2022 Robot Welding Machine FAQ

Detail Introduction :

It is believed that our company is the best 2022 Robot Welding Machine Suppliers, which provides custom
excellent quality products. We know you need more than just basic information about our products, such a
price and specification. That's why here, we've prepared frequently asked questions about our products fo
kind of solution for your questions about our devices.

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1. How to fix spot welding robot weld separate?

1. The pressure of the pressing head is not enough. After a long period of use, the pressure and pushing f
between the robot spot welding electrode heads will decrease significantly. At this time, although sufficient
can be generated during welding, due to insufficient pressure at the end of the electrode head, it will cause
separation. At this time, we only need to replace the electrode head or adjust its pressing force appropriate
2. The power supply is overloaded. The current supplied by the power supply may be excessive under cer
conditions, and even exceeds the rated current value of the electrode head. For example, if multiple sheet
overlapped during spot welding or there are too many layers of sheets on one side during multi-layer spot
this will lead to a significant increase in resistance and cause overheating of the electrode head.

2. three variables used in robot welding samples what are they?

"The three variables used in robot welding samples are Welding Current(amperage), Wire Feed Speed an
Voltage. The welding current refers to the amount of electricity that is applied to the melted wire. The wire
speed is the rate at which the electrode is consumed. The voltage is the measure of the difference in elect
potential between two points.
Welding current is one of the most important variables that determine weld quality and properties such as
penetration and bead width. Some welding processes rely on a steady, constant welding current to create
Other welding processes use a variable-current setting, where the amperage shifts from low to high throug
weld cycle."

3. what is the advantage of using touch sensing robot welding?

1.Touch sensing welding robot has the same performance as laser welding equipment, can achieve perfec
effect, but the price is much lower than that of laser welding equipment, saving cost.
2. The touch sensing welding robot is not restricted by the environment and can be used in most cases, wh
laser welding equipment needs to be used in a dark environment.
3. The touch sensing welding robot can realize automatic adjustment of focus at any time, while the laser w
equipment requires manual adjustment of focus.
4. The touch sensing welding robot can be connected with other automation equipment for packaging, whi
convenient for production line automation.

4. why actual timeless than estimated time in robot welding?

The estimated time is based on the speed at which the robot program was written. If your robot traverses a
certain speed and you write your program in such a way that it takes 100 seconds from start to finish, then
what you can expect in your weld cycle time. If you are able to cut down on the travel time between weld s
drops, then you can expect that your cycle time will decrease.
If you have multiple weld seams and each seam takes 20 seconds to weld, if you can cut down on travel ti
between the seams then your cycle time will decrease. It's basically cutting down on unproductive moveme
robot arm during a weld cycle.

5. how to stop wire splatter when robot welding?

Splatter is one of the biggest issues in robotic welding. Wire splatter is a common problem that needs to b
addressed to improve weld quality and reduce maintenance costs. Excessive wire splatter can interfere wi
cause robot crashes and lead to rework.
The best way to handle splatter is to reduce its occurrence through proper welding procedures and equipm
settings. The following steps enable you to minimize the amount of wire splatter that occurs during your we
1. Adjust the stick-out distance
2. Adjust the travel speed
3. Consider pulse welding parameters
4. Increase voltage
5. Reduce the wire feed speed

6. how does a welding robot learn to perform its task?

Welding robots learn their tasks through a process called programming or off-line programming. Programm
method by which the robot is told where to move, how fast to move, and in what manner (joint motions) to
its task. The process of programming may be accomplished by either manually moving the robot through t
desired motions or by using a CAM (computer-aided manufacturing) system.
Offline programming includes teaching points to the robot controller. This is accomplished through a series
manual moves from one point to another, and recording these positions in a table within the controller. On
points have been recorded, a smooth path can be determined for the robot to travel between those points
various algorithms.
The method of programming is entirely dependent on the application that is being performed by the weldin

7. how fast can a welding robot weld?

