

Pro360 Case Study – Architectural Building Seals

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A European company makes extruded EPM seals for PVC windows. Seals are run in 500 meter long, continuous strips that are wound onto spools. The old way of checking dimensional quality was to cut cross sections at the beginning and end of each roll, and check them using micrometer calipers. The physical samples, along with the measurement values, were saved in a filing cabinet for use in the case that a quality problem was reported by their customer.

In some cases, the sample from the start of the roll would be good, but the sample at the end would be bad. The company would have an operator remove the material from the spool and check the profile dimensions with hand calipers periodically to separate the good material from the bad. Once the bad material was removed, the partial spool could be shipped provided it was not too small. This operation was expensive due to the high cost of labor and the amount of time required.

In other cases, the samples at both the start and end of the roll would be good, but the material would be off-spec in between the two ends. In this case, bad material would be shipped to the customer.

Spools would ship to a PVC window lineal extruder who would cut the seal profile into lengths and insert the seal into the window lineal. They often experienced bad fits due to dimensional changes in the seal size. Once this happened, they would discontinue use of that spool, and return it for a refund. The seal maker would then scrap the entire spool of material.

Profile360 was implemented with a CRT display and light-tower where it could be viewed by the operator. The recipe was designed to track only one dimension. Now, when the product goes out of specification the operator determines if the deviation is serious enough to discontinue the run or simply adjust the process and continue the run. At the end of the run, the operator prints out a graphical report that documents the size measurement series for the entire length of the spool. Tremendous savings and improved customer satisfaction have been recognized in this case.