



the **e**n news

elcometer®

Quarter 3 2021

The Latest News from Elcometer around the World

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THE DNA IN OUR GAUGES COMES FROM OUR HISTORY

by **Michael Sellars**, Managing Director

Last week I received a photograph from our friends at Axalta in Portugal of 3 coating thickness gauges (below), two old gauges from the past - the Minitector and the Elcometer 256, bracketing the current Elcometer 456, and it reminded me of my childhood.

When I was a small boy, my father would bring work home. He would often walk into the house and leave the latest product development on the table by the front door.

It was not long before a rather inquisitive boy was playing with 'his new toy' - unaware of just how many hours of work had gone into its development.

I never got into trouble when I broke the early prototypes; my father believed that if a child could break it, then it wouldn't last in 'the real world'. Gauge reliability is in our DNA. Elcometer would not be here today had the very first ELCO meter not survived a drop test.

In the late 1940s, through a quirk of fate, two companies had been awarded a UK patent for very similar products. The two owners agreed to push their

own gauges off a lab desk onto a wooden floor, whichever gauge survived the drop would continue, alone. The ELCO meter was so successful it became our company name.

Today, drop tests are only one of a string of rigorous tests that we undertake throughout a product's development. In many cases, the drop test is not simply off a desk, the Elcometer 456, for example, was dropped out of a first-floor window many times during its product development - and if it failed to work when it was picked up, it was back to the drawing board and re-designed until it did.

Gauges have come a long way since 1946 when the very first ELCO meter was introduced, followed in the 1950s by the Minitector.

Elcometer has incorporated many technological developments over the years including microprocessors, graphical user interfaces, smart keyboards, colour LCD's, wireless comms, PC & mobile apps, to name a few, and even though that small boy has grown up, he still throws gauges out of the window.





We are now, more than ever, in a strong position to showcase our products for a wide variety of growing sectors.



Update

Commercial

MUCH MORE THAN JUST COATING INSPECTION

by **Nick Ball**, Sales Director

Despite global uncertainty and a bumpy demand cycle, the overall global trends are positive for both manufacturing and infrastructure investments at this time. The IMF recently forecasted that the global economy is projected to increase by 6% in 2021 and 4.9% in 2022.

I strongly believe this offers interesting opportunities for Elcometer and our distribution partners around the world, as we pursue our divisional channel focus on blast equipment, spray equipment, coating inspection & NDT equipment.

Following the launch of our new website this month, we are now, more than ever, in a strong position to showcase our products to a wide variety of growing sectors.

One such sector to keep an eye on is industrial manufacturing, whilst Elcometer is world-renowned for its protective coating inspection range of products we also have a comprehensive range of products to meet the needs of many industrial manufacturing applications outside of the coatings industry.

From viscosity measurements on foodstuffs to film application in battery research centres and wear resistance in the leather & textile industry - we have a wide range of testing solutions available.

For more information on our range of Physical Test Equipment, [visit our website](#).



INTRODUCING THE NEW ELCOMETER.COM



by Catherine Lund-Barker, Marketing Manager

Following five man-years and 12 calendar months of hard work, we are excited to announce the launch of our new industry leading website.

Designed for Desktop and Mobiles...

With over 7,000 unique web pages in eight languages covering over 2,800 products across our five business divisions, elcometer.com has been re-designed from the ground up, significantly improving your experience.

New Business Division Home Pages...

We have split the website up into our four business divisions to make it easier for you to find the products you want.

- Blast Equipment: blast.elcometer.com
- Spray Equipment: spray.elcometer.com
- Coatings Inspection: protective.elcometer.com
- NDT Equipment: ndt.elcometer.com

Find a Distributor with Ease...

Simply select the product division you are interested in and the country you are from to search for your nearest distributor. Then, quickly and easily fill in the 'Contact Us' form and a member of their team will get back to you elcometer.com/find-your-distributor.

News & Technical Articles from the Experts...

Stay up to date with the latest from Elcometer at elcometer.com/enews. We will constantly be updating this section with helpful information, articles, newsletters and company announcements.

Browse our Ever-Growing Video Library...

Our product videos can always be found on the relevant product pages, but a full library of educational and instructional videos is also available - elcometer.com/videos.

Search by Standards...

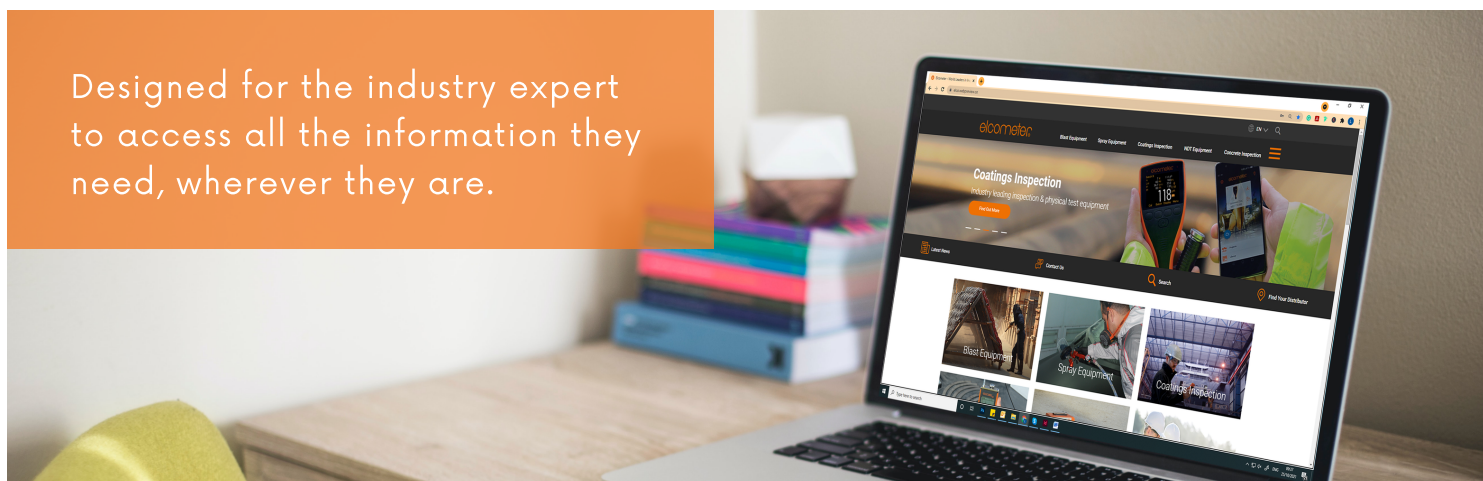
Know what industry-standard you need to work to, but unsure on what gauge you'll need? Quickly and easily find the relevant standard and we'll show you the equipment available, simply visit elcometer.com/international-standards.

Buy Bodyshop Spray Equipment Online...

Our UK customers will be able to purchase Sagola by Elcometer Bodyshop Spray Equipment online via our e-shop at spray.elcometer.com

We hope you enjoy using our new website and all it has to offer. If you have any suggestions or feedback, feel free to let us know by emailing marketing@elcometer.com.

Designed for the industry expert to access all the information they need, wherever they are.





GLOBAL NEWS

With **representation in over 170 countries across the world**,
Elcometer are wherever you are.



BLASTING SUCCESS IN SCOTLAND

by Neil Beswick, Sales Manager - UK

The Erskine Bridge is the longest cable-stayed bridge of its type in the world at just under 1.5km. Spanning the River Clyde near Glasgow, the bridge is set in an impressive landscape and was recently awarded Category A status by Historic Environment Scotland in recognition of its special architectural interest.

With the bridge being used by more than 40,000 vehicles a day, the blasting and repainting of the structure over a four year period meant the contractors given this project, Spencer Group, had to find innovative ways to complete the work while causing minimal disruption to the community.

After the contractor enquired about inspection equipment for this project, Debbie Morton in UK Sales also suggested that our range of blast equipment could meet their particular challenge.

Whilst Jordan Goodman and I were onsite, training the Spencer Group on the Elcometer coating inspection

products, we highlighted how the unique design of the Elcometer Professional HP Abrasive Blast Machines (ABM) with 1½" pipework and 15bar pressure, would enable them to blast the entire bridge structure with the ABM on the riverbank, avoiding lane closures. Site Management immediately saw the benefit of the unique approach to the blasting work required.

