

Technical Newsletter from
ADOR WELDING LIMITED
Formerly Advani Oerlikon Ltd.

SELECTING THE RIGHT EQUIPMENT FOR CROSS COUNTRY PIPELINE WELDING

Cross country pipeline welding

Cellulosic electrodes are generally used, adopting the stove pipe technique (welding vertical down), to enhance productivity while welding cross country pipelines. Electrodes are selected on basis of the composition and strength of pipe material in use. In order to further increase productivity, semi automatic welding using flux cored wires is being increasingly used for the filler pass and or for capping. In such cases, the following processes are adopted sequentially:

1. Root run with E 6010 using a DC power source
2. Hot pass run with E 8010 also with a DC power source
3. Filler bead with either 7018 Electrode in Manual mode or with E 81T8 self shielded flux core wire in Semi automatic mode
4. Capping with either 7018 Electrode in Manual mode or with E 81T8 self shielded flux core wire in Semi automatic mode

Welding Equipment Options

Product Update

CELWEL



All-position electrodes including vertical down

Ideal for cross-country pipeline welding (stove pipe welding technique or 6 GR applications)

Deep penetrating forceful arc

Consistency in performance batch after batch, welder-friendly

Covers the entire range of API pipe grades (X42 to X70) including root filling and capping runs

DC welding sets

Motor generator sets and diesel engine driven welding power sources are popularly used for welding in manual mode (DC). Diesel engine driven welding power sources are used where availability of power is a constraint and these can have one welding output (single operator) or two welding outputs (double operator). Increasingly, diesel engine driven power generators of varying capacities are being used to supply power to 4 or more welding power sources. Some of the advantages of using a double operator diesel engine welding set or a diesel engine driven power generator connected to many welding power sources are saving on maintenance costs and in fuel consumption of one diesel engine compared to equivalent number of single diesel engine welding sets.

Multi process welders

As mentioned earlier, for increasing the productivity for Filler pass and for Capping, semi automatic self shielded FCAW process is also being adopted.

In such cases it is preferable to use welding equipment which has capability to deliver Multi process with Constant Current (CC) and Constant Voltage (CV) characteristics for manual welding and semi automatic welding respectively. Where power is a constraint, diesel engine driven power generators are connected to these multi process welders.

Ador Welding Limited offers many equipment options for cross country pipeline welding. Please click on the type of equipment to know more about them.

1. **Welding Motor Generators - Supergen 320**

These proven brushless welding motor generators have been in use over 2 decades and over 4500 welding generators are in use presently.

2. **Welding Rectifiers - Thyroluxe and Choprec Series**

a) **THYROLUXE 401** - This is a proven Thyristorised DC

Moisture controlled

Test certificates with every batch & full support for Welding Procedure Qualification

Approved by leading agencies i.e. ABS, DNV, LRS, TOYO, PDIL, etc.

International-quality packing (TIN packed)

**ADOR Institute of
Welding Technology**



**Certification Course for
Welding Inspector (QC-1)
7th – 12th Dec. 2009**

**Hands on training for
Welders / Operators**

welding rectifier for site applications and can be used for depositing root run, hot pass and for filling and capping.

b) **CHOPREC 401** - This is high frequency energy saving Chopper based DC welding rectifier, suitable for welding with cellulosic and various other electrodes for cross country pipeline and other welding applications.

3. Diesel Engine Driven Welding Sets

Silent Challenger Series ED Sets come with options of water cooled and air cooled engines and welding capacities of 300, 400 and 500 Amperes.

4. Double Operator - Silent Challenger Multi 2X301

This is an Engine driven welding generator set which gives two independent welding outputs with CC and CV characteristic. With this welding set, two welders can work simultaneously either in Manual or Semiautomatic modes.

5. Welding Payload - 4 X Champ Multi 400 (FCAW)

This configuration is mainly with One Diesel engine generator set (62.5 KVA) to be used with 4 nos of inverter based Champ Multi 400. With these four welders can work simultaneously either in Manual or Semiautomatic mode for enhancing productivity in cross country pipe line welding.

6. Diesel Engine Driven Power Generators - Powergen Series

The range of power generating sets include diesel engine driven power generators from 10 KVA to 30 KVA (with Escorts Limited diesel engines) and from 40 KVA to 500 KVA (with Ashok Leyland Limited diesel engines). **All our DG sets comply with the requirement of CPCB norms for engine emissions and noise levels, which is a mandatory requirement in India and elsewhere.**

7. Welding Payloads can also be configured with 4 or more power sources of customers' choice.

For further details please contact us at, cmo@adorians.com



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