How to set Flame cutting - debugging process ---Thunder X-PRO

→ Flame cutting - debugging process, Contains three steps

Solution overview: Step1. Set the system to flame mode and parameters;

Step2. Manual test flame cutting;

Step 3. Start formal flame cutting ;

Detailed Description:

✤ Step 1- Set the system to flame mode and parameters

Step 1-1 : Press the 【M】 key on the keyboard at the cutting interface; change the cutting mode to flame mode; 【See photo below】:

| FLSK F2100 Version 21, 232, 02, V4, 0 | Speed 000000 | File: SHAPE_01. TXT | | Status: Stop | Current L 00004 / 00 | | AN 7 | BO CP 8 9 |
|--|-----------------|------------------------|-----------|---|--|--|---------------|--|
| | | | | Ignition LowHeat HighHeat Pierce1 Pierce2 Pierce3 TorchUp | | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | GT JW 0 | ER FS 5 6 HU IV 2 3 KX LY + |
| 5 | | | | • Torc • THC • Blow [X] CutSpeed [Y] Manual Spc [F] Manual | | | G | ress M key |
| +X:300.00 -X:-5.00 F1 F2 Shape Lib Files | +Y:25.00 -Y | F4 | F5 | [G] StepDis X:+0000 Y:+0000 F6 | 5:00 M F Pierce Length 000.0 Cut Time Run Time F7 | 14 4 18 00:03:30 00:05:00 F8 | Space | Del |
| | F3 | F4 | Di agnose | Zoom In | | Zero | Home | PgUp |

Pic1

Step 1-2 : Press the [F4 Setups] key at the cutting interface \rightarrow Into Parameter interface; \rightarrow

Press the **[**F2 Flame **]**; Need to change two parameter;

--Low Preheat Time 100.00S{This is the Preheat time of the flame. As the thickness of the

steel plate increases, the Preheat time increases.}

--Pierce 1 Time 01.50S{ This is the Pierce time of the flame cutting. As the thickness

of the steel plate increases, the Pierce time increases.}

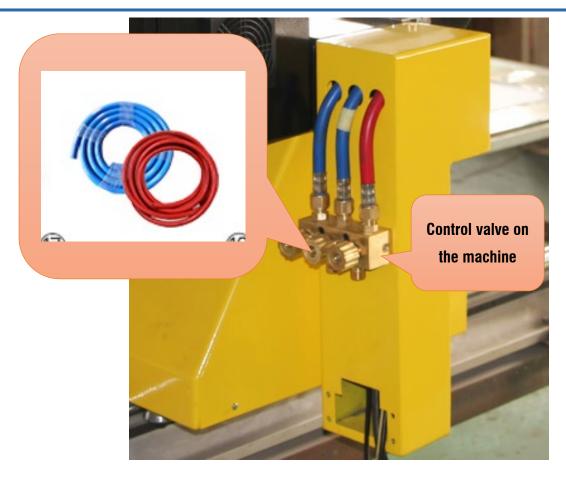
| | Ignition Time » Preheat Time | 0.00 100.00 | S S | Change | to 100S | |
|-------------------------|--|------------------------------------|--------------|-------------------|--------------|--------------|
| High | h Preheat Time Pierce 1 Time Pierce 2 Time | 0.00 1.50 0.00 | S S S | Change to | o 01.50S | |
| | Pierce 3 Time Blow Time | 0.10 | s s | | | |
| | Torch Up Time orch Down Time Pierce Up Time | 0. 30 0. 25 0. 00 | S S S | | | |
| Pie | erce Down Time THC Enable Hold Heat | 0.00 | S | | | |
| Edge (| Cutting Enable | | | | | |
| We | Pierce Count orkPiece Count | 4 | | ear ear | | |
| | Cut Length(m) Cut Time Run Time | 0. 87 00: 00: 31 00: 01 : 01 | CI | ear ear ear | | |
| F1 F2 Common Flame F | CONTRACTOR AND A CONTRACTOR OF A DESCRIPTION OF A DESCRIPANTE A DESCRIPANTE A DESCRIPANTE A DESCRIPTION OF A | 4 | F5 System | F6 Import | F7 Export | F8. Save, |

Note: This time is based on the actual situation on site.