With two Elcometer Professional HP 15 bar ABMs at each end of the bridge, Spencer Group, using the unique characteristics of our equipment, won't need to disrupt the bridge or close lanes in order to complete blasting work. They are simply running blast hose up to 750m (2460ft.) from each ABM, including a 40m (130ft) vertical run, to complete the work.

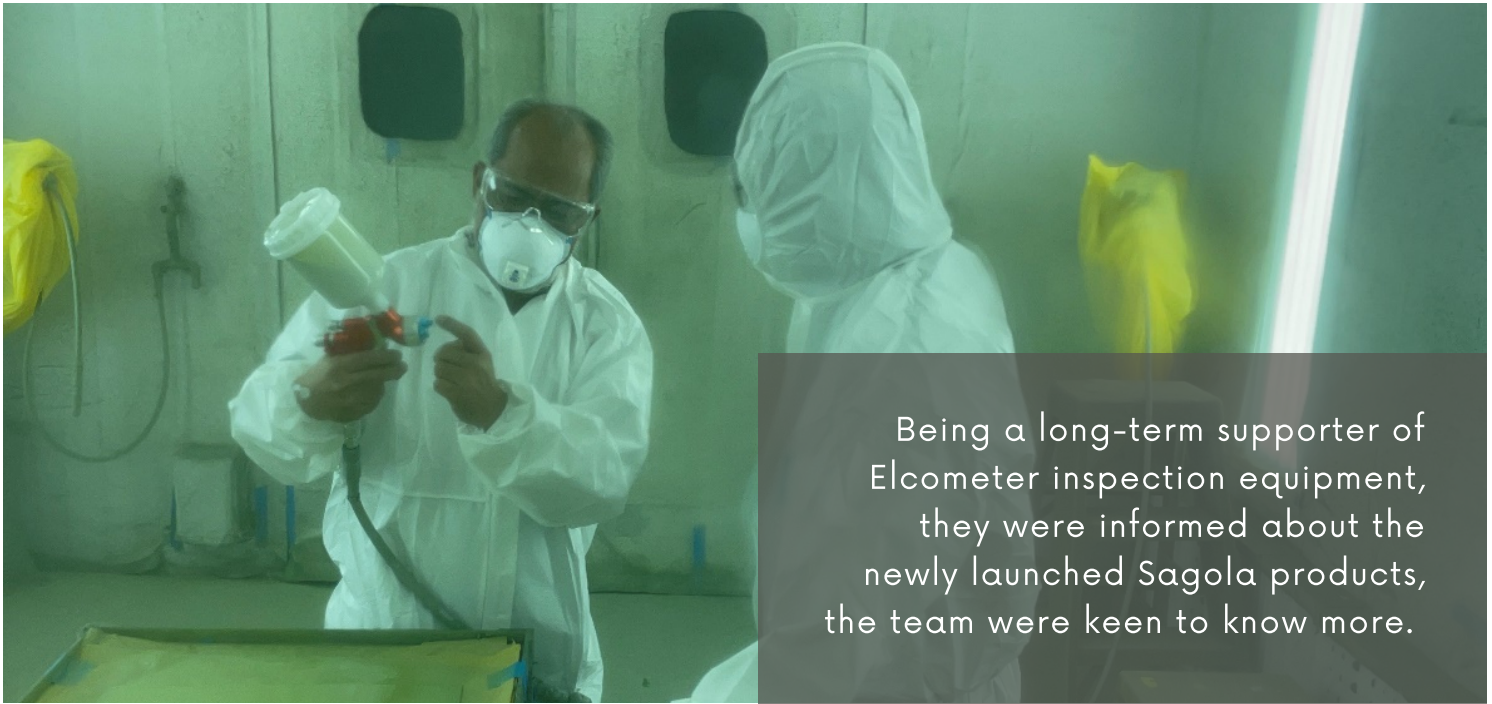
The Elcometer 15 Professional HP Blast Machines have not only solved what could have been the difficult issue of transporting the pots onto the highway, with the inevitable closure of lanes and traffic disruption, but they have also performed with reliability in the face of a heavy workload, transforming the way to blasting large structures.

For further information on our range of abrasive blast equipment, visit blast.elcometer.com or contact blast@elcometer.com



The unique characteristics of our blast equipment enables the bridge to remain open and undisturbed whilst the work is being undertaken.





Being a long-term supporter of Elcometer inspection equipment, they were informed about the newly launched Sagola products, the team were keen to know more.

EXPANDING INTO NEW MARKETS

by JJ Fong, Technical Support Engineer - Elcometer Asia

After the introduction of the Sagola by Elcometer range of spray equipment in mid-2021 in Asia, Sales Engineer, Aloysius wasted no time in introducing the range to the Singapore market.

His hard work paid off when he seized the opportunity to work with the regional Maintenance, Repair and Operations (MRO) platform of a major international group specialising in aerospace and defence in Singapore.

The company maintain and repair aircraft parts and equipment including landing gears, seats, cabin interiors, evacuation slides, lighting and toilets. Many of which are blasted and painted by the company in Singapore whilst carrying out all the coating inspections required throughout these processes.

Being a long-term supporter of Elcometer coating inspection equipment, when contacted by Aloysius to highlight the new Sagola by Elcometer spray equipment range, the team were keen to know more.





Although they had heard about the reputation and quality of Sagola spray guns from their peers, the team told us it was almost impossible to find out more about the products, as there had been limited representation locally.

With the ever-growing presence of Elcometer Asia's regional office and our vast experience in the local market, Aloysius had the opportunity to demonstrate the features and benefits of Sagola's spray guns to the team.

The customer said: **"The spray guns that we have previously used, either do not have the necessary local representative support or are challenging to obtain the necessary paint parameters for a wide variety of parts – which were an issue to assist in reducing painting induced defects. However, with the excellent performance and quality of Sagola, we were able to pursue a fact-based approach to resolving our paint defects in the paint shop by obtaining expert advice."**

The story doesn't end there - our success in the supply of coating inspection and also spray equipment led us to a cross-selling opportunity. Through further discussions with the client, Elcometer Asia was invited by the team to provide solutions for their abrasive blasting operation.

For further information on our range of spray equipment, visit spray.elcometer.com.

On the move!

Elcometer Asia moves to larger, purpose-designed premises in Singapore complete with sales, service repair and training facilities, expanding the Asia regional Elcometer Headquarters.

[Find out more.](#)



FIRST CHOICE FOR NEWPORT NEWS SHIPBUILDING



by **Joe Walker**, Vice President and General Manager - Elcometer Inc.

After almost one year of side by side testing with competitive products, we are pleased to report that Newport News Shipbuilding has chosen Elcometer to supply their coating inspection equipment for the production of the new Ford Class aircraft carriers.

The Elcometer 130 SSP Soluble Salt Profiler will be used for salt contamination testing and the Elcometer 456 Coating Thickness Gauge with Scan probe will be used as their DFT measurement method. Rather than purchase instruments for general use, the shipyard has chosen to supply every coating inspector on every shift with a custom-designed and fitted Elcometer Inspection Kit.

We are very pleased that these two cutting edge technologies have been adopted by the most technically

advanced shipyard in the US. We were informed of their decision to use the Elcometer 130 SSP when we attended the American Society of Naval Engineers MegaRust event in Hampton, VA. We are excited to be working with them on this exciting project.

The announcement that Elcometer was to supply custom inspection kits was made earlier this year.

For further information on our range of protective coatings inspection equipment, visit protective.elcometer.com.



The key to securing the order was our technical on-site demonstration & training which was given to their QC/QA team of 30 inspectors.



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ELCOMETER EXPERTS SECURE EPC ORDER

by **Ankur Tiwari** , General Manager - Elcometer UAE

From rig construction and refurbishment to oil and gas, foundation fabrication and offshore wind farms. Elcometer coatings inspection products have been widely used in EPC companies across the Middle East for many years.

Recently the Elcometer UAE office, based in Dubai, has won a project to supply Elcometer 456 Coating Thickness Gauges and Scan Probes along with Elcometer 130 Salt Contaminator Meters & Elcometer 319 Dewpoint Meters to one of our region's largest EPC contractors & their sub-contractors.

Following detailed project negotiations, we are pleased to announce that the customer awarded Elcometer the project on the basis of quality, reliability, ease of use and because Elcometer has a team of knowledgeable

Elcometer technical personnel available to assist and guide locally with the GCC.

