
Application Example



Controller systems in orbital welding power source

iOrbital5000 uses advanced DSP controller with a 10.4" LCD touch screen for easier and friendly operation, it is full functional for various orbital welding application comprehensive extendable special application customization development.

iOrbital5000은보다 쉽고 친숙한 작동을 위해 10.4 "LCD 터치 스크린이있는 고급 DSP 컨트롤러를 사용하여 다양한 궤도 용접 응용 프로그램을 포괄적으로 확장 할 수있는 특수 응용 프로그램 사용자 정의 개발을위한 완벽한 기능을 제공합니다.



i-Orbital5000 full-functional welding power source

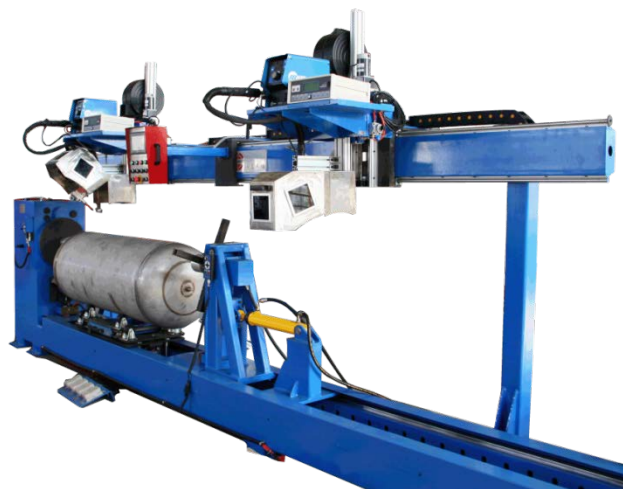
Mechanized automation welding system



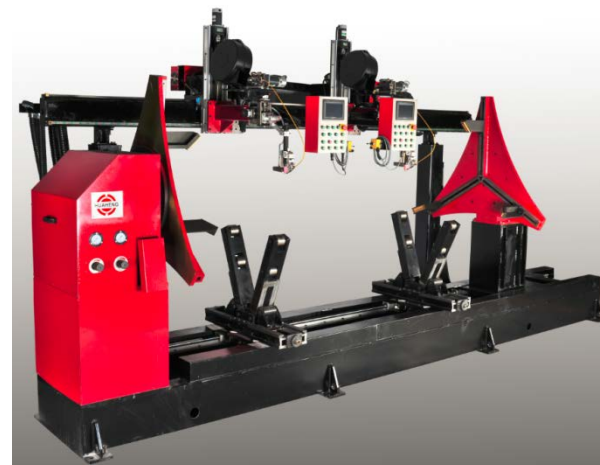
Longitudinal welding system mechanism



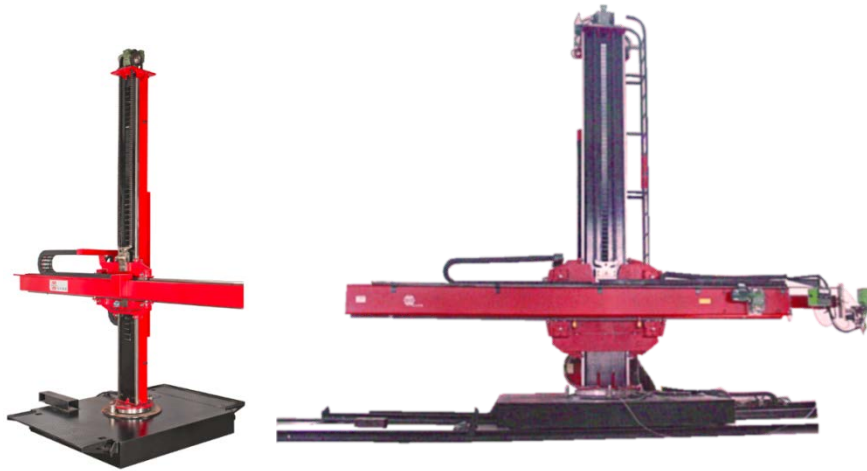
Mechanized automation welding system



Circumferential welding system mechanism



Mechanized automation welding system



Column-Boom / Welding manipulator



Positioner

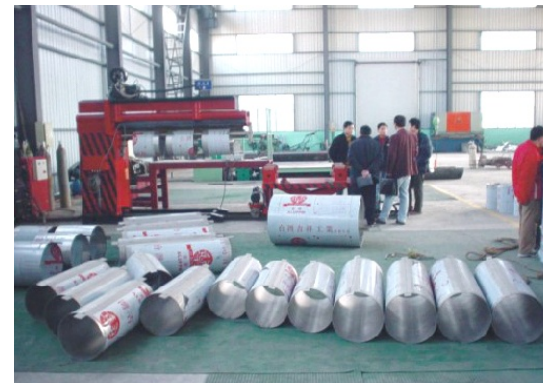


Turn table



Rotators

Mechanized automation welding system : Application



Longitudinal seam welding system

Mechanized automation welding system : Application



Longitudinal seam welding system

Mechanized automation welding system : Application



