Case History 108

Industry:

Tank Manufacturers

Components/Products:

Small cylindrical tanks for truck air brake systems, water heaters and portable gas cylinders for home use.

Background:

Small cylindrical tanks are usually manufactured on production lines at high throughput rates. The paint finish is almost the last process the manufacturer does but the first thing a customer sees. These finishes are applied for corrosion protection, decorative or identification purposes so they are important to the overall quality and acceptability of the product.

The Problem:

A manufacturer of water heaters and boilers had a problem with the quality of their powder coating. Rust spots, bubbles and poor paint adhesion resulted in the rework of over 50% of their production. After investigation it was found that before the powder coating operation the tanks were passed through liquid cleaning solutions followed by a spray applied rinse. Despite running the tanks through a heated tunnel the liquid cleaner/rinse water remained in the indentation at the top of the tank. This liquid was spilling out of the indentation and running over the surface of the tank resulting in an unacceptable finish from the powder coat.

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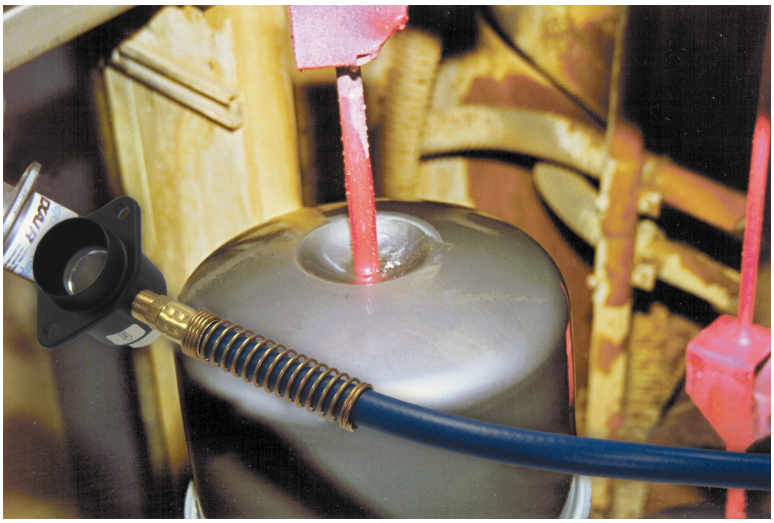

The Solution:

A **Model 120021, 1-1/4" Super Air Amplifier** with **Stay Set Hose** (for easy positioning) was mounted on each side of the conveyor before the heated tunnel. The high volume, high velocity airflow blew the liquid pre-treatment/rinse water from the indented area, allowing the heated tunnel to dry any remaining droplets. The finish of the powder coat was without fault on every tank from that time on.

Comment:

Without a doubt, this manufacturer could have solved his problem by blasting the tanks with open air pipes. In reality, this would be inefficient use of compressed air and the noise level would be unacceptable. EXAIR's patented design for the Super Air Amplifier increases airflow up to 25 times yet is extremely quiet.

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