Elcometer's ability to provide onsite technical operational demonstration and training to their QC/QA team of 30 inspectors was critical to the successful negotiation. Elcometer UAE has a team of technical sales, service & repair experts to provide best-in-class customer service locally and across the GCC.

For further information on our range of protective coatings inspection equipment, visit protective.elcometer.com.



HELPING OUR GERMAN CUSTOMERS GO GREENER

by Nick Ball, Sales Director

Whilst the new Elcometer Professional & Professional HP range of Abrasive Blast Machines (ABMs) from Elcometer has been designed to maximise the productivity of larger infrastructure projects, a little known fact is that our precision engineered products also allow for less energy and media use in smaller applications.

Extensive trials by Elcometer have shown that the Elcometer Professional & Professional HP ABMs have virtually zero pressure loss across the system, which when combined with our engineering design maximising airflow allows the user to also reduce input pressures & airflow from the compressor whilst still maintaining output pressure for the operator.

Peter Frey, Managing Director at Hützen Industrieanstrich GmbH & Co.KG said that by using Elcometer Professional ABMs, they **“can now carry outstripping work with a lower inlet pressure with the same output. Thanks to the fine adjustment option at the abrasive media valve, we can also save on abrasive media. This makes our work much easier, with less wear and tear and faster maintenance. Our material and disposal costs are also reduced.”**

For further information on our range of abrasive blast equipment, visit blast.elcometer.com or contact blast@elcometer.com.



Extensive trials have shown that the Elcometer Professional & Professional HP products have virtually zero pressure loss across the system.

CENTRE STAGE FOR THE ELCOMETER 456



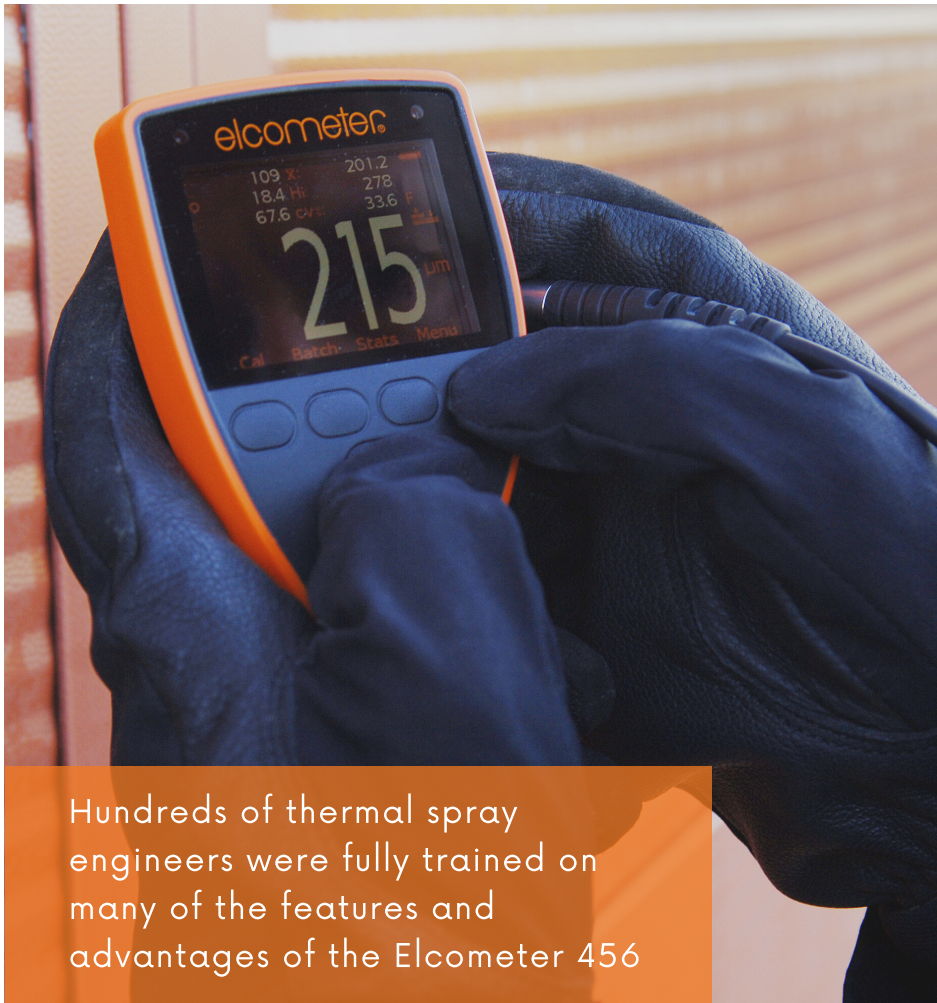
by **Kozo Morimoto**, General Manager - Elcometer KK

Each year, the Japan Thermal Spray Association (JTSA) holds seminars on thermal spray techniques to young engineers and technicians in Tokyo, Osaka and other local areas.

We are pleased to announce that this year the Elcometer 456 Coating Thickness Gauge was one of the chosen products to be demonstrated at the seminars for measuring the thermal spray thickness.

During the JTSA seminar series, hundreds of engineers were fully trained on the features and advantages of the Elcometer 456 which include the robust design and ease of use when compared to other domestic DFT gauges.

For further information on the Elcometer 456 Coating Thickness Gauge, [visit our website](#).



Hundreds of thermal spray engineers were fully trained on many of the features and advantages of the Elcometer 456



We believe in our workmanship so you can have confidence in yours.



blast it

High performance abrasive blasting equipment



paint it

Spray equipment engineered for the most demanding bodyshops



inspect it

Industry leading inspection & physical test equipment



test it

Ultrasonic NDT equipment for accurate corrosion & flaw assessment





BLAST!

by Alastair Kearton, Regional Sales Manager - Europe and South America

Based upon all of the benefits that the Elcometer blast pots provide to the end-user over the competition the ABM (Abrasive Blast Machine) sales through existing blast distributors continue to grow. In addition to this comes the reoccurring sales of consumables such as blast hose and personal protection equipment (PPE).

Over the next few months, we will be giving a number of presentations about the features & benefits of the Elcometer ABM to both our existing distributor network and any potential distributors that are interested in promoting and selling the Elcometer range of ABMs in their respective markets.

The presentations will explain in detail how the end-user can improve their productivity and significantly reduce the cost of their blast job simply by investing in Elcometer's state-of-the-art ABM range.

All the work done by research and development on the Professional HP ABM can now be backed up by test data and real-life customer experiences which have proven the efficiencies, reliability and reduced maintenance costs of the Elcometer ABM range over the competition.

If you want to know more, email the team at blast@elcometer.com.

SPRAY!

by Peter Bloem, Spray Division Manager

As we enter the next phase of our development and integration of the Sagola range into Elcometer's business portfolio's many of our legacy Elcometer distributors have expressed an interest in becoming distributors for Sagola products.

We are delighted that they are as excited as we are about the opportunities that present us with the Sagola by Elcometer spray equipment range.

Elcometer offices have been appointed as the Sagola bodyshop range's principal importing distributors in UK, UAE, USA, Singapore & China.

All other countries please speak to your account manager if you want to explore the Sagola opportunity further.



INSPECT!

by Alastair Kearton, Regional Sales Manager - Europe and South America

The Elcometer network of distributors continues to work hard promoting and supporting the Elcometer portfolio of products in these very challenging times.

Our distributors are going the extra mile to ensure that the Elcometer products are delivered to the end-user promptly following their order in many instances, this has provided Elcometer with an advantage over our competitors.

Our distributor in Russia, Ultra NDT, for example, were able to supply a major refinery project in Murmansk

with a sizable range of Elcometer instruments the next day, all from their stock in Moscow. This stocking policy helped Ultra NDT and Elcometer become the preferred supplier to many customers throughout Russia.

Elcometer's policy of manufacturing the majority of products in the UK, combined with substantial investment in stock, ensures that we can supply our distributors who in turn supply the end-user in a timely manner - despite the global shortage of electronic components.

TEST!

by Matthew Davison, NDT Division Manager

Sales of NDT is growing and this is very good news. MTG sales continue to be strong, and Ascan NDT range sales are increasing. The contribution of everyone to this success is highly appreciated. This is the good news.

