

## **How to halve inspection times using the Elcometer 456 Ultra/Scan Probe**

Dry film thickness, or DFT as it is often called, is one of the most important coating inspection measurements, as it not only helps evaluate the expected life of the coating, but also helps determine if the coating has been applied in compliance with the coating specification and any relevant standards.

Whatever the industry or application; when choosing a coating thickness gauge an inspector often considers the performance of the gauge; in other words how accurate, repeatable, and reproducible is the measurement?

One gauge feature which is often overlooked is the gauge reading rate - how quickly the gauge takes a measurement. But why is the reading rate so important?

Imagine two inspectors who are carrying out identical inspections. The specification states they need to take 3 spot measurements every 3 metres, or 10 feet.

One inspector is using an Elcometer 456 Coating Thickness Gauge that takes 70 readings per minute. The other inspector is using a gauge that takes 50 readings per minute.

Let's assume that it only takes two seconds for each of them to move the 3 metres, which I know seems fast but it is a constant.

After 10 minutes, the first inspector stops to allow his friend to catch up. With the Elcometer 456 he's been able to cover approximately 390m.

His friend is almost 70m behind, and it will take him another 2 minutes just to catch up, meaning he needs 20% longer to inspect the same area. So, by using a gauge that has a faster reading rate, the first inspector has saved himself one day in five.

But can a gauge read any faster and save even more inspection time?

Typical coating thickness gauges require the measurement probe to be removed from the coating in between each reading. This limits the physical measurement rate to between 40 to 70 readings per minute.

The Elcometer 456 Coating Thickness Gauge is far from typical. When the Auto Repeat function is selected, the Elcometer 456 Scan probe remains in contact with the coated surface all the time, and can therefore take in excess of 140 accurate, repeatable, and reproducible readings every minute.

What this means is if the first inspector in our example was using the Auto Repeat feature of his Elcometer 456 gauge, then he can now finish the inspection in half the time of his colleague, saving 2.5 days in his 5 day working week, when using the Elcometer 456 Scan probe over another industry gauge. Massively increasing productivity and helping to achieve significant cost savings.

In fact in 2014 the US Navy's National Shipbuilding Research Program (NSRP) undertook a 12 month project and found that by using these features of the Elcometer 456, they were able to measure their coatings more than 3 times faster than their current dry film thickness methods.

But taking fast, accurate, and repeatable measurements is only half the story– it's what you do with the readings that counts. It is no use having a fast gauge if you have to spend 1 or 2 days writing the inspection reports. Sending your DFT readings from the Elcometer 456's memory into ElcoMaster on your mobile device, allows you to generate instant reports on site – and these can be sent to anywhere in the world as a PDF via email. Alternatively, you can be linked to the cloud and the data is ready at your desk when you get back to the office.

For more information and training on the Elcometer 456 Coating Thickness Gauge and Ultra/Scan Probe, or any other Elcometer products, visit our website.