Understanding the True Cost of Poor Quality

Tony Hague, Managing Director at PP Electrical Systems, asks Machinery Manufacturers... “how much is downtime really costing you?”

Customer Expectations

Customers becoming more demanding, wanting more for less, pressure on lower prices, purchasing departments focused on cost down results, all of this sound familiar?

However, as important price may be – do they really appreciate the total manufacturing cost of your equipment and just as importantly, the lifetime cost?

More OEMs are now focused on true “total” cost when they consider their manufacturing and supply chain options, using valuable information back from their sales, service and installation teams to help shape future design and cost analysis.

Do They Know?

When you consider the electrical controls and automation field - speak to any machinery manufacturer, irrespective of industry or application – the biggest single contributor to field failure and resultant service visits is poor electrical connectivity. It’s a fairly obvious point to make, but the weakest part of any electrical circuit is the connection between cables and components.

Traditional methods of manual cable preparation and crimping using hand tools are prone to error, irrespective of how tools are calibrated and maintained. This is because the error is usually with how they are used by the operator themselves.

Quite often such defects result in a crimp “making” sufficiently well that when it is wired into a control panel or cable harness and then “point to point” tested, it will pass. However once that machine has been transported and installed, you could have an immediate problem, or indeed you may find the problem occurs some weeks later following the install.

Having an intermittent fault caused by a poor electrical connection is a “nightmare” for a service engineer. Such an issue can cause a host of problems for an automated machine and can be exceptionally difficult to locate. The result at best is an expensive service visit, but it could be far worse depending on the end customer, application and the associated costs of machine downtime.

These scenarios are exactly why PP Electrical Systems has invested over £1 million in the best automated cable preparation machinery, much of it unique to us in the UK.

Crimp Force Monitoring

Features include crimp force monitoring (CFM) technology, where every single crimp going on to every cable, is 100% optimised by measuring the force applied to the crimp at the point of application.

The automated machinery can immediately sense a variance caused by over strip (copper conductors being removed when the outer jacket/sleeve is removed) or the crimp not being seated correctly on the stripped cable when crimped.

Either way the machine will recognise a potential issue, cut off the faulty crimp and re-crimp accordingly.

This removes the need to batch test crimp quality through pull off tests or crimp height tests, you guarantee 100% quality – every time.
Our Customers

Our customers are World leading OEMs with a reputation for optimum quality, technology and machine performance. Many of them export equipment all over the globe and their clients are demanding and machine downtime is an absolute catastrophe for all parties concerned.

A good example of this would be Mazak Machine Tools, with whom we have worked in partnership with for close on 20 years.

Marcus Burton, European Managing Director, had this to say: “The quality of our machine tools are recognised globally and everything we strive for with our partners is focused on maintaining those levels of performance.”

In Summary

When you consider machinery build costs, not only consider true total costs of manufacture, but also factor in lifetime costs associated with machine performance.

One thing is clear. Although we all strive to get the most for our money, it is never a wise to ignore quality and value. Repeat customers are important to us all, the only way to ensure that is to be the best.

PP Electrical Systems’ investment in automated cable preparation and the associated levels of 6 sigma quality that is delivered, is a critically important factor in ensuring we take every possible step in offering our customers the most reliable product available.

Contact Ian Knight to arrange a site tour and learn the true power of outsourcing.

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