suitable for various specs of seamless steel tube cutting and beveling provided the diameter is 108mm above. Due to the adsorption affinity of the magnetic wheels, this cutting machine can work in free direction such as flat, stand, across, face-up. The cutting and groove can be finished at the same time. This cutting machine can promise you higher efficient, better quality and less labor work.

MAIN TECHNICAL DATA

1. **Dimension and weight:**
   Dimension: 350(L)x270(W)x160(H)
   N.W: 14.8kgs

2. **Cutting scope:**
   Seamless steel tube dia.: ¢108mm above
   Tube wall thickness: 5-50mm

3. **Cutting precision:**
   Deviation: less than 0.5mm for one circle cutting on the ¢159 - ¢425mm seamless steel tube
   Cutting and beveling surface roughness: 12.5 — 6

4. **Cutting speed:** 50-762mm/min, stepless adjustment by silicon controlled rectifier

5. **Motor:**
   DC 70SZ08 rotate speed: 6000r/m
   Frequency: 68w

6. **Control box:**
   Power voltage: 110~120V 60Hz

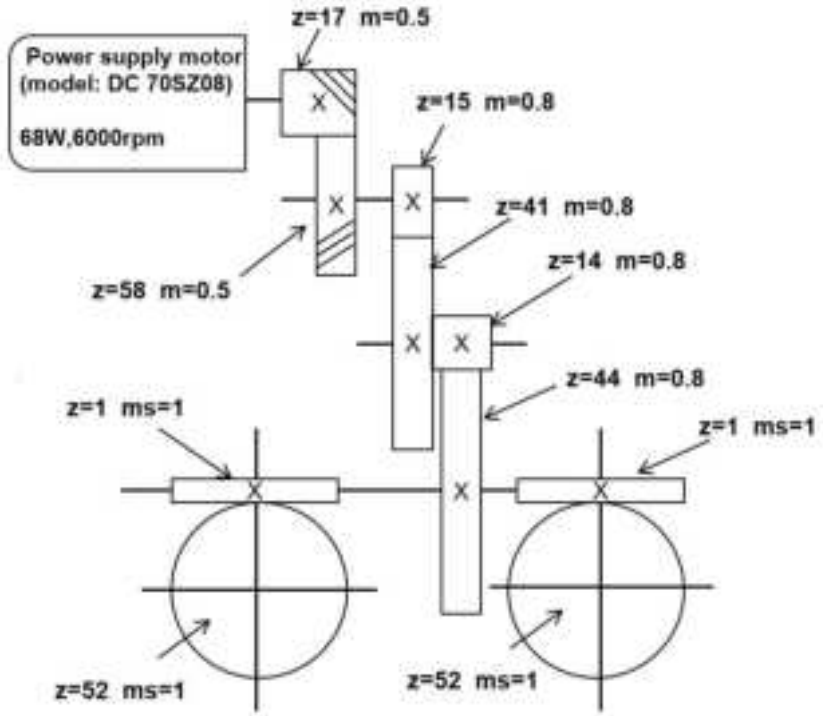
7. **Absorption affinity of magnetic wheel:** more than 50 KGS

8. **Driving momentum:** less than 0.5mm when go down round the steel tube.

MAIN STRUCTURE

1. Driven Structure:

Components: DC 70SZ08 power supply motor, 3 pairs of reduction gear and one pair of worm wheel. Please see the drawing below for the driven principle:



Picture 1

2. Tracking structure:

Components: Magnetic roll wheel, axe, axe cover and magnetic steel.

3. Machine body:

Box shape, made of aluminum alloy forged by ZL101.

4. Cutting torch and tip:

Use isobaric cutting torch . The cutting torch is flexible through the adjustment of m=0.8 gear pair. The beveling angle can be adjusted according to different requirement.

CUTTING

1. Determination of cutting process parameters

1) Select the nozzle

According to the thickness of the steel plate, the model of the cutting nozzle is selected according to table 1. The best cutting effect can only be obtained by selecting the right cutting nozzle.

2) Adjust the verticality of the cutting torch

For normal cutting, adjust the cutting torch (by the transverse rod you can do fine adjustment of the front and back directions) so that it is perpendicular to the steel plate.

If cutting inclined plane, the user should adjust cutting torch left and right; if do V-shaped groove, should use gas cutting machine with double torches.

3) The height of the cutting nozzle

Adjust the cutting torch up and down, so that the distance between the end of the cutting nozzle and the surface of the steel plate is as follows:

GO2 and GO3 cutting nozzles: 10-15mm; GK1 - GK3 cutting nozzles: 5-10mm

4) Regulation of preheating flame

Adopt the neutral flame, temperature is high and the cutting effect is good. The power of the preheating flame increases with the thickness of the cutting plate.

5) Cutting oxygen pressure adjustment

Adjust the cutting oxygen pressure, when the flame wind line is the longest, the clearest, that is the appropriate value, which can get the best cutting effect.

