OPS 21

TOMORROW'S OPERATIONS —
FOR TODAY'S MANUFACTURERS

CASE STUDY - SUSSMAN-AUTOMATIC CORPORATION

About:
Sussman-Automatic manufactures and assembles electric steam boilers. Their boilers are designed for two market segments: residential luxury spas (mr. steam); industrial and commercial applications (Sussman Boilers).

Employees:
57

Website:
www.mrsteam.com

Location:
Long Island City, Queens, NY

KEY IMPACTS

50%
REDUCTION IN TESTING TIME PER UNIT

~0%
RETEST RATE, REDUCED FROM 20%

~100%
IMPROVED TRACEABILITY, DUE TO SERIALIZED, DIGITIZED TEST RESULTS

SUSSMAN-AUTOMATIC'S OPS21 GRANT WAS UTILIZED TO DEVELOP A TEST STATION TO INCREASE THE EFFICIENCY OF THEIR TESTING PROCESS AND TO DIGITALLY RECORD ALL TESTING PARAMETERS ON THEIR STEAM GENERATORS. AS A RESULT OF THEIR CUSTOM TESTING UNIT, THEY HAVE REDUCED TESTING TIME, IMPROVED TESTING ACCURACY, AND CAPTURED TESTING DATA ELECTRONICALLY, SIMPLIFYING DATA ACCESS AND TRACEABILITY.

GRANT TECHNOLOGY AREA: Digital Manufacturing / Testing

CHALLENGE / OPPORTUNITY

Prior to this project, Sussman-Automatic had a manual testing process in place that was more prone to human error, as the tester needed to manually attach testing leads to several electrical contacts, input test equipment settings, read outputs, cross-reference measurements to a tolerance chart and then repeat the process for each parameter. In addition, Sussman-Automatic did not have traceability of unit test outcomes after units were shipped. This limited their ability to determine if a unit had failed in the field due to normal operating usage or due to a production issue.

SOLUTION

Sussman-Automatic developed a custom testing station that allows the tester to simply plug in the diagnostic ports and run the automated test parameters simultaneously. The test station logs each unit's serial number and its associated testing data, which is now available for the technical teams to review. This enables Sussman-Automatic to detect failure trends and to trace issues back to a unit's production batch. The new test station not only improves test efficiency, but it also enables the company to further improve their products.

Adding this new test fixture allows us to improve quality, add component traceability and gives us the ability to track quality metrics. The way it has been designed and implemented, these outputs have been added to our assembly line inspection process while reducing inspection time.

Peter Titolo, Engineering Manager, Sussman-Automatic

NYC/EDC fw itac

RESULTS & INSIGHTS

INCREASED EFFICIENCY

- Reduced testing time per unit by more than 50%, freeing up the person doing the testing to support other areas in production.
- Improved testing accuracy, shifting from a 20% retest rate to a near 0% retest rate – thereby saving time and associated rework costs.
- Supported troubleshooting process in the field with additional traceability data, used to identify defect failure trends.

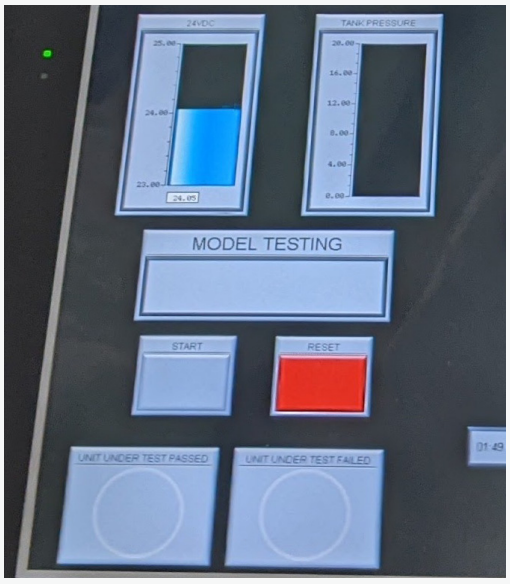
COST SAVINGS

- Reduced costs resulting from an improved ability to troubleshoot issues in the field due to serialized test logs and historical test results for all units produced.

IMPROVED COMPETITIVENESS

- Increased data access resulting from digital data capture of test results, which ultimately leads to improved quality and reduced costs, both of which increase Sussman-Automatic's competitiveness/marketability.

Old testing equipment that was replaced.



New test station.

OPS21 PROGRAM OVERVIEW

Ops21 is a multi-faceted program designed to help NYC manufacturers learn about and adopt advanced technologies, specifically advanced materials, robotics, and digital manufacturing. It is part of the greater Futureworks NYC initiative, which aims to help manufacturers embrace advanced technologies and increase local production.

Ops21 Grant funds are generously provided via the Futureworks NYC Ops21 program, which is funded by the New York City Economic Development Corporation (NYCEDC) and led by the New York City Industrial and Technology Assistance Corporation (ITAC).

iSteam touch screen control.