

Annexure A SPECIFICATION

Specification to supplying, testing, commissioning, and training of Pulse welding machine in Germiston main plant (TE)

1. SCOPE OF WORK INSTRUCTION

1.1 This specification is strictly for the supplying, testing, commissioning, and training of pulse welding machine at Germiston main plant (TE)

2. MINIMUM REQUIREMENTS:

This specification does not absolve the supplier of sound engineering practices.

Material to be supplied should be SABS approved and of first grade.

THIS SPECIFICATION IS FOR: pulse welding machines.

*Rated input voltage/frequency: 3 PHASE, 380V \pm 10%,

50 /60HZ * Rated input capacity(kva):23.4

*Rated input current:36.1A

*Duty cycle (40 degrees): 60%@500A

* OCV (V): around 106

*Output current range: 25-500A

*Trigger mode: 2/4T, Spot, repeat

*Wire size: 0.8, 1.0, 1.2, 1.6

*Double pulse frequency (Hz):0.5-5

*Job channels:100

*Protection glass: IP23

*Dimensions (L X W X H): 655 X 324 X 546

*Metal type: Carbon Steel / Stainless Steel / Aluminium / Nickel Alloys

*The package should include the relevant full gas bottle and the locking system *The pulse machine should include intelligent remote equipped with 8m cable, Great for setting welding parameter inside vessels or on top of structures with limited visibility

*The latest and more advanced pulse welding machine is recommended

3. **GUARANTEE**

The Contractor shall guarantee the civil/machine for a period of twelve (12) months

4. **SAFETY COMPLIANCE:**

- 4.1 The Contractor's personnel will have to attend a compulsory safety induction course at the Transnet plant before they commence work/enter within the plant, which will be for the expense of Transnet.
- 4.2 The employees of the contractor shall at all-times adhere to Transnet Engineering's security and safety procedure.
- 4.3 Wearing of appropriate PPE is always mandatory when entering the workshops.
- 4.4 The bidder to supply three set of manuals, for operation, maintenance and spares list
- 4.5 Bidders to provide training for maintenance and the operation of the machine

5. **BIDDERS SHALL STATE:**

- 5.1 Whether all essential renewable parts for the machines / equipment will be readily available in the Republic of South Africa
- 5.2 What after-sales service for the machines / equipment can be offered?
- 5.3 Where similar machine has been supplied in the Republic of South Africa

Acceptance Column:

Name & Surname:	
Company Name:	
Signature:	Date:

By signing on the acceptance column, the supplier acknowledges that he understands the content of the specification. He/She shall conform to the requirements specified in the specification. He/She has the authority within his delegation to represent and sign on the company's behalf.

END OF SPECIFICATION FOR PULSE MACHINE

Specification supplying, testing, commissioning, and training of 3-wheel submerged arc welding tractor and the power source at Germiston main plant (TE)

1. SCOPE OF WORK INSTRUCTION

1.1 This specification is strictly for the supplying, testing, commissioning, and training of a 3-wheel submerged arc welding tractor and the power source at Germiston main plant (TE)

2. MINIMUM REQUIREMENTS:

This specification does not absolve the supplier of sound engineering practices.

Material to be supplied should be SABS approved and of first grade.

THIS SPECIFICATION IS FOR: 3-wheel submerged arc welding tractor.

1 * Max Current:1000AMP

*Travel Speed (met): 0.1-2.0 m/min (4-78.7 in./min)

* Metal Type: mild steel (wire type)/mild steel or stainless wire

2 *Wire Diameter (met):1.6-5mm 3 *Flux

Capacity (met): 6.0 l (1.6 gal)

*Wire Feed Speed (met): 9.0 m/min (354.3 in./min)

*Max Temperature (met): -10 - +40 deg C (+14 - 104 degF)

*The welding matching must be equipped with Lamp kit (2x36W LED)

*Features should include V-wheel track in steel (set of 3)

*The latest model is recommended

*Overall dimensions of welding tractor should be able to fit through minimum tank diameter of **428mm** without being disassembled. If the welding tractor is too big to fit through **428mm** diameter, at least minimum quick disassembly and re-assembly of the machine sub-components may be done in order to fit the machine through minimum tank diameter of **428mm**. *The original equipment manufacturer (OEM) of the welding tractor will be responsible to at least train minimum of **four** employees on operation of the machine including basic first line maintenance of the machine.

*The welding tractor should be able to travel and weld minimum tank internal diameter of **1500mm**.

The supplier must be able to give support to the machine at his/her expense to any technical or operational issues that may arise within the period of machine guarantee.

TECHNICAL DATA FOR THE SUBMERGED ARC WELDING POWER SOURCE

*Supply also a three phase 400VAC 50Hz, fan cooled dc welding power source **Current:** Min 30A and Max 1200A

*Ideal for submerged ARC Welding, MIG/MAG Welding

*Equipped with Digital Controller

*Voltage, 3 PH 60 Hz, V.....400/440/550

*Current A 100% 60 Hz.....64/64/52

*Maximum Load at 100% Duty Cycle

A/V.....800A/44V *Maximum Load at 60% Duty

Cycle A/V.....1000A/44V

*Setting Range A/V MIG/MAG.....50/17-1000/45

*Setting Range A/V SAW.....40/22-1000/45

*The power source should be latest model

*The original equipment manufacturer (OEM) of the welding tractor will be

responsible to at least training a minimum of **four** employees on operation of the machine including basic first line maintenance of the machine.

3. GUARANTEE

3.1 The Contractor shall guarantee the machine for a period of twelve (12) months.

4. SAFETY COMPLIANCE:

4.1 The Contractor's personnel will have to attend a compulsory safety induction course at the Transnet plant before they commence work/enter within the plant, which will be for the expense of Transnet.

4.2 The employees of the contractor shall at all-times adhere to Transnet Engineering's security and safety procedure

4.3 Wearing of appropriate PPE is always mandatory when entering the workshops.

5. BIDDERS SHALL NOTE THAT:

5.1 Full detail of recommended lubricants shall be furnished.

5.2 The bidder to supply three set of manuals, for operation, maintenance and spares list

5.3 Bidders to provide training for maintenance and the operation of the machine

6. BIDDERS SHALL STATE:

6.1 Whether all essential renewable parts for the machines / equipment will be readily available in the Republic of South Africa

6.2 What after-sales service for the machines / equipment can be offered?

6.3 Where similar machine has been supplied in the Republic of South

Acceptance Column:

Name & Surname:	
Company Name:	
Signature:	Date:

By signing on the acceptance column, the supplier acknowledges that he understands the content of the specification. He/ She shall conform to the requirements specified in the specification. He/ She has the authority within his delegation to represent and sign on the company's behalf.

END OF SPECIFICATION FOR 3-WHEEL SUBMERGED ARC WELDING TRACTOR AND THE POWER SOURCE