6) Cutting speed adjustment

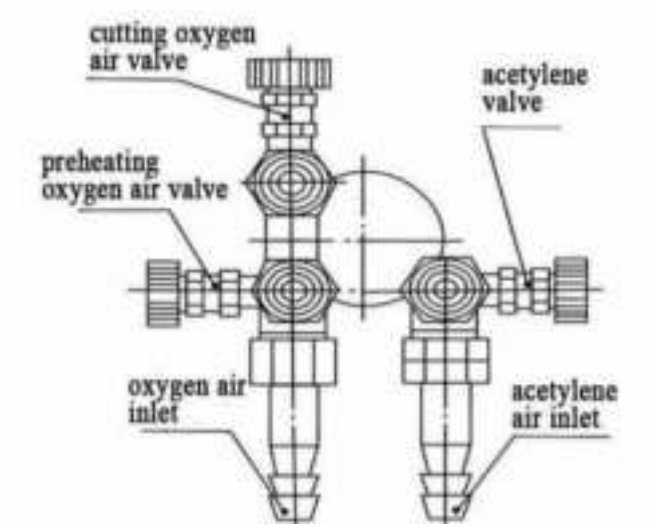
The cutting speed depends on the thickness of the steel plate, the power of the flame and the required cutting quality. When requiring for high cutting quality, the cutting speed should be slightly slower; When requiring for general cutting quality, the cutting speed should be a bit faster. Normal speed occurs when the spark is discharged forward when it is vertical or slightly deflected.

7) The surface condition of the steel plate

The steel plate should be leveled before cutting, and the oxide, yellow rust, paint and other dirt should be removed along the cutting line to improve the cutting quality.

2. Cutting

The schematic diagram of the regulating valve is shown in Picture 2.



Picture 2

1) Toggle the power switch, let the trolley walk, the running track of the cutting nozzle should coincide with the cutting line, or adjust the guide rail or steel plate.

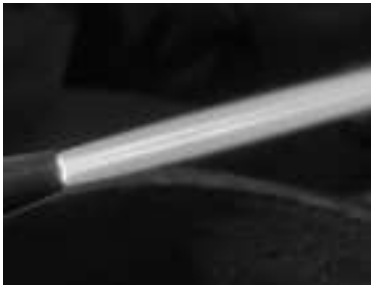
2) Open the acetylene valve, As shown in Picture 3.1.

Picture 3.1

And after ignition, then open the preheating oxygen valve.As shown in Picture 4.2.

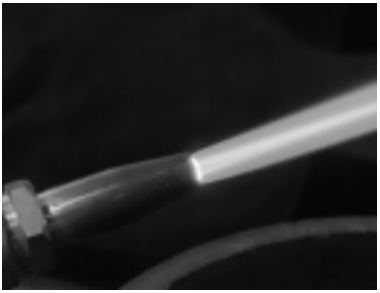
Picture 3.2

Adjust the power and type of the flame, wait when the flame heats the plate to about 970 ℃. As shown in Picture 3.3.



Picture 3.3

Then open the cutting oxygen valve, after adjusting the pressure, and then open the power switch, push on the clutch, and then start to cut the steel plate.As shown in Figure 3.4.



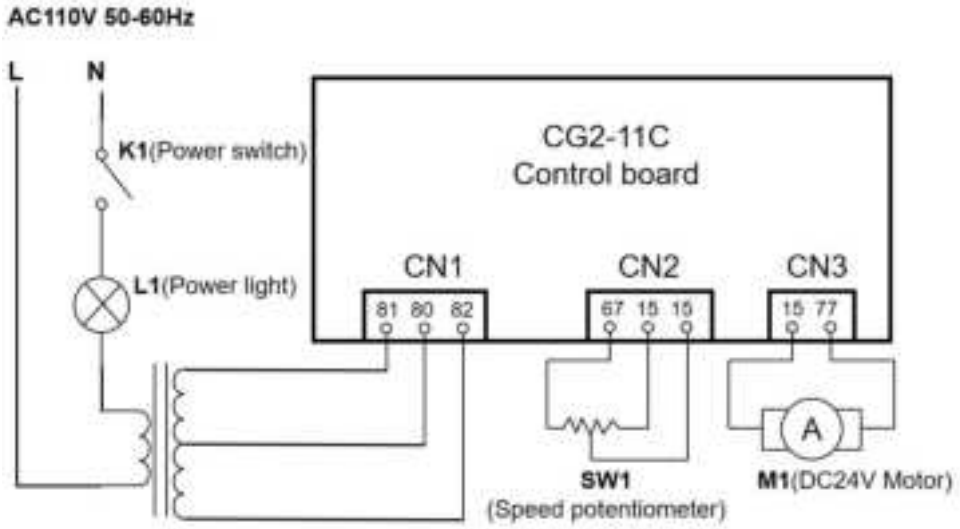
Picture 3.4

Note: Ignition should be started immediately after opening the acetylene valve to prevent combustible gas from escaping or entering the fuselage, which can cause danger.