At this time, we are working towards adding new distributors to sell our NDT range. We would like to

welcome Testrade Limited to the Elcometer NDT division who have recently joined us.

Should you be interested in representing Elcometer's NDT range of products in your country, please contact me at matthew.davison@elcometer.com.

ELCOMETER – BACK ON THE ROAD AGAIN

by **Nick Ball**, Sales Director

Whilst we have had to find new ways of dealing with customers during the last year there is no better way of seeing the benefits of the Elcometer range than at a trade show.

Jan Lindeaar and the team at Elcometer BV have just completed their first event in the new post-COVID era, with a great turnout from industrial coatings customers both old & new at Materials+ Eurofinish+ Surface 2021 in The Netherlands.

Domenec Mayoral, Marcelo Roales Gonzalez and the team at MRG Iberica also had a successful event at Eurosurf in Spain.

Elcometer Inc has been busy, attending both the FABTEC show and MegaRust, which were both successful.

Here in the UK, Peter Bloem and Mark Vickery attended The Refinishing Trade Show where our range



of Bodyshop Spray Equipment was exhibited for the first time in this country. Peter tells us more about how that went on page 22.

We are looking forward to exhibiting our range of Bodyshop Spray Equipment again in November, this time at the SEMA show in Las Vegas. We will also be attending ChinaCoat in Shanghai, the same month.

Keep an eye on the [exhibition page](#) of our website to see if we are due to visit a show near you.

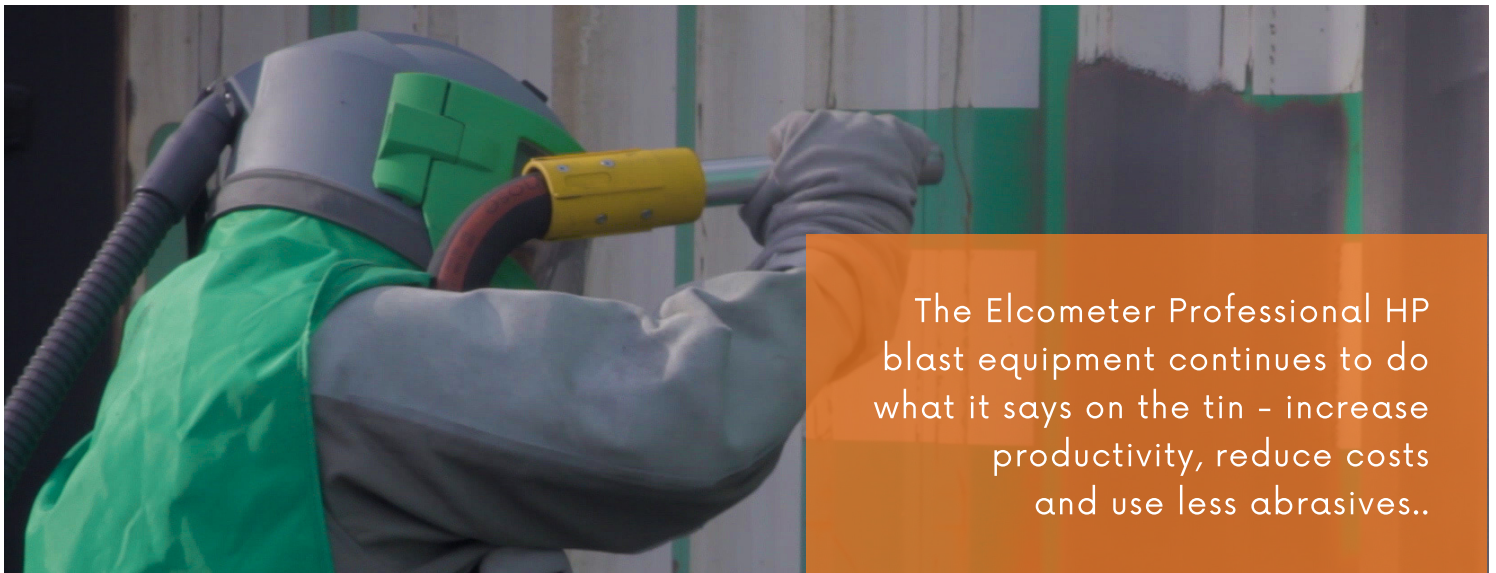


There is no better way of seeing the benefits of the Elcometer range than at a trade show.

A worker in a white protective suit and helmet is using a high-pressure water spray gun to clean a metal structure. The worker is positioned in the center-left of the frame, facing right. The spray gun is emitting a large, dense cloud of white mist that fills the right side of the image. The background is a bright, hazy outdoor setting with some industrial equipment visible. The overall tone is industrial and professional.

ABRASIVE BLASTING

Engineered to **last longer, work harder** and **perform better.**



2

by **Nick Ball**, Sales Director

NOT JUST ANOTHER BLAST POT

Following on from our last edition of e-news the Elcometer Professional HP blast equipment continues to do what it says on the tin - increases productivity, increases cost savings on large-scale projects and reduces the amount of abrasives used.

PPE HAS NEVER BEEN SO EASY

In a typical blast operation, Personal Protection Equipment (PPE) is essential and investment in PPE and breathe air consumables can be as much as 25-30% of the annual spend by a contractor. Operator safety is critical and will always be a topic of conversation.

Elcometer's personal protection partner is RPB safety, now part of the GVS group, which provide safety solutions that are a class apart from the competition.

We will be continuing our series of lunch and learn sessions on the Elcometer blast equipment range during November to explain how an Elcometer abrasive blast machine can make a difference for the contractor, if you would like to take part email us blast@elcometer.com to be added to the mailing list.

As part of our ongoing efforts to ensure that when an end-user buys an Elcometer abrasive blast machine has a seamless set-up experience, we are now offering a full operator accessories kit that includes the basic PPE and set up items needed for first-time blasters. For more information contact us blast@elcometer.com

Our PPE range covers breathe air as well as respirators, commonly referred to as Blast Helmets, which can provide the end-user with an unrivalled experience in terms of comfort, ease of use and ultimately productivity gains through less downtime when changing out spares. RPB revolutionized the abrasive blasting experience with the world's most comfortable blasting respirator, the Nova 3.

If you have not already done so check out its [combination of features](#) which make this a first-class respirator for abrasive blasting operations and is available from our extensive stocks around the world.



PRECISE ABRASIVE METERING

by **Steve Pollard**, Customer Support Manager

In a similar way that a tap controls the flow of water, a grit valve is used to control the flow of abrasive into the mixer 'T' located below the grit valve at the bottom of an abrasive blast pot.

It uses a screw thread to squeeze or release a rubber liner housed within the casting to reduce or increase media flow. However, that's where the similarities end between traditional valves in the market and the Elcometer GV valves.

It was quickly recognised by the Elcometer design team that a finer thread would enable the blaster to more finely control the abrasive fed into the mixer 'T'. In contrast to competitors' coarser, 'corkscrew style' threads, the Elcometer system can be finely tuned and balanced such that a minimum amount of abrasive is used in the blast process, saving consumables and reducing cleaning costs.

Furthermore, the media flow rate can be adjusted whilst blasting.

In addition to the fine control, the grit valve features a unique flow indicator to ensure that precise and repeatable metering can be achieved as well as indicating the liner wear.

Using a trademarked 'ElcoTough' material, the rubber liner is also unique to the Elcometer General Valve. Its long life resistance to aggressive abrasives has proved to last between three and six times longer than other liners on the market. The liner was vigorously tested in-house using Elcometer abrasive test machines before being chosen for integration into the valve.

The Elcometer GV valve has been designed such that when the liner eventually needs replacing it is easy to do so without having to fully remove the valve from the blast machine.

For further information on our range of abrasive blast equipment, visit blast.elcometer.com or contact blast@elcometer.com.



A person wearing a full-body white protective suit, gloves, and a respirator mask is shown from the side, leaning forward and spraying a surface with a spray gun. The spray gun is held in their right hand, and a fine mist of material is being emitted from the nozzle. The background is a plain, light-colored wall. The overall scene is brightly lit, with a warm, orange-toned overlay on the right side of the image.

SPRAY EQUIPMENT

Whatever your spraying requirements
**Sagola by Elcometer has the gun
you need.**



Many Elcometer distributors have expressed an interest in becoming distributors for the new Elcometer range of Industrial Spray Equipment - are you?

