

RFID Tag Print/Encode/Apply to Metal Cylindrical Parts

Agricultural Equipment Manufacturer



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The ability for FOX IV engineers to modify standard equipment enabled them to meet the application criteria.

Growth & Impact



Increase in
throughput
rate



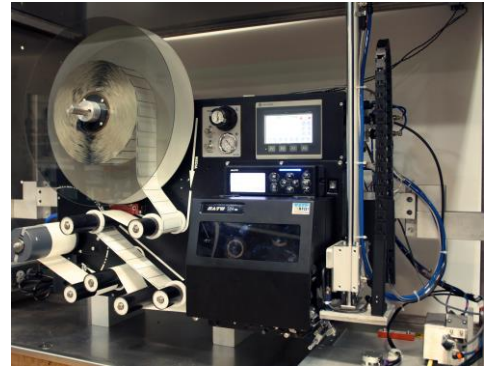
Enabled
automation
of
production
line



Reduced
labor

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FOX IV was able to supply labelers for printing, encoding, and applying a specialized RFID tag and applying a paint mask label.



Background

An agricultural equipment manufacturer wanted to print, encode, and apply an RFID tag to a part, then place another label over the tag to act as a mask during the paint process. An integrator would design a labeling station utilizing the chosen equipment to handle two processes.

APPLICATION:

The end-user wanted to print, encode, and automatically apply 45 mil closed cell foam RFID labels, 2.75" W x .75" H, to the side of a metal cylindrical part. The RFID tag would then need a removable "paint mask" label of the same size to be accurately applied over the tag. Maximum throughput rate was 3 ppm. The systems were to run 24/7

ENVIRONMENT/SPECIAL CONDITIONS:

Factory temperatures can reach 110°F with an oily and dusty atmosphere. Thickness of RFID tag is 45 mils, over the maximum thickness tolerance of standard OEM print engines.

Solution

FOX IV provided the designated integrator with a PLC controlled 6984R-2 RFID label print and apply unit as well as a 1014 label applicator. Both units were housed in FOX IV designed metal enclosures with built-in air conditioning units and automatic application doors. To accommodate for the thickness of the tag, FOX IV engineers modified the printing apparatus in the 6984. Additionally, the systems were configured with digital I/O, Ethernet, and an RYG light beacon assembly for unit status notification.

The integrator mounted the labeling units into a labeling station. When the cylinder was in place to be labeled, the integrator's system sent an "apply" signal to the FOX IV unit. Once the tag or label was applied, the FOX IV unit sent a "complete" signal to the integrator's control software to advance the metal cylinder to the next station.

VIDEO LINK:

<https://youtu.be/EBIDVofTlaM>

"The tag thickness was a critical part of the application. Our experience working with various print engines was invaluable in overcoming this obstacle and creating a system that would work reliably for the customer."

Rick Fox III, Director of Engineering FOX IV Technologies, Inc.