

Reference exhibit

厚板高能率溶接システム「D-Arc溶接」

Thick plate high efficiency welding system "D-Arc Welding"

1パス溶接で溶接時間を最大80%削減

Reduction of welding time by 80% by one pass welding

新開発の高電流溶接プロセスD-Arcにより、厚板の1パス溶接を実現。

One pass welding of thick plates realized by newly developed high current welding process D-Arc.

開先加工時間を大幅短縮

Drastic reduction of groove processing time

1パス溶接が可能となることで、開先加工が少なく、加工費を低減。

One pass welding leads to less groove processing, resulting in processing cost reduction.

ワイヤ消費量最大70%低減

Reduction of wire consumption by up to 70%

開先加工面積の削減に伴いワイヤ消費量も約70%低減。

Realize reduction of wire consumption by 70% due to edge preparation space reduction.

適用分野

Applications

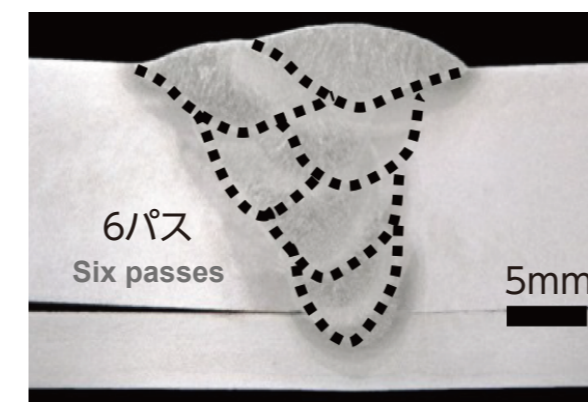
鉄骨、橋梁、建機、造船、プラント配管等の厚板溶接など。

Thick plate welding users for steel frames, bridge, construction machinery, ship building, plant, piping, etc.

[板厚19mm突合せ、溶接長1mの場合]
[For plate thickness 19 mm butt weld, welding length: 1 m]

約20分

approx. 20 minutes



従来多層溶接

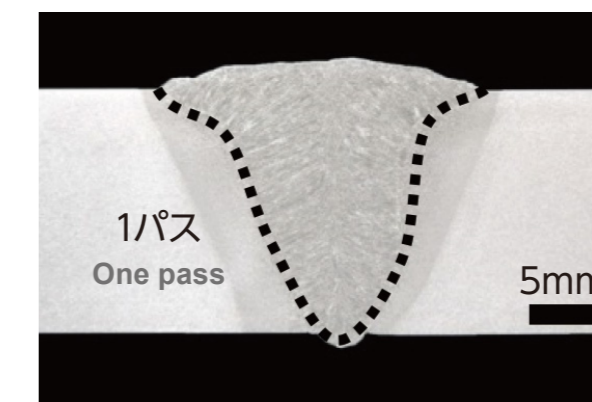
Conventional multi-layer welding

炭酸ガス
ソリッドワイヤ1.4mmφ
電流:300A 30V
溶接速度:30cm/min
6パス

Carbon dioxide gas
Solid wire: φ1.4 mm
Current: 300 A, 30 V
Welding speed: 30 cm/min
Six passes

約3.5分

approx. 3.5 minutes



D-Arc溶接

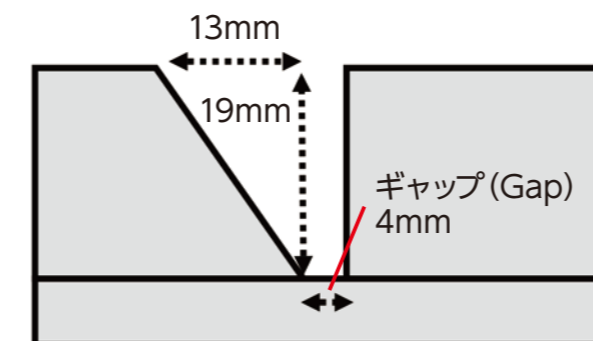
D-Arc welding

炭酸ガス
ソリッドワイヤ1.4mmφ
電流:650A 45V
溶接速度:30cm/min
1パス

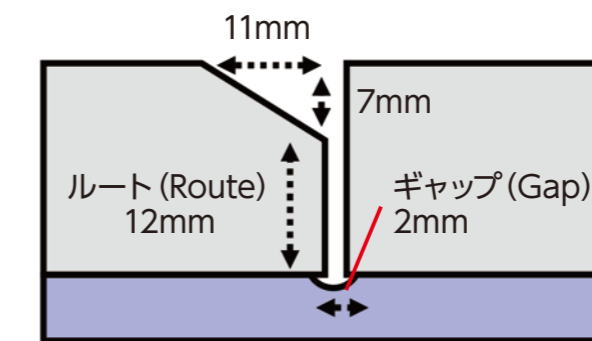
Carbon dioxide gas
Solid wire: φ1.4 mm
Current: 650 A, 45 V
Welding speed: 30 cm/min
One pass

開先加工面積 70%削減!!

Groove processing area 70% reduction!



鋼裏当て Copper backing



銅裏当て Copper backing

構成

Components

- ロボット:FD-V20 ■溶接電源:Welbee500A電源 2台
- 送給ユニット:高速ワイヤ送給システム ■トーチ:水冷1000Aトーチ
- Robot: FD-V20 • Welding power source: Welbee 500A power source x 2
- Feed unit: High speed wire feed system • Torch: Water-cooling 1000A torch

