

System Profile

Robotic Powder Installation



Industry: Commercial lawn equipment & Off-highway

Part: Large commercial grass cutters, end loaders and components for large tractors

Installation Date: • April, 2004

Description: System includes one spray to waste powder spray booth and one standard production powder spray booth. Parts are loaded on an overhead power and free conveyor, are identified up line and the information is passed down to the robots via an Allen Bradley

PLC using RIO.

The robots are preprogrammed to either paint all of the cut-ins as required or to coat the complete part. All robots use the ABB IC powder spray gun in dual configuration (2 applicators in parallel). After the robots complete their programs, the parts are conveyed into the automatic reciprocator booth, where the process is completed.

Each booth has two IRB 580 robots. The spray to waste booth incorporates four (4)valve color changers which allow the robots to paint special colors on the tractor parts.

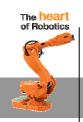
■ (4) IRB 580 robots **Equipment:**

ABB IC powder spray gun in dual configuration (2 applicators in parallel)

ABB Powder Color Changer

ABB Breakaway gun bracket with sensor switch

■ ABB RobView[™] and ShopFloor[™] editor



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Unique Elements:

Dual configuration of IC Powder Gun

ABB Powder Color Changer

Breakaway end effectors with sensor switch

■ Interface into existing PLC

Customer Provided Equipment:

Existing PLC

Existing paint booths

Some robot programs

Project/Steps to Implementation:

Concept

Reviewed Specification

Prototype/feasibility study in the lab

Proposal Engineering
 Project Management
 Electrical Engineering
 Mechanical Engineering
 Manufacturing/Build

System Assembly & Test
 System Programming & debug
 System installation On-site
 System Installation Supervision

System installation SupervisionRobot System programming

System TrainingDocumentation

Project

Responsibility: Paint Process Automation

Photos/Videos: No

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