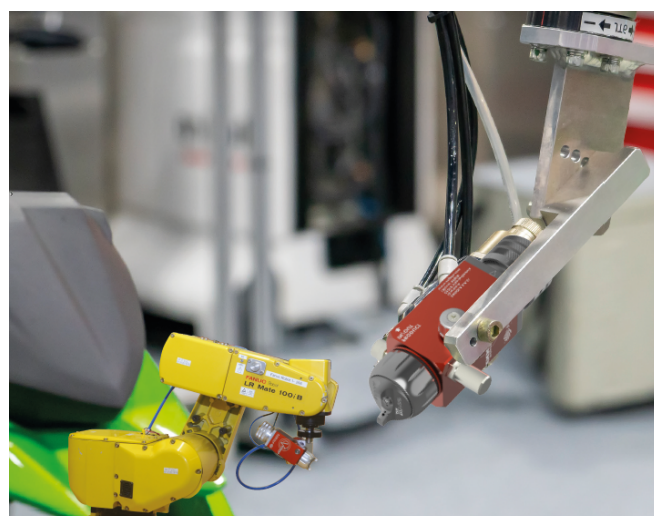
DISTRIBUTOR INTERESTS WELCOME

by **Peter C. Bloem**, Global Divisional Manager – Coating Spray Equipment

As we enter the next phase of our development and integration of our Sagola acquisition into Elcometer's business portfolio's many Elcometer distributors have expressed an interest in becoming distributors for the Sagola range of Industrial and Protective Coating Equipment.

We are excited about all of the new products nearing completion - including the new Sagola V4000 range of automatic spray guns - on display for the first time at ChinaCoat in mid-November - as well as a comprehensive range of Elcometer pneumatic & electric piston and diaphragm pumps, due out in early 2022.

If you are interested in becoming an Elcometer Distributor for the Industrial Finishing and Fine Finishing Spray Equipment range, please contact peter.bloem@elcometer.com for more information.



The new Sagola V4000 range of Automatic Spray Guns

REDUCE PAINT DRYING TIME



by **Peter C. Bloem**, Global Divisional Manager – Coating Spray Equipment

Volatile organic compounds, otherwise known as VOCs, are numerous, varied, and ubiquitous. VOCs are any volatile compound of carbon (both artificial and naturally occurring) unless it appears on a list of compounds specifically exempted. VOCs in paints are solvents that get released into the air as the paint dries. In the auto body refinishing industry, the most commonly used paints are solvent-based.

The transformation from solvent-based paints used in the automotive collision repair industry to waterborne paints continuous its rapid transition around the globe. More so nowadays due to the environmental negative impact solvent-based paints on the environment. Waterborne paints are a practical, environmentally friendly alternative to solvent-based paint.

WATERBORNE AUTOMOTIVE PAINTS DRY DIFFERENTLY THAN SOLVENT-BORNE PAINTS

Considerations when applying waterborne paints;

- Waterborne compatible spray guns that do not corrode. Waterborne ready spray guns like the Sagola 4600 and 4100 range.
- Curing times of waterborne versus solvent-based paints.

Unlike solvent-based paints, waterborne paints curing times is accelerated by turbulent air movement across the vehicle's surface.

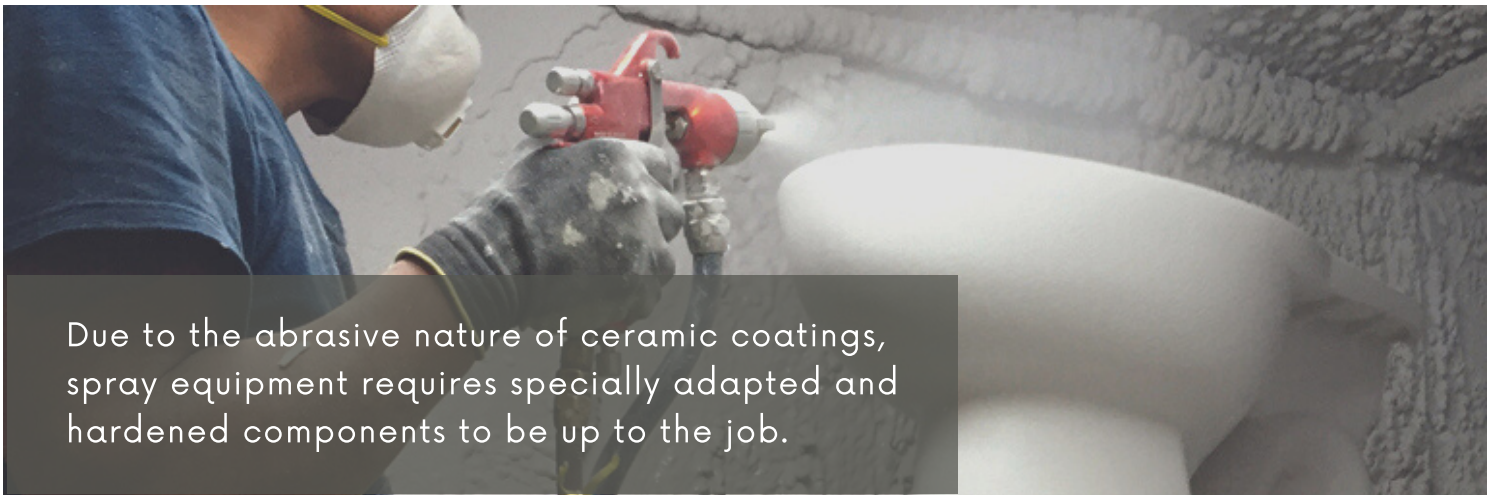
AN EXPERTLY DESIGNED DRYING GUN FOR WATERBORNE PAINTS

Sagola's venturi effect air drying gun ensures a greater volume of air output to evaporate waterborne faster – reducing drying times, increasing productivity. Sagola's SuperFLOW outperforms other waterborne drying tools.

Full technical data can be found on [our website](#).



Sagola's venturi effect air drying gun ensures a greater volume of air output to evaporate waterborne faster – reducing drying times.



Due to the abrasive nature of ceramic coatings, spray equipment requires specially adapted and hardened components to be up to the job.

Q Product Focus



Spray Equipment

A SOLUTION FOR APPLYING HARDWEARING CERAMIC

by **Peter C. Bloem**, Global Divisional Manager – Coating Spray Equipment

For the past 65 years, Sagola by Elcometer has quietly been engineering and producing an extensive product range to apply abrasive ceramic coatings. These are typically sprayed on ceramic items such as sanitary ware and tableware.

Ceramic coatings contain larger, more abrasive particles than standard paint materials and due to the abrasive nature of this material, spray equipment requires specially adapted and hardened components. Typically needles and nozzles used in standard spray guns wear out 60% faster when used with these abrasive materials.

The Sagola 4100 Xtreme Ceramic spray gun features tungsten carbide needles and nozzles. The inner wetted parts and the exterior components have all been engineered with a proprietary coating developed to reduce cleaning time and prevent corrosion on the gun components.

Our team at Sagola have designed a hardwearing, heavy-duty spray gun that carefully considers the total cost of ownership and investment in ceramic and stove enamel coating equipment.

The Sagola 4100 Xtreme Ceramic spray gun enables the operator to achieve a high-quality finish when applying abrasive coatings in the ceramic and vitreous enamel market sectors.

The Sagola team's capabilities in metal forging and metallurgy are ingrained throughout the organisation and stem from their experience manufacturing precision components for the aerospace industry.

The Sagola 4100 Xtreme Ceramic spray gun is engineered utilising metallic elements with different inter-metallic compounds. This enables us to manufacture a spray gun that offers the feature of metal-to-metal seating and sealing. Our 3-year warranty backs up our confidence in the design and engineering.

A significant feature of the Sagola 4100 Xtreme Ceramic gun is the self-adjustable packing (SAP) gland. Unlike other guns in the market, our gun does not require continual packing gland replacements. Sagola's SAP technology enables Sagola's ceramic guns to withstand the abrasive coatings on the needle shaft.

SAGOLA BY ELCOMETER SPLASHES DOWN AT THE REFINISHING TRADE SHOW

by **Peter C. Bloem**, Global Divisional Manager – Coating Spray Equipment

Darwen, not the one in Australia, but the one in Lancashire, England, saw Elcometer make ourselves known to the British Refinishing Industry – panel beaters, spray painters, fellow spray equipment manufacturers and automotive factors.