Pic2

✤ Step 2- Manual test flame cutting;{ We use oxygen+ acetylene as an example}

Step 2-1 : Connect acetylene and oxygen to the gas pipeline of the machine - red for gas pipeline and blue for oxygen pipeline;



Pic3

Note: The Oxygen pressure is adjusted to below max0.8Mpa; The acetylene pressure is adjusted

to below max0.8Mpa;Document attachment with flame cutting parameter table;

Step 2-2 : Ignition \rightarrow Adjust the intensity of the flame

Press the [Ignition] key on the keyboard; \rightarrow Open preheated oxygen and acetylene valves,

Feel gas ejected by hand; \rightarrow Ignition with a flame igniter

Note: When igniting, the oxygen output gas is too large and the flame is extinguished;

lake Work Simple

Adjust the intensity of the flame

Press the [Cut] key on the keyboard; \rightarrow Open Flame torch

regulating value \rightarrow Check the strength of the flame; \rightarrow Press [10]

OFF Test flame finish

The strength of the flame is adjusted according to the thickness

of the steel plate



Step 2-3 : Test flame cutting

Select a graphic in the system gallery to test flame cutting;

Flame cutting process:

Unique Solution



Flame torch regulating valve Load G code or graphics \rightarrow Press the green [start] button \rightarrow Ignition with a flame igniter \rightarrow Waiting for Preheat \rightarrow See redness steel reaches the molten state; \rightarrow Press [Cut] key then Start flame cutting;

Repeatedly adjust the intensity of the flame, the pressure of cutting oxygen, the cutting speed, and the height of the cutting to optimize the cutting effect.

✤ Step 3- Start formal flame cutting;

Load G code or graphics \rightarrow Press the green $\{$ start $\}$ button \rightarrow Ignition with a flame igniter \rightarrow Waiting for Preheat \rightarrow See redness steel reaches the molten state; \rightarrow Press $\{$ Cut $\}$ key then Start flame cutting;

Note: If the preheat time is not modified, the system will automatically remember the last preheat time, the next time the cutting machine runs the last preheat time and then automatically pierce-cutting; However, it is also possible to press the **Cut** button according to the preheat condition;

Then perforation-cutting

In the cutting process, you can adjust the cutting speed according to home and end; adjust the capacitance value of the CHC---control the height of the torch



| Cutting | | Cutting kerf | Oxygen pressure | Acetylene | Cutting |
|---------|---------------|--------------|-----------------|----------------|---------------|
| Tip No. | thickness(mm) | (mm) | (MPa) | pressure (MPa) | speed(mm/min) |
| 0 | 3-10 | 1 | 0.6 | 0.025 | 600-700 |
| 1 | 5-20 | 1.5 | 0.6 | 0.025 | 550-600 |
| 2 | 20-30 | 2 | 0.7 | 0.025 | 450-550 |
| 3 | 30-50 | 2-3 | 0.7 | 0.03 | 380-450 |
| 4 | 50-70 | 3-4 | 0.7 | 0.035 | 320-380 |
| 5 | 75-100 | 3-4 | 0.7 | 0.035 | 250-320 |
| 6 | 100-150 | 5 | 0.7 | 0.04 | 160-250 |
| 7 | 150-200 | 5.5 | 0.7 | 0.04 | 130-160 |
| 8 | 250-300 | 6 | 0.7 | 0.04 | 100-130 |

Acetylene-Oxygen cutting parameter

Propane-Oxygen cutting parameter

| Tip No. | Cutting | Oxygen pressure | Propane pressure | Cutting aroud/mm/min) | |
|---------|---------------|-----------------|------------------|-----------------------|--|
| | thickness(mm) | (MPa) | (MPa) | Cutting speed(mm/min) | |
| 0 | 3-10 | 0.6 | 0.025 | 600-700 | |
| 1 | 5-20 | 0.6 | 0.025 | 550-600 | |
| 2 | 20-30 | 0.7 | 0.025 | 450-550 | |
| 3 | 30-50 | 0.7 | 0.03 | 380-450 | |
| 4 | 50-70 | 0.7 | 0.035 | 320-380 | |
| 5 | 75-100 | 0.7 | 0.035 | 250-320 | |
| 6 | 100-150 | 0.7 | 0.04 | 160-250 | |

Unique Solution

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| 7 | 150-200 | 0.7 | 0.04 | 130-160 | |
|---|---------|-----|------|---------|--|
| 8 | 250-300 | 0.7 | 0.04 | 100-130 | |