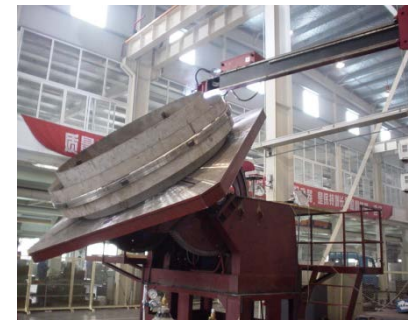
Circumferential seam welding system



Mechanized automation welding system : Application



Circumferential seam welding system



Mechanized automation welding system : Application

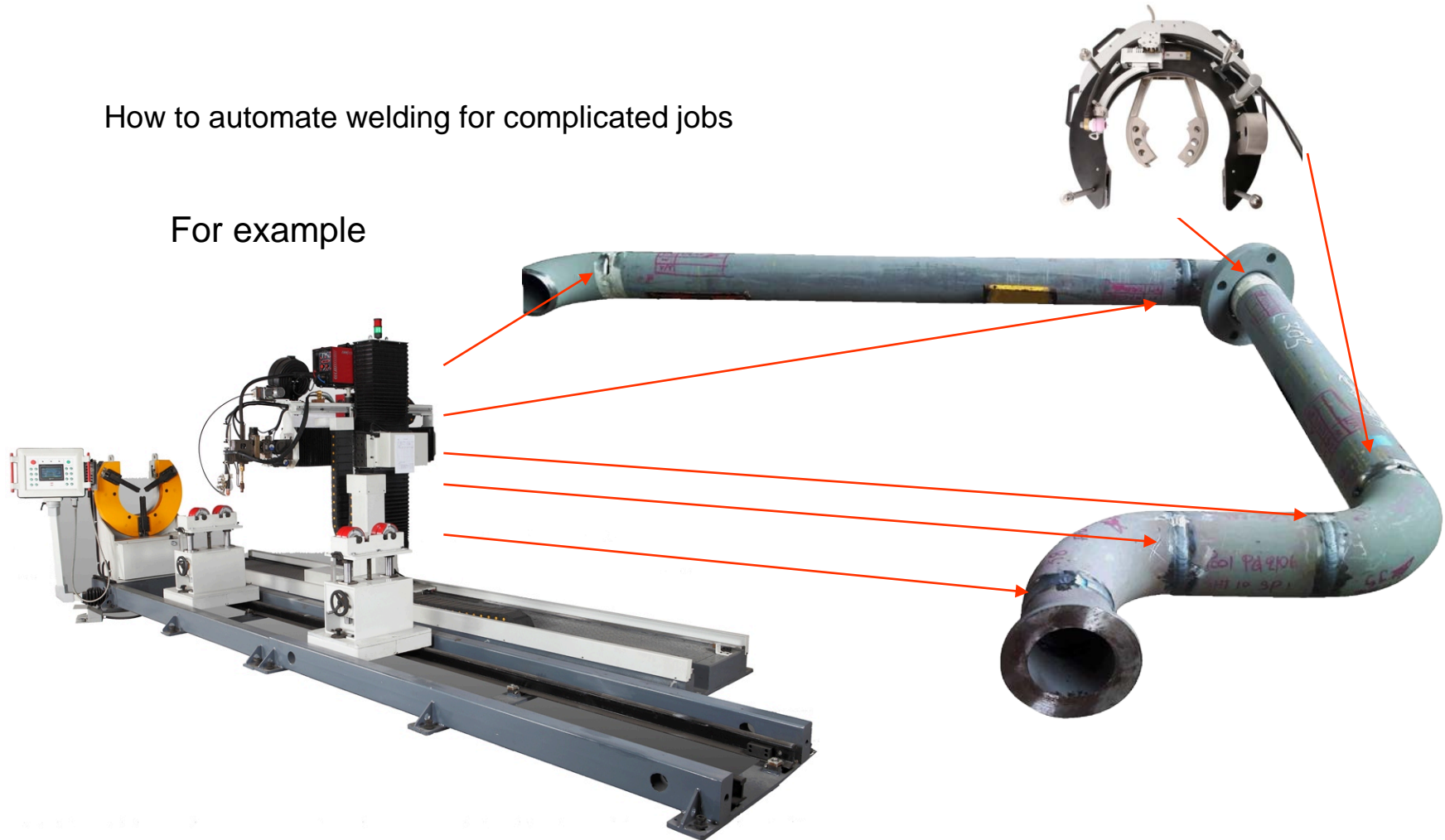
LNG tank production line



Mechanized automation welding system

How to automate welding for complicated jobs

For example



Mechanized automation welding system

HH Automation 제공

- A. Fixture – patent design open headstock, to solve axial and radial jumping during the rotation;
회전 중에 축 방향 및 방사상 점핑을 해결하기 위해 헤드 스톡을 열어주는 디자인(특허).
- B. Inverter digital control welding power source – EWM; 인버터 디지털 제어 용접 전원 – EWM;
- C. 15 year experience of automation application, develop unique TIG process and MAG ColdArc process for root pass welding with/without monitoring system; TIG process with hot-wire feeding for root pass/fill/cap;
자동화 응용 분야 15 년 경력, 독자적인 TIG 공정 및 MAG ColdArc 공정 개발, TIG 공정 도입 (루트 패스 / 충전 / Cap 용접을 위한 열선 공급)
- D. Powerful and stable multi-function control system developed based on Omron/Beckhoff platform;
Omron / Beckhoff 플랫폼을 기반으로 개발 된 강력하고 안정적인 다기능 제어 시스템.



