# Claims

1. A metal wire positioning system, comprising:

a main frame;

a plate containing an internally threaded opening, the plate fixedly attached to the main frame;

a holding unit attached to the main frame, the holding unit comprising a rotatable support piston engaged with a pivot joint, and a connector connected to the rotatable support piston and pivotably supporting the rotatable support piston;

an adjustable guide support frame rotatably connected to the main frame by the holding unit via the pivot joint and suspended by the rotatable support piston;

a wire guide attached to the adjustable guide support frame;

a motor attached to the adjustable guide support frame, the motor attached to a threaded member that is engaged with the internally threaded opening in the plate such that the adjustable guide support frame is repositioned toward or away from the main frame in response to a rotation of the threaded member; and

a detector that detects the position of an arc of welding torch.

2. The system of claim 1, further comprising a control system in communication with the motor, the control system controls a rotation of the motor and thereby the movement of the threaded member.

3. The system of claim 2, wherein the control system controls an amount and a direction in which the threaded member is rotated.

4. The system of claim 1, wherein the threaded member is a screw or bolt.

5. The system of claim 1, wherein rotation of the threaded member by the motor in one direction repositions the adjustable guide support frame toward the main frame, and rotation of the threaded member by the motor in the opposite direction repositions the adjustable guide support frame away from the main frame.

6. The system of claim 1, further comprising a movable sleeve that encircles the threaded member.

7. The system of claim 1, wherein the motor is a direct current motor driven by a power control signal.

8. The system of claim 1, wherein the motor is a stepper motor.

9. The system of claim 8, the stepper motor allows a rotation of the threaded member in either direction by electronically controlling the number of energizing pulses supplied to the motor.

10. The system of claim 1, wherein the detector is attached to the adjustable guide support frame by a detector support.

11. The system of claim 1, wherein the detector comprises a camera.

12. The system of claim 1, further comprising a master feed device containing a first motorized wire feeder, a wire feeder motor, a rotation counter, and a second motorized wire feeder.

13. The system of claim 12, wherein the wire feeder motor drives the first motorized wire feeder and the second motorized wire feeder.

14. The system of claim 12, wherein the rotation counter is positioned between the first motorized wire feeder and the second motorized wire feeder.

15. The system of claim 14, further comprising a rotation counter positioned before the first motorized wire feeder.

16. The system of claim 1, wherein the main frame comprises a cut-out, perforation or hole.

17. The system of claim 1, wherein the adjustable guide support frame comprises a cut-out, perforation or hole.

18. The system of claim 1, further comprising:

a support element attached to the adjustable guide support frame;

a guiding element attached to the support element; and

a contact tip assembly attached to the support element**.**

19. The system of claim 18, wherein the contact tip assembly comprises a replaceable contact tip.

20. A system for production of an object of a weldable material by solid freeform fabrication, comprising:

a metal wire positioning system according to claim 1; and

a first welding torch fixedly attached to the main frame.

21. The system of claim 20, further comprising a second welding torch fixedly attached to the main frame.