



Truck Factory Paint Line Avoids Rejected Parts and Operator Error

CUSTOMER

Commercial vehicle manufacturer

GRACO EQUIPMENT

ProDispense Intrinsically Safe (IS) Barrier Kit

CHALLENGE

A heavy-duty truck manufacturer used a three-component material -- a resin, an accelerator, and a catalyst -- to paint chassis for tractor-trailers. This made for extra challenges between the paint kitchen's hazardous and non-hazardous areas.

Paint line operators hand mixed the resin and accelerator separately before sending it to the hazardous area to be combined with the catalyst. But hand mixing caused costly ratio accuracy problems.

- If not enough accelerator was added, the chassis would come out of the oven wet
- If too much accelerator was added, the chassis would have a brittle finish with air bubbles or craters along the surface.

Such defects weren't detectable until the end of the paint line. By the time they noticed a bad finish on one chassis, up to four more would be rejected.

This wasn't their only downtime issue. The mixture needed to be stored in a separate tank and refilled often. To fill the tank, operators would use a dead-man pneumatic ball valve. To attend to other tasks, they would often wedge the ball valve open, leaving the tank unattended. This caused overflows of up to 60 gallons that required several hours of halted production to clean up.

Paint line operators needed a clean and safe way to automatically mix the material and refill tanks in the paint

mix room. But electronic controls were not typically safe for hazardous areas.

SOLUTION

The paint line manager agreed to test the ProDispense Intrinsically Safe Barrier. This new technology would allow easier installation and control of key paint room equipment inside the hazardous area.

Now they could precisely mix the resin and the accelerator, and automatically replenish material.

1. The fluid dispense unit outside the hazardous area fed into a tank inside the hazardous area.
2. The tank was equipped with Graco's level sensor and remote fill solenoid technology. Whenever the tank ran low, it worked with the intrinsically safe barrier to communicate with the control panel.
3. The ProDispense automatically refilled the tank.

RESULTS

The ProDispense Intrinsically Safe Barrier provided a way to safely install the solenoid valves and meters within the hazardous area. Reducing excess cable and fluid lines in installation by over 60 percent.

The commercial vehicle manufacturer now can do something it could not do before: Run automated systems from within the hazardous area in a clean and safe way.



For more information, contact us at 1-800-533-9655 or info@graco.com. Visit www.graco.com/prodispense.