



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.
- Equipment:**
- (4) IRB 580 robots
 - 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



System Profile

Robotic Powder Installation

- 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
 - Robot System programming
 - System Training
 - Documentation
- Project Responsibility:** Paint Process Automation
- Photos/Videos:** No

ABB Inc.
1250 Brown Road
Auburn Hills, Michigan 48326
T/ 248-393-4600
F/ 248-393-4603

ABB Automation GmbH
Business Area Unit Robotics
Grüner Weg 6
D-61169 Friedberg
Germany
T/ +49-6031-85-0

ABB MC s.a.s.
ZI des Bethunes
Rue de l'Equierre
95130 Saint-Ouen l'Aumone
France
T/ +33 1 3440 25 25

ABB K.K.
Cerlulean Tower
26-1 Sakuragaoka-cho
Shebuya-ku, Tokyo 150-8512
Japan
T/ +81 (0) 3 5784 6170