2100 XHD

Low heat electrode for repair & joining of wrought aluminium alloys

Description:
Compatible with many wrought aluminium alloys.
Corrosion resistant for marine and industrial environments. Deposits can be anodised or electroplated.

Technical data:

On base metal alloy type:	*AlMg3*	*AlMn*	*Al99*
Tensile strength: N/mm²	150-200	80-120	70-100
Yield strength: N/mm²	~80	~40	~30
Elongation: (%	~10	~20	~30

Applications:
Road transport vehicles, truck bodies, panel wings, frames, tankers, buses, railway rolling stock, wagons, marine fittings & most aluminium castings.

Base metals:
XHD2100 is particularly recommended for the following non heat treatable wrought aluminium alloys.
Aluminium (Al99 commercially pure) aluminium manganese alloys, aluminium magnesium alloys (up to 3%Mg) aluminium manganese-magnesium alloys.

Procedure for use:
Preparation:
Cleanliness of the joint faces is essential for highest quality weld deposits. All traces of oil, grease or paint must be removed using appropriate solvents and only uncontaminated stainless steel wire brushes should be used for cleaning the thin oxide layer prior to welding.
Preheating:
High thermal conductivity of aluminium tends to reduce the penetration and increase the lack of fusion or porosity risks due to the rapid solidification of the weld pool.
Preheating to between 100-300°C is recommended for large and complicated sections, this allows lower amperage settings for positional work.
Welding technique:
Strike arc by brushing, rather than tapping the electrode tip on the work piece.
Keep the electrode almost vertical, the arc should be maintained as short as possible by pushing the electrode down so that contact with the plate can de felt. The stable arc continues to burn beneath the molten flux and high welding speeds are maintained.
Welding parameter:
Welding current **=(+)**

Procedure A:
High amperage welding for thick sections and maximum welding speed.

Ø Electrode (mm)	**Amperage (A)**
2.5	60-80
3.2	80-100
4.0	110-130

Procedure B:
Low amperage welding for thin sections or positional work where dilution must be minimised.

Ø Electrode (mm)	**Amperage (A)**
2.5	40-60
3.2	60-80
4.0	80-110

Storage and handling:
Safely stack and store electrodes in a dry location to avoid humidity pick up or coating damage. Should electrodes become damp, the following re-drying conditions before use are recommended: 100°C / 1 hr.

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