Some of the world's fastest arc welding robots have a top speed of 1,200 inches per minute. This means t
can weld 20-inch long beads in less than one second!
This is an impressive speed, but as with most things, speed isn't everything. The fit-up of your parts, the jo
design, and the welding process used will determine how fast you can weld. Below are some of the speed
expect when using robotic arc welding:
Friction Stir Welding (FSW) – 250 to 350 inches per minute
Laser Beam Welding (LBW) – 750 to 850 inches per minute
Robotic Gas Tungsten Arc Welding (GTAW) – 400 to 500 inches per minute
Spot Welding – 1,000 to 1,500 inches per minute
Robotic Gas Metal Arc Welding (GMAW) Spray Transfer – 900 to 1,000 inches per minute
Squeeze-Type Resistance Spot Welding (STRSW) – 500 to 800 inches per minute

8. how is a welding robot taught to perform its task?

The first method is the easiest, but it can only be used for simple applications. It's called the lead through t
method, where you manually move the welding torch along a part, and the robot records this movement ar
it as a program.
It's important to mention that this method works only if you have a human-like robot arm (with six degrees
freedom) that has a similar size and structure to your human operator. It's also essential for the robot to ha
attached torch that moves freely. If any of these requirements are not met then the lead-through method w
The second way is to teach a robot using its teach pendant (the screen on which we enter commands). In
you need to enter joint angles or cartesian coordinates by hand. This is fine for simple parts, but when it co
more complicated parts with many different welds, it can get really tedious and time-consuming. This is wh
programming (OP) software was created. You can use your computer mouse to simulate moving the robot
through 3D space, and as you do so you set keyframes/way

9. how many degrees of freedom does a welding robot have?

When choosing a welding robot, you need to consider the configuration of the robot, depending on your ap
The configuration and number of axes will determine the degree of freedom that a welding robot has. Weld
robots are generally used for spot welding and arc welding.

Spot welding robots are generally in Cartesian coordinates or polar coordinates. These two structures hav
degrees of freedom, one arm, and three rotating axes in the vertical direction that can not be rotated horiz

10. how many flexible joints does a welding robot have?

Commonly known as a robotic arm, it is a type of manipulator. It generally has a fixed base and a movable
effector which may have one or more joints.
Any type of robot can be used for welding and several types of welding, including spot welding, arc weldin
laser welding.
A welding robot typically has 6 axes of movement, some of which are rotational (wrist pitch, wrist roll, and
while others are linear (shoulder, elbow, and base).

11. how much waste does a welding robot make?

I am not sure what is being asked here, but I will assume it is how much trash/scrap is generated by a wel
robot. This depends on the product being welded, the welding process, and the material used. For exampl
use a robot to weld steel bars together there may be very little scrap or waste. If you are welding thin alum
parts there can be a lot of waste due to thermal expansion and contraction during the welding process.

12. how to control a welding robot?

Welding robots are essentially the same as those used in other industries, such as automobile manufactur
are controlled via a robot controller and a teach pendant, which is essentially a joystick that allows the ope
move the robot's arm. The robot controller uses software to make decisions based on input from sensors.
The robot controller is programmed using a teaching method, in which the operator physically moves the r
through each weld without performing the weld. The robot then records the movements and applies them t
parts.
The teach pendant is used to run programs, test welds, or re-teach a program if needed. A welding robot w
typically have a power supply and wire feeder built into it that is connected to its welding gun.

13. can robots weld smaw?

Robots can weld SMAW.
The process, however, is not recommended because of the nature of the SMAW process. The SMAW pro
requires the welder to stop and start, stop and start. This makes it difficult for a robot to operate.
Recommended processes for robots are GMAW and FCAW.

14. Do robots make perfect welds?

The weld quality is dependent on a number of factors, including but not limited to the type of welding being
performed, the tools and fixturing used, and the programming of the robot itself.
However, the advantage of using a robot is greater consistency between parts when compared to a human
This gives you better overall quality control, which can be critical in certain industries such as medical or a
So robots don't make perfect welds, but they can produce consistently higher quality welds as compared t
humans.

15. how customizable are welding robots?

