THANKS FOR PURCHASING OUR PRODUCT

NX 180 POWER ALU

DC INVERTER
AC TIG/DC TIG
WELDING MACHINE

OPERATION INSTRUCTIONS

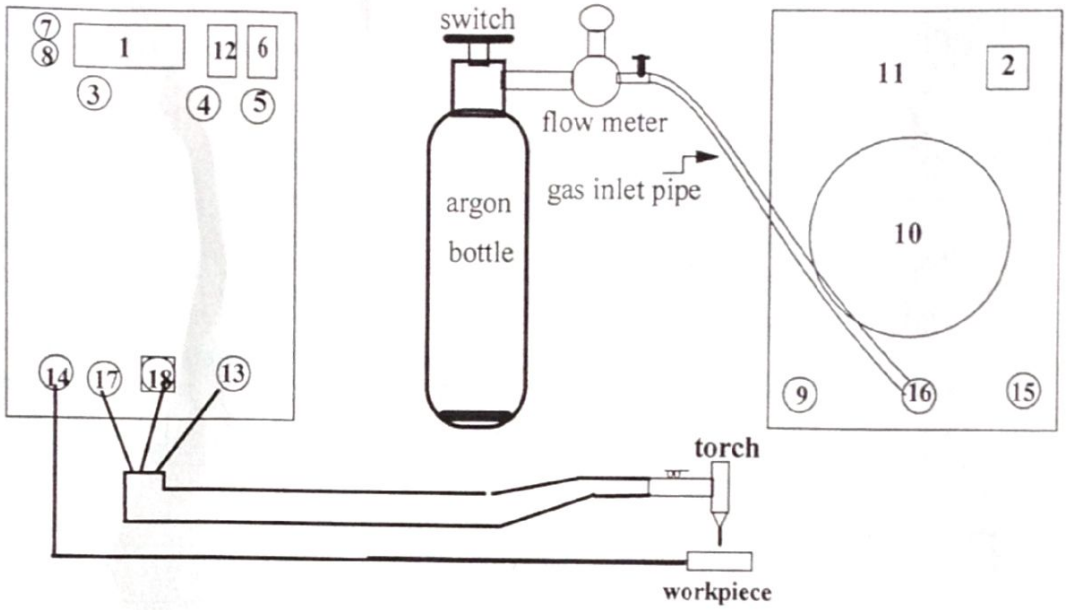
(with remote control receptacle)
(with preset current display)

VI.METHOD OF THE OPERATION

1.ARGON ARC WELDING(TIG)

a. FRONT OF WELDER

b. BACK OF WELDER



1.1 CLEARING BEFORE WELDING

Tungsten argon an welding is very sensitive to surface contamination of filled metal. Therefore before welding is carried out, grease, paint and coating on the surface,lubricant for machining and oxidized film should be removed.

1.2 DC ARGON ARC WELDING

①.Put Switch "12"(AC/DC) onto the position " DC",Connecting the gas inlet pipe to inlet "16 " of the welding.

②.Connecting gas inlet pipe of the welding torch to argon output of welder "17".

③.Putting the aerial plug of the welding torch in the argon arc control socket "18".

④.Testing gas: get the power of the welder ready and switch on the power "2", open the argon bottle switch and switch on the flow meter, press the torch switch, select suitable argon flow.

⑤. .Regulating the current knob "3". Selecting suitable welding current according to thickness of the workpiece to be welded.

. **Notice:** when the" 6.Pedal/panel switch" on "Pedal", welding current is regulated by "adjustable foot control box switch".

⑥. Tungsten electrode end is 2-3mm away from the welding workpiece. Press the torch switch, arc striking will occur.

⑦.Releasing the switch of the torch, welding current will reduce gradually (time is adjustive) and arc extinguishes.The welding torch can not be removed as soon as the arc extinguishing. Let the protection gas cooling down for the welding seam not to be oxidized.

⑧.When the welding operation is finished, turn off argon bottle switch and cut off input power of the welder.

