Resistance Butt Welding

Using state-of-the-art automation to produce consistent, ductile welds, free of internal defects

Applications

- All sizes and grades of semi-elliptical continuous rod
- All sizes and grades of round continuous rod

Safety Notices

- Standard PPE required: hard hat, steel toe boots, safety glasses, and grinder's mask

Features and Benefits

- Weatherford proprietary COROD® welding technology
- State-of-the-art automation and closed-loop hydraulic motion control
- Data logging
- Real-time technical support with remote log-in
- Customization of the amount of current used in a weld
- Less volatile than flash-butt welding
- Production of reliable rod strings with consistent, ductile welds that are free of internal defects
- Increased performance in tensile and bend testing
- Increased quality control and boosts customer confidence
- Reduced maintenance costs and decreases downtime, compared to flash butt welding
- Enhanced safety at the wellsite
- Less human intervention

Tool Description

Weatherford resistance butt welding is an innovative welding process using automation and closed-loop hydraulic motion control to produce consistent, ductile welds that are free of internal defects. The system, which is less volatile than flash butt welding, allows the operator to adjust the amount of current used in a weld, which reduces the amount of material lost because of flashing, melting, or carburization at the weld line. The state-of-the-art automated process tracks and logs details on every weld and instantly provides feedback on whether a consistent weld has been performed. Clients are able to access the data log for use in rod string analysis.

Resistance butt welding equipment

Resistance butt welding (RBW) is used to help install COROD continuous rod strings, adjust rod string lengths, weld pin ends and fish pins, and miscellaneous service jobs. To ensure that welds are completed to proper specification, weld procedures have been developed for each size and type of continuous rod; these procedures are automated through the resistance welder's computer.

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The welding process works by bringing the ends of two rod strings together under pressure and applying an electric current to create contact resistance, which heats the rod ends. When sufficient heat is generated, the contact pressure causes the work pieces to upset and form a bond. The result is a reliable, uniform weld line with excellent performance in tensile and bend testing.

RBW Tablet

The RBW tablet is used to select the weld procedure, make any minor adjustments, and log critical details for each weld.

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