Robot automation systems have become increasingly popular in industrial applications, including welding. robots are able to perform tasks that are difficult and dangerous for humans to do, and they can work cont without a break. Also, robots can be designed and built to withstand harsh environments that would otherw too hazardous for a human worker.

Welding robots can be customized for a wide range of applications and industries. These include arc weldi automotive frames, MIG welding in aerospace manufacturing, TIG welding in the oil & gas industry, resista welding in the medical device industry, and more.

Robots can also be customized with different types of welding power sources, wire feeders, and other acc to perform specific tasks such as orbital or pattern welding. Other customizations may include changing th arm type, servo wrists, or tool center point (TCP).

16. how long to train a robot welder operator?

The answer depends on the type of robot welder and the skill level of the operator.

If it is a simple resistance spot welder and the operator has never used one before, I would say a week or would want to teach them how to use the weld gun and teach them some basic troubleshooting skills.

If it is a more complex robot welder using MIG, TIG or arc welding, it could be as much as 1-2 years before become proficient at programming and operating the robot.

17. how often do you clean a robotic welding torch?

If you work with a robotic welder, you know how important it is to keep the equipment in top working condit will help extend the life of the robot and keep your production line running smoothly. Cleaning the robotic w torch is an essential part of maintaining this equipment.

it is a good idea to clean them after three to five hours of welding and in between every shift. There are se methods available for cleaning robotic torches, including using a wire brush or a compressed air blow-off.

18. how to test a program in welding robots?

1. Put the robot in manual mode;
2. Manually move the robot to the first point of the path, ensure that all joints are in the correct position;
3. Press the Cycle Start button, check if all joints move correctly according to your program;
4. Repeat steps 2 and 3 until you finish the whole program;
5. If there is no mistake, you can run the program in auto-mode now.

19. what is a robotic welding operator?

A robotic welding operator is responsible for operating robotic welding machines. They are in charge of pre the machines and fixtures, loading the machine with raw materials, setting up the welding program, and m the performance of the machine.

Robotic Welding Operator Duties & Responsibilities

This job generally requires the ability to do the following work:

Sets up robotic welding machines by running programming software, setting tooling, installing fixtures and and loading materials into the machine.
Operate robotic welders by loading parts into positioners or fixtures, setting cycle parameters, and initiatin cycle.
Monitors robotic welder during operation to ensure proper function of equipment.
Troubleshoots problems with robotic welder by checking pre-programmed sequences and making necessa adjustments as needed.
Performs preventive maintenance on equipment by performing routine cleaning, lubrication, and replacem worn parts as needed.
Makes minor mechanical adjustments to programmable logic controllers (PLCs), robots, or peripheral devi necessary.
Reports any safety issues or other problems encountered during operation to supervisor.
Optimizes equipment use by determining the best location for equipment within the plant; determining mos cutting patterns; minimizing unnecessary movement of equipment;

20. what is weld robot cycle time?

Welding robot cycle time is simply the amount of time it takes a robot to complete its programmed moveme start to finish. The shorter the cycle time, the more parts the robot can produce and the faster you can get product out of production.
Cycle time is often one of the most effective ways to measure productivity in robotic welding and automatio long as you use your weld robots in a consistent way and on similar parts, reducing cycle times will help yo increase productivity and lower your cost per part.

21.will welding robots take over our jobs ambassador?

Welding robots have long been a staple of industrial fabrication. Because they can be programmed to perf precise welds with the same accuracy every time, they’re highly valued for their repeatability.
But even in this highly automated environment, there’s still a vital role for human workers: programming th
The question that comes up when thinking about automation is “will robots take our jobs?” This is a very lo question because so much depends on what kind of job you have.
In the welding industry, we have some insights into this question thanks to research from the American We Society (AWS). Their study found that about half of the welding professionals surveyed said that robotics w increasingly take over more tasks in their field over the next 10 years. However, it also found that most of t surveyed believe that humans will continue to fill a vital role in new technology applications.
In this FAQ, we focus on the general issues of robot welding machines, including their main parameters (s voltage, current frequency, and welding position), advantages, and disadvantages. We hope this informatio help you find some right answers. Feel free to contact us if you have any questions regarding our products