

Case History 3 Process Improvement Project – Industrial Paint System



Process Booth: Four (4) Mod Spraybooth Base Coat (BC) Manual / Observe Zones

Energy Savings Opportunity:

Air Flow Reduction, the BC Manual zone is no longer used for process and is only used by the process engineer to inspect product quality. This process zone was therefore transformed into a dry Observation zone. Specification now calls for the allowance of 30fpm for dry miscellaneous booths. The manual zone was originally designed for 100fpm downdraft.

How Implemented:

To implement, the Mod Booths had central exhaust system with a fan farm style of arrangement. The exhaust fans were re-sheaved for the adjusted overall volume reduction. The supply fans were adjusted through the use of VFD's.

Air Flow Reduction:

200,000 CFM. The savings comes from the reduced electrical load of lowering the output of the fans, and the natural gas required to heat the air flow.

Implementation Cost: \$100,000

Energy Savings Achieved: \$287,000 annually