Patent No.: CN200710023268.7 A. Fixture - Open headstock

- To solve axial and radial jumping during rotation; 회전 중에 축 방향 및 반경 방향 점핑을 해결하려면;
- Open design is convenient for load/unload and clamping for easy adjustment of welding position; 개방형 디자인은 용접 위치를 쉽게 조정할 수 있도록 로드 / 언로드 및 클램핑에 편리합니다.
- Long pipe welding application advantage; 긴 관 용접 신청 이점;
- Stable mechanism design is easy for automatic TIG root pass process; 안정적인 메커니즘 설계는 자동 TIG 루트 패스 프로세스에 용이합니다.

Mechanized automation welding system

B. Welding power source

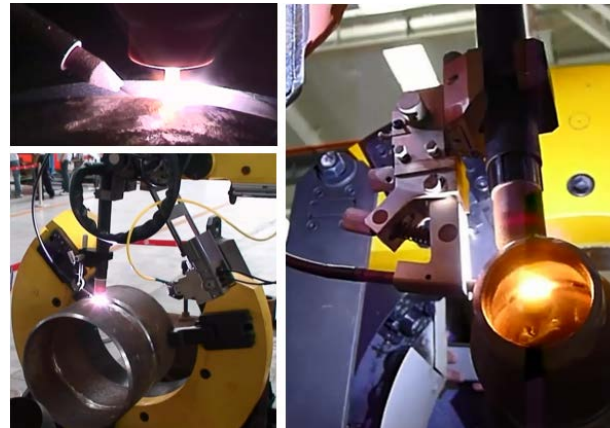


- *High efficiency with low energy requirement;*
- *Digital control, stable performance;*
- *Double pulse technology;*
- *EWM-coldArc® Patent technology;*
- *EWM-forceArc® Patent technology;*
- *Customized automatic polarity switch for TIG/MAG process*

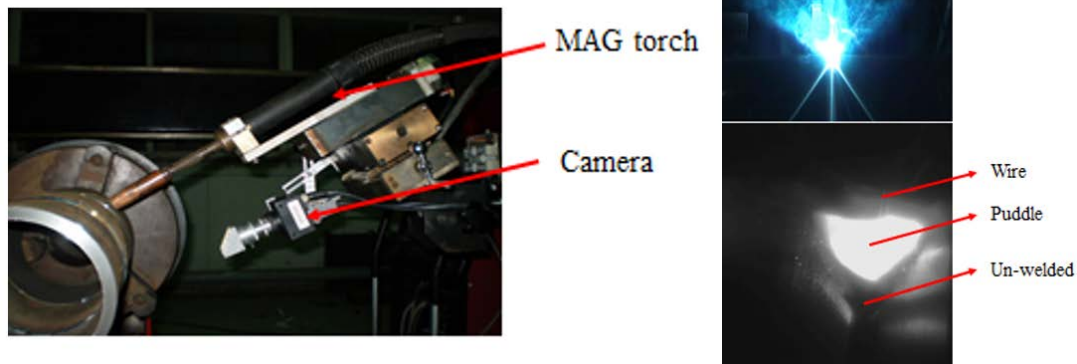
Mechanized automation welding system

C. Mature welding process for root pass

TIG process for root pass



MAG process for root pass



Mechanized automation welding system

C. cont'd...

- **TIG welding for root pass and ensure single side welding double side formation;**
- **Over 15 years practical experience in TIG welding process**
- **Introduced orbital AVC and OSC control technology;**
- **루트 패스 용 TIG 용접 및 단면 용접 양면 형성 보장;**
- **TIG 용접 공정에서 15 년 이상의 실질적인 경험**
- **궤도 AVC 및 OSC 제어 기술 도입;**



Mechanized automation welding system

C. cont'd...

MAG welding for root pass for the fit-up space 0~6mm, and ensures single side welding double side formation thanks to EWM ColdArc technology;

0 ~ 6mm를 위한 루트 패스 용 MAG 용접 및 EWM ColdArc 기술에 의한 단면 용접 이중면 형성 보장.



Gap between 2~6mm and miss-alignment between 0~2mm



Root pass welding – front side



Root pass welding – back side

Mechanized automation welding system

System application

*KB760 open headstock system, (HWH060)
TIG/MAG root pass + SAW fill/cap welding process*



Mechanized automation welding system

MAG root pass/fill/cap welding application



Mechanized automation welding system

System suitable industry application

Pressure vessel pipeline;

Oil and gas pipeline;

Thermal pipeline;

Marine, offshore and ship building

Construction machine

감사합니다

