TENDER SPECIFICATION

COMPANY

DESCRIPTION KUKA KRC4 KR120 Welding Cell Install

Customer: TECHNIPFMC

Date: 20.02.18
Reference: 18104_23_011

SUMMARY

The project is to design and build a control panel to integrate Kuka KRC4 KR120 Robot and Fronius welding equipment into a complete cell

SCOPE

THE DOOR SAFETY SWITCH

The cell access door will be monitored by a Guardmaster two channel safety switch that is integrated into the robots operator safety circuit.

The supply and installation of the door safety switch is in the scope of Phoenix Control Systems Ltd.

The mounting bracket for the safety switch is the responsibility of Technipfmc.

Note: that in the current design there is a single cell access gate.

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THE CONTROL PANEL

- The cell control panel contains all the circuit breakers, safety relays and safety circuits along with the Invertek inverter for the spindle and the Beckhoff IO and the associated wiring.
- Includes: Rittal enclosure.
- 3Phase to 24VDC PSU.
- Main Isolator.
- MCB Robot
- MCB Fronius Equipment
- Circuit Breakers for panel equipment.
- Safety relays for Estop circuit and operator safety circuits.
- Beckhoff Digital IO Modules. (16 Inputs and 16 Outputs Global Supply)
- Terminal Strips for cable termination.
- Cycle Start. (illuminated push button that will flash when the system is ready for a cycle start)
- Cycle Stop. (illuminated push button available to be programmed by user)
- Drives On. (illuminated push button to enable the drives ready for cycle start)
- Reset. (push button to re-arm the safety relays after cell entry, pressed estop etc)
- Glands and consumables.
- X11 cable for robot safety circuits. (Harting connectors)
- X12 cable for peripheral devices (Tip Cleaner etc)
- Ethercat Cable between panel and robot controller.
- Access door safety switch cable. (Ferrogard Safety Switch)

INSTALLATION, COMMISSIONING

- The mechanical installation of the robot and Fronius equipment in Dumferline.
- The mechanical install of the Phoenix Control Panel on it’s stand.
- The electrical install of the robot (fixing down of containment, put in place and connection of the controller supply cables, data cables, motor cables and earth bonding).
- The electrical install of the Fronius cables.
- The electrical install of the cell control panel (put in place the containment and connection of the cables from the control panel to the main incoming supply, from the control panel to the door lock).
- The commissioning of the robot (mastering, floor defined working base data, and welding tool tcp).

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- The commissioning of the safety circuits (Estop and Operator safety) and control panel push button controls.

TRAINING

A three day basic programming and setup course.

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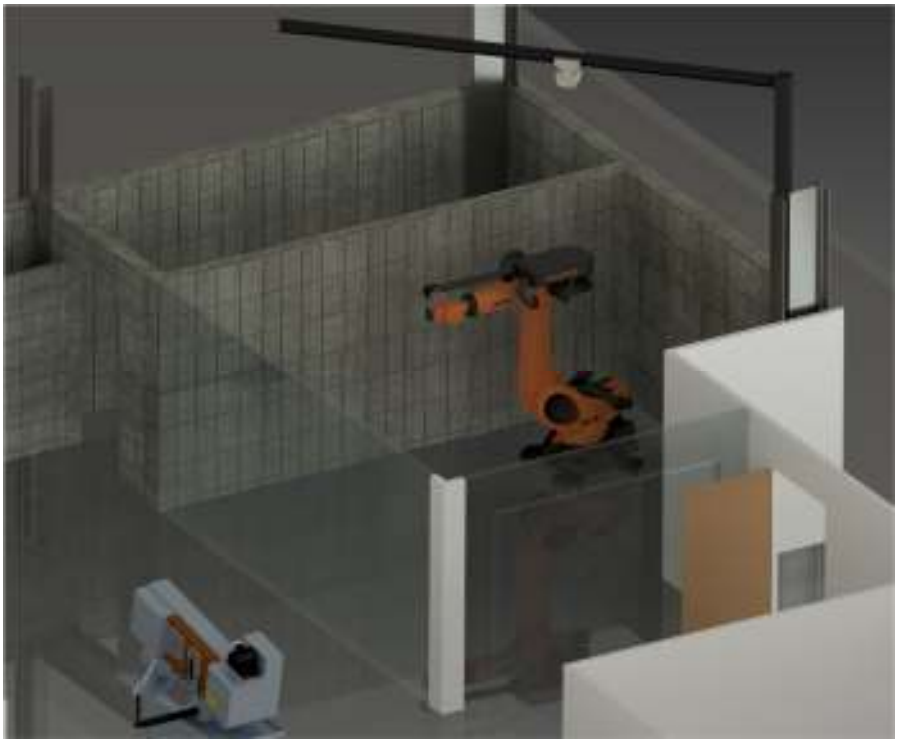
Additional information

Proposed Cell Layout (Awaiting confirmation layout drawing from Technipfmc)



LAYOUT DRAWING WILL NEED TO SHOW DIMENSIONS, EARTH BAR AND POWER DISTRIBUTION POINT ALONG WITH THE DESIRED CONTROLLER POSITION

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