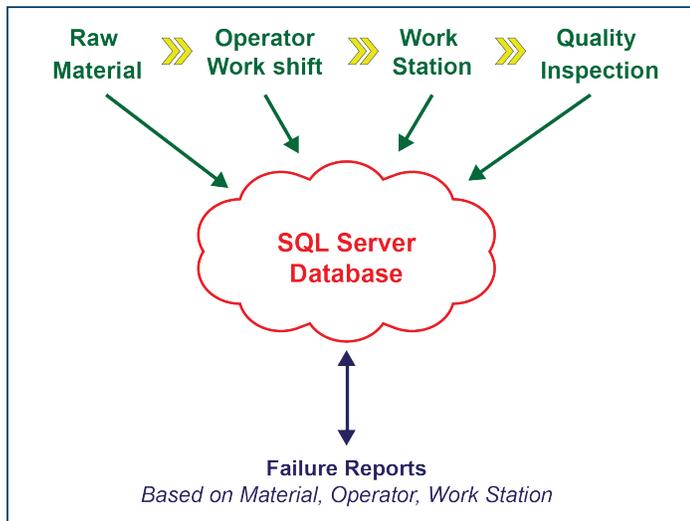
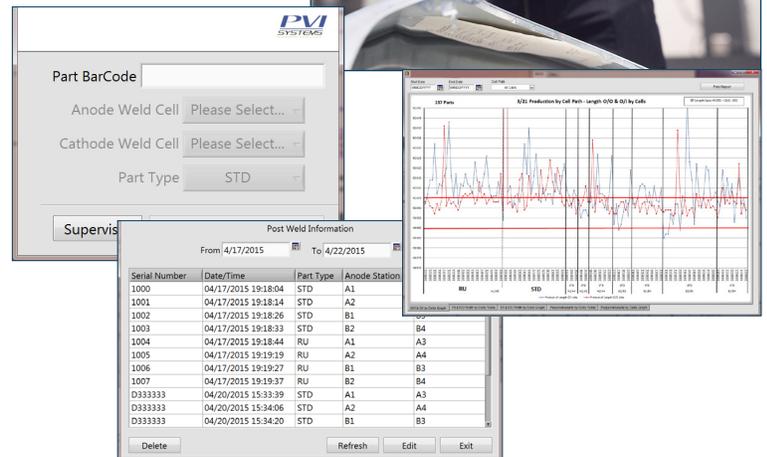


## The Challenge

To help improve welding fabrication processes at their plant, a fuel cell manufacturer wanted to track manufacturing data relating to their fuel cell welding operations. Analysis of the data would provide insight into the manufacturing process and help determine the root cause of problems by being able to track materials, production personnel, machine used, etc.

## The Solution

PVI designed a custom data acquisition system and database to capture a variety of information specifically related to welding processes in the fabrication of fuel cells. The system would first capture information from the manufacturing process such as raw material lot numbers, operator names, and assembly work stations. The system would then acquire information on how many defects were present, how often they occurred, and retrieve data from other manual manufacturing processes.



## System Features

The custom solution included:

### Data Entry and Collection System -

Custom-developed software to collect data from user and store in custom database. System consisted of networked touch-screen PC and barcode reader.

Custom Database - Custom SQL Server database to record cell data which would be linked by serial number of the UUT and include the following fields:

- Date/Timestamp of assembly
- Raw material type and lot numbers
- Operator name
- Assembly station
- Quality system measurement data
- Part tolerances



The data capture was analyzed and helped improve the company's manufacturing processes by reducing rework and waste, improving yield which resulted in time and cost savings. The company, based upon the success of the initial system, later added additional capability to detect and track visual defect data relating to its cell welding process to improve the assembly and fabrication process.

Contact us for more information about custom-engineered Process & Motion Control, Data Acquisition, Automated Test & Measurement, and Machine Vision systems.