1.5 AC ARGON ARC WELDING

1. put switch "12" (AC/DC) onto the position "AC".
2. The method of the connection same as 1.1
3. Reguting "5" to select right "sp(AC balance)"

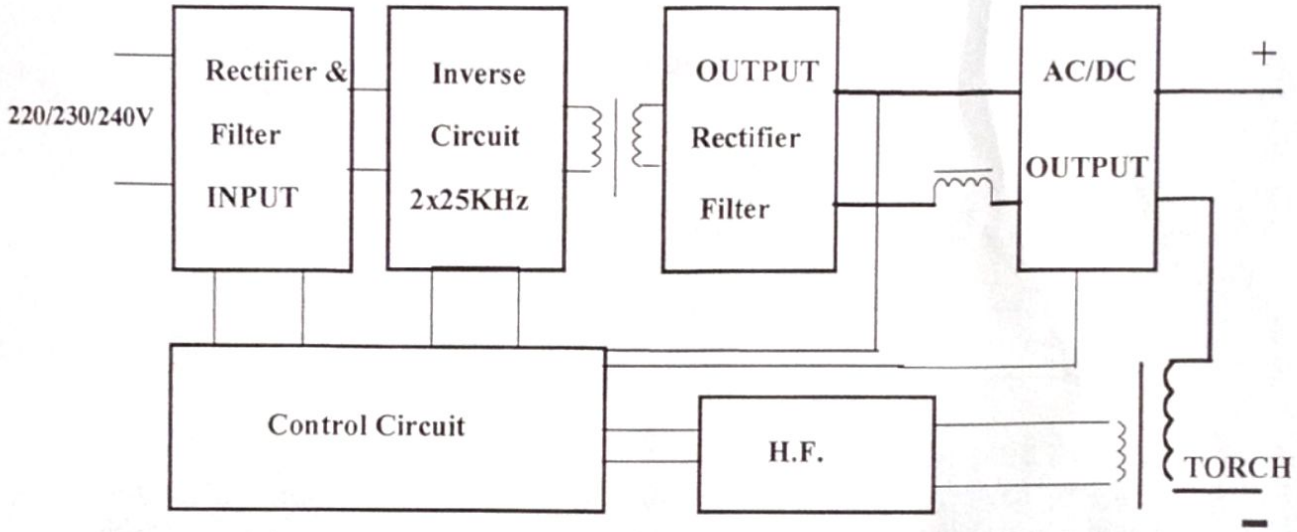
SP= $\frac{tp}{tn}$ *100%

tp:the time of I_2 at positive tn: the time of In at Negative

4. Regulating "4" to select right AC square wave frequency.

5. The Method of the welding same **as 1.1**

Ⅶ.SYSTEMATIC BLOCK DIAGRAM



Ⅷ.This product is sold subject to the understanding that if any defect in manufacture or material shall appear within 12 months from date of consumer sale, the manufacturer will arrange for such defect to be rectified without charge on the sales invoice and warranty card (except for any personal trouble).

I. MAIN USAGE AND THE RANGE OF USAGE

NX 180 POWER ALU Welder is double functional machine used as AC TIG, DC TIG Welder. All ferrous metals copper, Aluminium ,titanium and stainless steel material can be omnibearing welding in all position.The welding current is stable and stepless adjustable.The welding seam is nice. few spatter and low noise occurs during welding.The welder is small volume,light in weight and easy to move.It is particularly suitable for enterprise of pressure vessel,building,shipping and petrochemical works. It is the priority product to replace the NSA series welding machine.

II. MAIN TECHNICAL SPECIFICATIONS

MODEL		NX 180 POWER ALU
INPUT	Voltage	1~AC220/230/ 240V 50Hz
AC TIG	No-load Voltage	60 - 80V
	current Adjusting Range	20~165A
	AC balance	10%~90 %
	AC Square Wave Frequency	20~100Hz
	Rated Duty Cycle	35%
DC TIG	Current Adjusting Range	5~165A
	Rated Duty Cycle	35%
	Arc starting Mode	high frequency arc striking
Efficiency		≥80%
Mass		25kg
Protection Class of enclosure		IP21S
Outline Dimensions mm^3		430x200x290

III. OPERATING CONDITION AND WORK SURROUNDING

1. Operating condition:

Voltage of power source: 1~AC 220/230/240 V ± 10%。

Frequency: 50/60Hz

Reliable grounding protection

2.Work surrounding

①. relative humidity: not more than 90 %(average monthly temperature not more than 20℃)

②. ambient temperature:-10℃ ~ 40℃

③. The welding site should have no harmful gas, Chemicals, molds and inflammable matter,

explosive and corrosive medium, no big vibration and bump to the welder.

