CASE STUDY

1574

APPLICATION GOAL

The first objective was to reduce the volume of compressed air used to remove moisture from wire on a processing line. The second was to mitigate the sound levels from the blowoff. The OEM of the machine manufactured horseshoe shaped blowoffs that are a series of drilled holes.

Horseshoe shaped OEM blowoffs

BEFORE EXAIR

The customer used the air blowoff provided to them by the original equipment manufacturer (OEM) of the machines they used. Each machine had two horseshoe shaped nozzles bolted together, one had a 2-1/2" inner diameter, while the second had a 2" inner diameter. Each OEM blowoff had a series of holes around the throat diameter that allows the compressed air to blow onto the wire. There were five machines in total with this setup on each machine. The effectiveness of the blowoff was good, but the customer was concerned with the air consumption. The OEM blowoffs were operated at 100 PSIG inlet pressure, they consumed **73.9 SCFM** and produced a **90.6 dBA** sound level. The horseshoe nozzles were not controlled independently, both operated full time. Total consumption of the OEM provided solution across all five machines was **369.5 SCFM**.

AFTER EXAIR

The **Model 2402SS 2" Stainless Steel Super Air Wipe** was a simple selection due to the matching throat diameter. With a continuous 360° blowoff only one Super Air Wipe was needed per machine. The Super Air Wipe operated at 80 psig and the same amount of time as the OEM blowoff did before. The **Model 2402SS** requires **29.5 SCFM**. This is a total of **147.5 SCFM** for all five machines. The Super Air Wipe operates at a **77 dBA** sound level for a total reduction of **12.4 dBA** at each blowoff station.

EXAIR Super Air Wipe

SUMMARY:

The customer replaced all five OEM blowoffs with the EXAIR **Model 2402SS 2" Stainless Steel Super Air Wipe**. The total compressed air savings was **222 SCFM** for the installations. This equates to **106,560 SCFM saved per 8 hour shift** or **$26.50 per shift**. This gave the customer a **37 week simple ROI**, using a 40 hour work week. By installing EXAIR Super Air Wipes the noise level was reduced by 13.6% in the blowoff areas. The sound levels are now below the OSHA threshold for allowable noise level exposure.

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