Both myself and Mark Vickery enjoyed the warm welcome received from visitors to our exhibit, along with the overall reaction from those not yet aware of Sagola's acquisition by Elcometer.

Meeting lifelong brand loyal Sagola painters was humbling. It was such a privilege to tell our customers that Sagola is here and accessible directly from Elcometer.

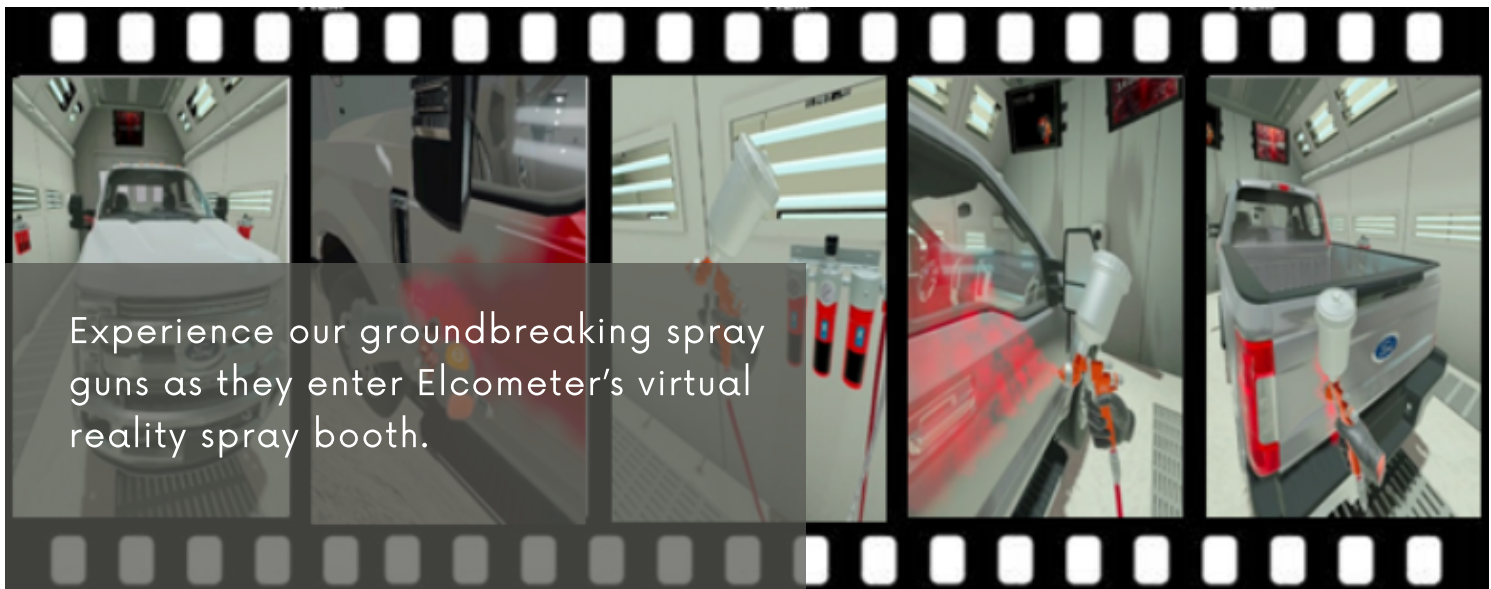
Elcometer sponsored prizes for the event's raffle. Craig Bourke @the_speckyPainter won the Sagola 4600 Xtreme spray gun.

The Mini Xtreme spray gun drew a lot of attention amongst SMART repairers. Its compact size and ability to produce a 26 cm wide spray fan had painters sign up for try before you buy demonstrations with Mark Vickery.

Keep an eye out to see where we will splash down next; follow us on our dedicated business social channels on [LinkedIn](#) Sagola by Elcometer and [Instagram](#).



Meeting lifelong brand loyal Sagola painters was humbling - it was a privilege to tell our customers that Sagola is here and accessible directly from Elcometer.



Experience our groundbreaking spray guns as they enter Elcometer's virtual reality spray booth.

SAGOLA BY ELCOMETER TAKES TO SEMA

by **Peter C. Bloem**, Global Divisional Manager – Coating Spray Equipment

Between 2 - 5th November sees Elcometer launching Sagola by Elcometer to the USA. Elcometer Incorporated, based out of Michigan and Texas will announce to the automotive world that Sagola is back in the USA, stronger than ever.

For those who have not heard of SEMA, it is the worlds largest trade show for the automotive industry, manufacturers and global influencers.

Despite the pandemic, SEMA expects to attract more than 160,000 individuals and over 70,000 quality buyer companies from more than 140 countries outside the United States. Elcometer will be one of the 2400 exhibiting companies.

Elcometer secured a prime location for our 600 square foot SEMA exhibition stand. Visitors entering Hall 10 coming up the escalator will immediately enjoy the

view of Elcometer's exhibit with a world first, the Elcometer virtual reality spray painting booth.

Visitors to Elcometer's exhibit will be able to experience Sagola's groundbreaking Sagola 4600 spray gun by becoming an automotive spray painter as they enter Elcometer's virtual reality spray booth.

Our guests will be able to paint a Ford F-250 pickup truck in VR. Live visuals of their spray painting progress will be beamed onto the screen on the Elcometer booth.

Following Covid safety guidelines, all our VR headsets will be UV sterilised making the experience as safe as it can be.

Watch out for a similar VR display at ChinaCoat and other shows around the world.



COATINGS INSPECTION

Experts in coatings inspection
since 1946.

Adhesion testing is initially seen as destroying a perfectly good coating, so why do we do it?



Q Product Focus



Coating Inspection

WHY MEASURE ADHESION?

by David Barnes, Group Technical Manager

When people from outside the coating's industry-first hear about the pull-off adhesion test method, their initial reaction is one of disbelief. Why would we try to destroy what appears to be a perfectly good coating just to test how good it is?

So, *why* do we do it?

If a protective coating is applied to a surface then it stands to reason that, in order to protect it, the coating must adhere to that surface. For the coating to do that, surface preparation needs to be carried out correctly. The substrate must be in a sound condition and the profile and cleanliness (normally soluble salt levels) of the surface should conform to that specified by the paint manufacturer.

A successful adhesion not only confirms that the bonding of the coating to the substrate meets the specification, but also all the other processes carried out pre-coating have been completed satisfactorily.

The Cross Hatch Test Method

Initially, coating adhesion was tested using the cross-cut method. In these tests the coating is subjected to a "St Andrews cross", or 'X' being cut into the coating - all the way down to the substrate - using a craft knife.

Over time, the cross-cut method developed into what we now call the cross hatch cut adhesion test,

where a latticework of cuts (typically two sets of six parallel cuts) are made perpendicular to each other and the resultant debris is removed.

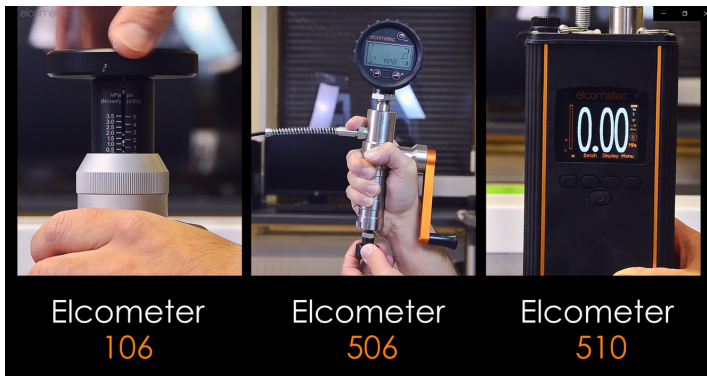
The resulting appearance is then visually assessed and compared to a chart as prescribed within the relevant national or international standards, such as ISO or ASTM.

The overriding problem with both these methods is that they are subjective and the results can depend almost as much on the judgement of the inspector as the adhesion performance of the coating being tested.

The Pull-Off Test Method

There was clearly a requirement for an adhesion test that was objective, where a value can be ascribed to the adhesion property of the applied coating. This saw the introduction of "Pull Off" adhesion testing.

A metal fixture, "dolly", is bonded to the coating using an adhesive (henceforth known as "glue"). A Pull-Off



Tester then applies a lift force to the dolly and the tension is gradually increased.