④. Avoiding rain water. Operating in rain is not allowed.

Ⅳ. DESCRIPTION OF THE ERECTION

1. Before welding, the operator should read the operation instructions.

2.Check the welder appearance for deformation and damage.

3.For the safety of the equipment and the persons, the customer must correctly make grounding or protection according to the power supply system:using $4mm^2$ lead to connect the protection grounding of the welder

4. Welding operation should be carried out in dry and good ventilating area.The surrounding objects should be not less than 0. 5m away from the welder.

5.Checking the welder output connector for tightness.

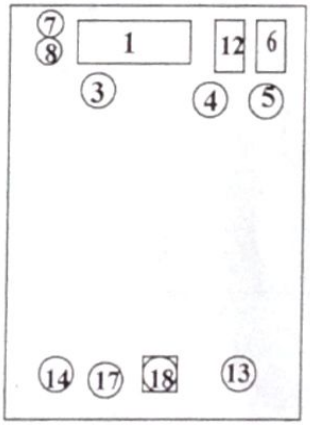
6.The welder can not be moved and the cover can not be opened during the power is on and welding operation is carried out.

7.The welder should be cared, used and managed by specialized person.

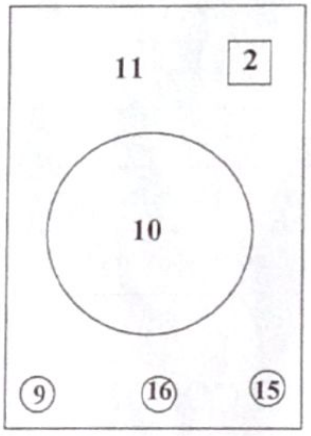
8.Current of the distribution board:not less than 40A

Ⅴ.SKETCH SKETCH THE PANEL FUNCTION

1. FRONT PANEL



2. BACK PANEL



1.indication of welding current 2.power switch 3.Current regulator 4. AC square wave Frequency
5. AC balance 6. Pedal/panel switch 7.indicating light of power 8.warning indicating light
9.safety earthing column 10.fan 11.nameplate 12.AC/DC TIG 13. output"-" 14.output"+"
15. power supply 16. argon inlet 17.argon out 18.argon arc control

General Troubles and Problem Solving:

Trouble	Causes	Problem Solving
Power lamp not light	1.No electricity input 2.Switch of welder fails.	1.Check incoming line . 2.Replace the switch
Fan not rotating	1.Fan power line is off. 2.Enclosure blocks the fan due to deformation 3.The fan fails.	1.Reconnect the line 2.Reform the enclosure . 3.Replace the fan
Warning lamp lights	1.Over heat(yellow lamp lights) 2.Over current(Green lamp lights)	1.Welding after cooling. 2.Input voltage too low or the machine fails.
No output of welder	1.Over current protection 2. Welder fails	1. Over load using 2. Maintenance in manufacturer or service center
Output current decreased	1. Input Voltage is low 2. Input line is too thin	2. Power line is thickened
Current can not be regulated	1.Connecting line of the potentiometer is off 2.Potentiometer for current regulation fails	1.Reconnecting the line 2.Replace potentiometer
High frequency are can not be generated	1.The switch fails 2.Interval of high frequency discharging is too big 3.Distance of the torch and workpiece is too far 4.High frequency arc generator fails	1.Replace torch switch 2.Regulating discharging interval to 0.8-1.0mm 3.Put torch tungsten electrode close to workpiece 4.Replace high frequency arc generator
Arc of argon welding is broken or tungsten electrode is burnt	1.Argon gas flow is not regulated well 2.Tungsten electrode fails 3.Value of current does not match with dia. of tungsten electrode	1.Regulated well 2.Replace or sharpen 3.Select the electrode dia. and current correctly 4.Enlarge the time
Welding torch overheat	1.Not use the water cooling when the current is more than 160A 2.The argon flow is the low current	1.Use water cooling 2.Enlarge the argon flow