Claims

1. A crawling welding robot for crawling on and welding a workpiece to be welded, comprising a vehicle chassis, two crawler wheels connected to two opposite sides of the vehicle chassis, respectively, and a welding torch connected to the vehicle chassis and used for welding, wherein the crawler wheels each comprises a wheel carrier, a first sprocket and a second sprocket rotatably connected to two ends of the wheel carrier respectively, and a chain disposed around the first sprocket and the second sprocket, characterized in that the wheel carriers of the two crawler wheels are movably connected to the opposite sides of the vehicle chassis, respectively, the crawling welding robot further comprises a magnetic adsorption device for adsorbing the workpiece to be welded and lifting mechanism disposed on the vehicle chassis and configured for raising and lowering the magnetic adsorption device, wherein the vehicle chassis is provided with through holes, the lifting mechanism comprises an adjusting screw passing through the through hole and connected at one end with the magnetic adsorption device, and an adjusting nut located at a side of the vehicle chassis away from the magnetic adsorption device and threadedly connected with the adjusting screw, and the lifting mechanism further comprises a circumferential stopper fixedly disposed at the vehicle chassis and configured for restricting a rotation of the adjusting screw.

2. The crawling welding robot according to claim 1, characterized in that the crawling welding robot comprises hinges, through which the two wheel carriers are connected to the vehicle chassis, and wherein the hinges are rotatably connected to the wheel carrier and/or the vehicle chassis, and each have a rotation axis extending in a moving direction of the crawler wheels.

3. The crawling welding robot according to claim 1, characterized in that the crawling welding robot further comprises a molten pool observation module for observing welding conditions of the welding torch; the molten pool observation module comprises a camera component for photographing the molten pool and a shielding component for shielding spatters, the shielding component comprises a first shielding member having a first light-transmitting hole, and a light-transmitting baffle located between the first shielding member and the camera component and covering the first light-transmitting hole to be shielded from the spatters; the camera component is configured to photograph the molten pool through the first light-transmitting hole; and an area of the light-transmitting baffle is at least twice an area of the first light-transmitting hole and is movable relative to the first light-transmitting hole, so that a varied region of the light-transmitting baffle covers the first light-transmitting hole.

4. The crawling welding robot according to claim 3, characterized in that the molten pool observation module further comprises a rotating shaft, to which the light-transmitting baffle is

rotatably connected.

5. The crawling welding robot according to claim 4, characterized in that the shielding component further comprises a second shielding member located between the first shielding member and the camera component, the second shielding member is provided with a second light transmitting hole opposite to the first light transmitting hole, the camera component is configured to photograph the molten pool through the first light transmitting hole and the second light transmitting hole, the first light transmitting hole and the second light transmitting hole cooperate to define an accommodating space therebetween, within which the light-transmitting baffle is located, and the rotating shaft is connected with the first and/or second shielding member.

6. The crawling welding robot according to claim 5, characterized in that the light-transmitting baffle is of a cylindrical shape, the rotating shaft is rotatably connected to a center of the light-transmitting baffle, and the accommodating space has a notch, at which the light-transmitting baffle is exposed.

~~7. The crawling welding robot according to claim 1, characterized in that the crawling welding robot further comprises a magnetic adsorption device for adsorbing the workpiece to be welded and lifting mechanism disposed on the vehicle chassis and configured for raising and lowering the magnetic adsorption device, wherein the vehicle chassis is provided with through holes, the lifting mechanism comprises an adjusting screw passing through the through hole and connected at one end with the magnetic adsorption device, and an adjusting nut located at a side of the vehicle chassis away from the magnetic adsorption device and threadedly connected with the adjusting screw, and the lifting mechanism further comprises a circumferential stopper fixedly disposed at the vehicle chassis and configured for restricting a rotation of the adjusting screw.~~

~~8~~7. The crawling welding robot according to claim ~~7~~1, characterized in that the circumferential stopper has a clamping hole and is disposed around the adjusting screw, the clamping hole is D-shaped and clamps on an outer periphery of the adjusting screw to restrict the rotation of the adjusting screw, the adjusting screw includes a sliding connection section which slidably cooperates with the clamping hole, and a cross-sectional shape of the sliding connection section matches the shape of the clamping hole and is D-shaped.

~~9~~8. The crawling welding robot of claim 1, characterized in that the crawler wheel further comprises a first tensioning mechanism connected to the wheel carrier and configured for adjusting a tension of the chain in a first direction, and a second tensioning mechanism connected to the wheel carrier and configured for adjusting a tension of the chain in a second direction different from the first direction.

~~10~~9. The crawling welding robot according to claim ~~9~~8, characterized in that the first direction is a lateral direction consistent with a moving direction of the crawler wheel, and the second direction is a longitudinal direction perpendicular to the lateral direction.