When the dolly is pulled off the surface, an indicator on the scale shows the numerical value of adhesion expressed in terms of the force per unit area required to remove the dolly.

This development of adhesion testing allowed for a specific value to be given for the adhesive properties of a coating system on a surface and pass/fail criteria were introduced.

Further Developments

To avoid applying a “shock” load, the best way to apply a load for this kind of testing is to continuously increase the load at the same rate. The original “pull off” testers employed a mechanism similar in operation to unscrewing the lid of a jar.

The loading was limited by the flexibility of the user’s wrist and the user would need to release their hold on the wheel to re-set their hand on the wheel to continue the loading process.

Improved manual loading methods were introduced to enable the continuous smooth loading of the dolly and to facilitate easier loading.

With gauges such as the Elcometer 506 Pull-Off Adhesion Tester, pictured above, the orange handle can be turned continuously thereby increasing the load in a uniform manner, and, due to its design, if the handle is rotated at 1 revolution per second the load is applied at 1 MPa/sec, as required by international standards such as ASTM D 4541.

Automatic Pull-Off Testing

Taking this loading requirement a stage further, fully automated gauges such as the Elcometer 510 were designed to enable a dolly to be loaded automatically and continuously until either the dolly is pulled from the surface or until a pre-defined load has been achieved - at which point the load is rapidly removed, minimising any damage to the coating.

FOUR BRESLE EQUIVALENT READINGS IN JUST 2½ MINUTES

by **David Barnes**, Group Technical Manager

For many years the “holy grail” for surface cleanliness has been the Bresle patch. A foam frame with a latex sheet stretched across it is stuck to the surface being measured.

Using a syringe, 3ml of deionised water is injected into the void and agitated around the surface before being extracted by the syringe.

The conductivity of the 'contaminated' water is then measured using a conductivity meter. The level of conductivity is an indicator of the amount of soluble salts that have been washed off the surface.

The Bresle Method is slow, uses needles and is very labour intensive. By contrast, the Elcometer 130 SSP uses a saturated filter paper to extract the soluble salt from the surface.


The gauge then measures the conductivity of the saturated, salt impregnated paper to assess the amount of salts on the surface.

In order to be accepted as a valid test method by the industry, the Elcometer 130 SSP must be able to display a “Bresle Equivalent” reading.

To show equivalency of measurement between the Bresle Method and the Elcometer 130 SSP it is essential that all parameters are identical - except the gauges under test - and both gauges must display similar values, taking into account the accuracy and resolution of each test.

The issue, however, is how do you provide an exact copy of the salt concentration on the substrate, when both methods essentially wash the surface clean?

Working with the School of Materials at the University of Manchester, UK, an automated, repeatable and reproducible doping method was developed to apply a known salt concentration uniformly over a large panel.



How do you provide an exact copy of the salt concentration on the substrate, when both methods essentially wash the surface clean?



Over 200 individual tests were undertaken across a range of concentrations and blast profiles.

Results

The Elcometer 130 SSP measurement equivalency is incredible - at less than $0.46\mu\text{g}/\text{cm}^2$ across all concentrations, on smooth and blasted substrates it is almost half the background contamination of most Bresle Patches.

Background contamination (inherent from the manufacturing process) within many Bresle test patches has been shown to have a contamination range of $0.88\mu\text{g}/\text{cm}^2$ ($8.8\text{mg}/\text{m}^2$).

As the reading variation between the Elcometer 130 and the Bresle Test Method are significantly within the background contamination range of the Bresle Patches themselves, the Elcometer 130 has been proven to be an equivalent test method for the industry.

The Elcometer 130 SSP can do much more than one Bresle Patch, due to its design, it not only undertakes up to 4 equivalent readings in just 2½ minutes, but can also provide a salt concentration profile - highlighting areas of concern to the user, and much more besides.

For more information visit www.elcometer.com

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We are seeing a growing demand for our products across many other industrial sectors.

Q Product Focus

 Coating Inspection

PHYSICAL TESTING BEYOND COATINGS

by **Nick Ball**, Sales Director

Whilst Elcometer has been renowned for providing products for the paint and coatings industry, we are seeing a growing demand for our products across many other industrial sectors.

Whether this is abrasion resistance of papers, textiles or plastics or the film application on new battery technologies or OLED monitors, the Elcometer physical test range has a much wider audience than our traditional paint or ink technology focus.

This edition's technical focus is on viscosity.

Gathering viscosity data on material provides industrial manufacturers with the information that they need to predict how a material will behave in the real world.

Viscosity measurements, for example, are used in the food industry to maximise production efficiency and cost-effectiveness.

Viscosity affects the rate at which a product travels through a pipe, how long it takes to set or dry, and the time it takes to dispense the fluid into packaging, which can affect the production efficiency of the plant.

This month, Elcometer has launched a comprehensive re-design of their entire website, which allows users to quickly find the products that they are looking for by business division and industry sector.

To see Elcometer's full range of physical test equipment, simply visit: pte.elcometer.com



SAME CUP, DIFFERENT GRAVY



by **David Barnes**, Group Technical Manager

Whilst there are several types of different viscosity cups available on the market they all perform similar functions. Flow cups are filled to the brim, and by using the vacuum created by a glass plate being slid across the fluid meniscus, the fluid is held in place until the plate is removed.

The time is recorded from the moment the glass plate is removed until there is a visible break in the flow.

Depending on which type of cup is used, the measured time may be converted into CentiStokes (cSt) - the measure of viscosity - either by using the chart available on the Elcometer website or by using the ElcoCalc App.

What the user perhaps doesn't realise is that the charts and the App are populated using the formulae that appear in some of the standards which define the geometry of the cups.

This means that if you do not see a cup listed on the chart or in the App, then there is no formula available to convert the time into a cSt value. AFNOR and LORI viscosity cups are two of the cups that do not have a conversion formula available.

These cups are therefore used as comparators with the user defining their own "pass/fail" criteria for timings in order to represent acceptable viscosities of their product.

Most cups come in two forms: flow cups and dip cups. Flow cups are typically used in laboratories and should be mounted in a stand in order to give the most accurate values.

Dip cups are essentially the same cup with a handle, allowing the cup to be dipped into the fluid thereby enabling a check on the viscosity during the production process.



Viscosity measurement is not only about coatings. It is often necessary to think outside the box to help our customers.

Over the years, liquid soaps, sauces, blancmange, icing (frosting) and many more foodstuffs have been sent to Elcometer for viscosity testing.

Whilst some are suitable for measurement by viscosity cups, sometimes it may not be possible to use a viscosity cup.

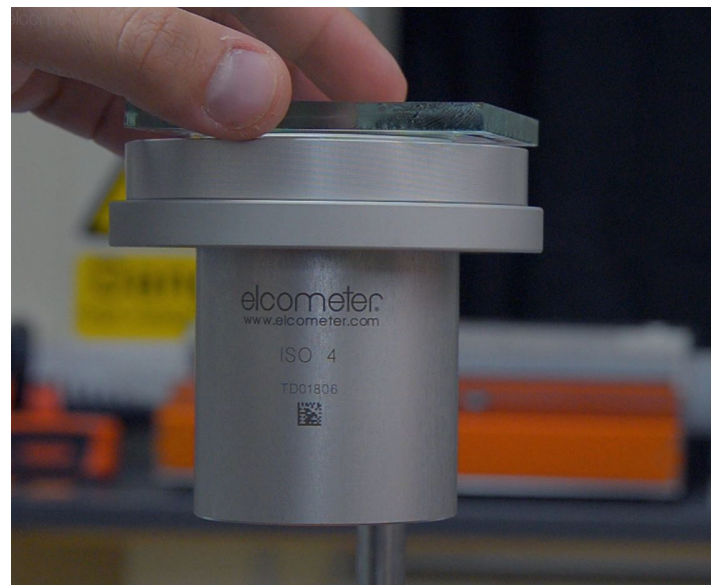
On one occasion a customer sent us some sweet chilli sauce to see if we could measure the viscosity. We soon found that the viscosity cups were not best suited to the task as the chilli flakes would block the orifice in the viscosity cup thus affecting the readings. The solution was to use the Elcometer Daniel flow gauge.

