

Assembly Monitoring with Promess PRO-Monitoring System

Accurately fit a tube onto the end of a barbed fitting, and certify that 100% are assembled properly.

Challenge:

Putting these two parts together was complicated by three possible problems. The first: There are two sizes of tubes to fit with two different sizes of barbed fitting on the same assembly line. One fitting/tube combination was slightly larger in diameter than the other. The second: Once the fitting and tube were matched, alignment of the two parts was needed before pressing. If the two parts were not aligned properly, the barbed fitting would rip through and permanently damage the tube. The third: The tube needed to be pressed to full depth for full engagement of all the barbs. This was to ensure that the tube did not come apart during application of the part.

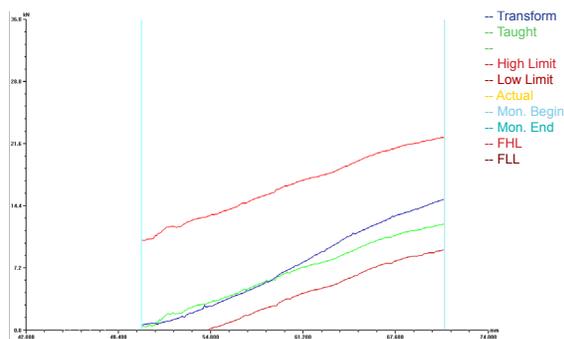


Strategy:

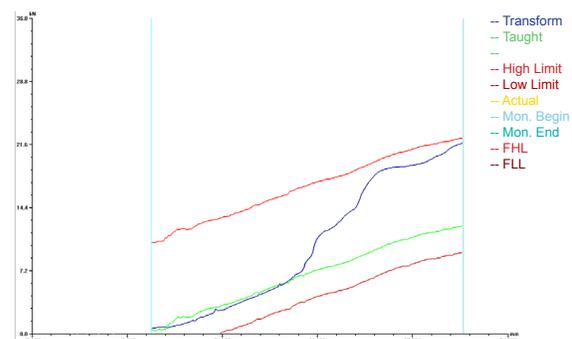
The Promess PRO-Monitoring System was used to measure the force over distance. The PRO-Monitoring System allowed the customer to check all three of these problems simultaneously and in-process. By measuring the force used over a specific distance to assemble the parts, the PRO-Monitoring System was able to detect whether or not the part was being assembled correctly or if one of the three errors was occurring.

Results:

Promess captured 100% of all errors outside the taught signature. The Promess solution surpassed the expectations of the customer and certifiable documents were available for their customer, via Promess Data Acquisition.



Normal Barb



Abnormal Barb