3) When finishing cutting, the user should in order **close the cutting oxygen valve**, **preheating oxygen valve, acetylene valve and the trolley power switch or pull open the clutch.**

ELECTRICAL CONTROL SYSTEM INSTRUCTION

The electrical control system is consisted of electrical box, body control panel and motor. In electrical box, there are power voltage transformer and circuit control board. Power switch, fuse and pilot lamp are equipped on the electrical box panel. On the body control panel, there are potentiometer for speed adjustment and switches for going back, ahead and stop. It adapts the silicon-controlled thyristor DC motor system to adjust speed. The thyristor is motivated through the signal superposition of AC and DC capacitance-Resistance and phase shifting and the DC signal will be changed to control the SCR angle of flow to realize the stepless speed adjustment of motor. For its detailed principle, please see the drawing below:



Picture 4

CUTTING TIP SPECS TABLE

No.	Cutting thickness (mm)	Oxygen pressure (MPa)	Ethyne pressure (MPa)	Cutting speed (mm/min)
00	5-10	0.20-0.30	>0.03	600-450
0	10-20			480-380
1	20-30	0.25-0.35		400-320
2	30-50			350-280
3	50-70	0.3-0.4	>0.04	300-240
4	70-90			260-200
5	90-120	0.4-0.5		210-170

Note: The cutting tips, model from GO21 to GO2 3 will be supplied for one machine. Please purchase other types of cutting tip by yourself if needed.

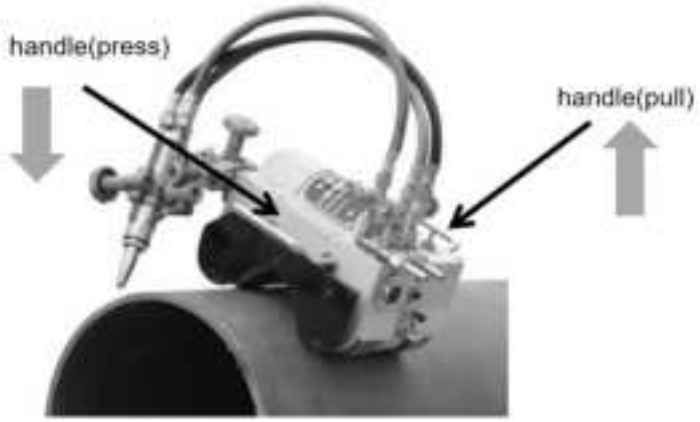
OPERATION INSTRUCTION

1. Put the cutting machine on the steel tube carefully to avoid collision. Get the handle prior to cutting

2. If you have to change the direction during cutting, please stop the machine first, open the direction switch and then drive the machine. Please do not change the travel direction directly during its working to avoid the damage of electrical elements and machinery parts.

3. Before cutting, please adjust well the suitable oxygen pressure, ethyne pressure, cutting speed and beveling angle. Adjust the oxygen-ethyne to preheat the flame, move the cutting torch to align with the cutting mouth and open the oxygen-cutting valve for cutting when the steel tube is heated well. After finish cutting, please remember to shut the oxygen valve, ethyne valve and power.

4.The way to remove the torch cutter is shown in the following figure.



Step 1: Place your hands on the handles which on both sides.

Step 2: Press and hold the handle with one hand, and pull the handle on the other side with the other hand.

MAINTENANCE

1. Please remember to clean up rubbishes as iron scraps adhered to the roll wheels frequently
2. For the wind pipe surface, the travel place, the steel wire brush is suggested to be used for cleaning. Please don't do cutting on the steel tubes whose paints haven't been dry. Otherwise, the paints will stick on the roll wheel and the magnetic capacity will be reduced.
3. During the cutting, please avoid the oxygen-ethyne gas pipe and power wire to be hooked, which may cause the falling of cutting machine and its damage. After finishing use of cutting machine, please put it on the magnetic protection board at a dry place to avoid rust of roll wheel and magnetic phenomenon aroused.
4. The reduction structure shall be lubricated by supramoly and shall be replaced in every half a year. Please clean the new reduction device by carbon tetrachloride and lubricate it before the replacement.
5. If demagnetization occurs and absorption performance reduced on the magnetic wheels after certain period used, please unfix the magnetic wheel sets and magnetize them.
6. If the down momentum is too strong during work, please open the top left and right covers, adjust the left and right support bracket, endless screw and bevel wheel to ensure good cutting quality.

MAINTENANCE WARRANTY INSTRUCTION

1. Guarantee for half a year against the invoice since the selling day.
2. The manufacturer will be responsible for repairing the machine if it is proved to be ill produced by our quality inspection personnel.
3. The damage caused by the reasons below will be out of our maintenance warranty scope:

   Transportation

   Inappropriate save

   Operate without according to the instructions given

   The input voltage exceeds the defined scope

Note: The right to interpret this user manual is reserved to be our Technology Department.

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