Whilst this gauge does not allow the user to ascribe a specific viscosity value to the liquid, we identified how the customer could compare an approved sauce's viscosity to all other batches - using the Daniel gauge as a comparator. The customer was very happy with the solution.

Viscosity is not just related to coatings, producers of inks, foodstuff and other liquids may need to monitor the viscosity of their product. It is often a requirement of the job that Elcometer technicians have to think laterally - outside the box, so to speak - in order to provide our customers with a satisfactory solution.



An Elcometer Zahn Dip Cup



An Elcometer ISO Flow Cup

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We are delighted to be able to offer face-to-face training for the first time since Covid 19 restrictions have been lifted!

EXPERT SUPPORT BEFORE AND AFTER SALES

by **Alastair Kearton**, Sales Manager - Coatings

This quarter we have been working with our network of distributors to ensure that they can offer Elcometer customers across the globe the best-in-class customer service, both before and after purchase.

To do this, we have set up 'Tech Talks' - a new series of live online workshops exclusively for our distributors.

These workshops feature 'show and tell' style tips and tricks conducted by the Elcometer Technical Team in order to help customers get the most out of their gauges.

At the end of the workshop, attendees are given the opportunity to ask our team any questions which are then answered - with a full demonstration, live.

We have so far covered a wide range of topics, from coating thickness, to soluble salt measurement and the feedback from attendees has been excellent.

We'd like to thank those that attended for their continued support.

If you are an Elcometer distributor and are interested in joining our Tech Talk workshops, please email nick.ball@elcometer.com

In the UK our sales team are enjoying being able to offer face-to-face training again! This quarter our Regional Sales Executives, Rachel Proud and Rob Sommerville hosted a number of Coating Thickness Gauge Masterclasses in Coventry and Manchester.

These were the first face-to-face training we have been able to offer in the UK since Covid 19 restrictions were lifted.

They were joined by delegates from Rolls-Royce PLC and the University of Leeds, amongst others where they learnt how to utilise the many features of their Elcometer 456 Coating Thickness Gauge to their advantage.

The team have three more masterclasses planned this year in Manchester, Bristol and Newcastle. To book your place, please contact Melissa Hayward on: melissa.hayward@elcometer.com



ULTRASONIC NDT

Meeting the needs of the
inspection industry - **whatever**
and **wherever** they may be.

TRAINING IN GERMANY

by **Matt Davison**, NDT Division Manager

The German NDT market is one of the largest NDT markets in the world with an estimated market value of €6 million for handheld NDT gauges.

Ultrasonic NDT (Non-Destructive Testing) or NDE (Non-Destructive Evaluation), began as early as the 1870s with the publication of "The Theory of Sound" by Lord Rayleigh.

From the 1950s, helped by advances in materials and electronics, NDT technology really progressed.

In Germany in 1958, Krautkramer carried our work to develop a new method for sizing a defect which was called DGS – Distance Gain Size.

Krautkramer's work was very influential in the field of NDT, as a result of such historic early advances Germany remains a prominent region for many NDT equipment manufacturers.

The Germany Elcometer NDT teams, based in Aalen in the south and Leer in the north recently underwent advanced NDT technical training and on market opportunities.

The training focused heavily on the Elcometer FD700 Mini Flaw Detectors and the use of A-Scan.

The A-Scan display enables a user to know what is happening to the sound wave inside the part being inspected, indicating if there is a fault or not.

The new Elcometer FD700DL+ Mini Flaw Detector packs all of the functionality of a benchtop device in a small, highly portable gauge and features landscape views which are a big advantage during weld inspections, especially using a gauge of this size.

For more information on our range of NDT Equipment, visit ndt.elcometer.com



The German NDT market is one of the largest NDT markets in the world - and one of the most competitive.





A removable protective cover can improve the IP rating of your gauge - and its lifespan..

ELCOMETER NDT HAS IT COVERED

by **Matt Davison**, NDT Division Manager

This month Elcometer NDT introduce three new protective covers.

Protective covers are essential in tough environments to keep the gauges clean, safe and to extend operational lifetime.

To avoid delays - place your order today:

- **T99931812** – Plastic Protective Case for the MTG/PTG Thickness Gauges. Also compatible for 456, 415, 224
- **T92031809** – Rubber Protective Caser for the CG/PG Thickness Gauges, FD700 & Bolt Gauge.
- **T92031810** – Plastic Protective Case for the CG/PG Thickness Gauges, FD700 & Bolt Gauge



IT'S ALL IN THE NUMBERS

What is an IP gauge rating for and can a protective case make any difference?

The design of any electrical instrument's enclosure can be determined by how effective it is at stopping the intrusion of foreign bodies such as dirt and moisture. This resistance can be determined by the product's IP rating.

International Protection (IP) standards IEC 529, BS EN 60529 or its US equivalent, Nema, work as a rating system for protection against solids and liquids.

The first number determines how resistant the housing is to solid particles of various sizes. The second number, it's resistance to water ingress.

The higher each number, the more resistant the design. For example, whilst IP54 has dust protection which can prevent harm and has protection from water splashed in any direction, IP67 means that the housing will not allow any dust and no water ingress when the gauge is immersed in up to 1m of water.

Although not considered part of the gauge's IP certification process, a removable protective cover can improve the 'IP performance' of your gauge.

For more information on our range of NDT Equipment, visit ndt.elcometer.com.



SOLIDS			WATER		
0		Non protected.	0		Non protected.
1		Protected against a solid object greater than 50mm, such as a hand.	1		Protected against vertical dripping water. Limited liquid entry.
2		Protected against a solid object greater than 12mm, such as a finger.	2		Protected against vertical dripping water when tilted up 15°. Limited liquid entry.
3		Protected against a solid object greater than 2.5mm, such as a screwdriver.	3		Protected against vertical spraying water at an angle up to 60°. Limited liquid entry.
4		Protected against a solid object greater than 1mm, such as a screw or wire.	4		Protected against vertical splashing water at an angle up to 60°. Limited liquid entry.
5		Dust protected. Prevents ingress of dust sufficient to cause harm.	5		Protected against jets of water from all directions. Limited liquid entry.
6		Dust tight. No ingress of dust.	6		Protected against powerful jets of water from all directions. Limited liquid entry.
IP 6 5 Ingress Protection. Dust tight. No ingress of dust. Protected against water jets from any angle.			7		Protected against the effects of water immersion between 15cm & 1m.
			8		Protected against the effects of water immersion under pressure beyond 1m.
			9		Protected against high temperature, high pressure water and steam.

A photograph of two men in construction attire. The man on the left wears a white hard hat, safety glasses, and a high-visibility yellow vest. The man on the right wears a white hard hat and an orange safety vest over a red and white checkered shirt. They are both looking down at a laptop held by the man on the right. The background is a blurred outdoor construction site.

STANDARDS & QUALITY

Ensuring we have **products fit
for purpose**, exceeding the
demands of our customers.



STANDARDS ARE A SERIOUS SUBJECT

by **David Barnes**, Group Technical Manager

The coatings inspection industry is governed by standards. If the standards were not in place, outlining what inspection is required and the method by which the inspection should be carried out defined, then any coatings job would be just like what we do at home when painting the house - so long as it looks good...

In a protective situation, however, we need to ensure the coating has been correctly applied and that it is technically capable of doing the job for which it has been selected - protecting the steel from corrosion, for example.

Anyone who has read an Elcometer catalogue or visited our website will see that Elcometer take the subject of standards very seriously. Each gauge has a list of the standards that it can be used in accordance with and, in the back of the catalogue and on the website, there is a useful list of the main international standards and the gauges that can be used in accordance with each standard.

In order to keep abreast of standards development, to ensure our gauges conform to and can be used in

accordance with standards Elcometer has a presence at many of the international standards bodies including ASTM, ISO and AMPP (formerly NACE and SSPC) to name but a few. Attending these meetings enables us to respond to any changes in the standard to ensure that our gauges continue to conform to, and be used in accordance with, the standards. It is not and never will be our aim to influence the standard in order to create a need for a gauge.

Occasionally we may not be in agreement with what is decided, usually on a point of technicality or reasonableness, but as the standards are usually developed on a consensus basis sometimes we are not found 'persuasive' and we have to accept the opinions of the majority.

In some cases where we either believe more detail would benefit users of Elcometer gauges specifically or where we have reluctantly had to accept defeat in the development of a particular standard but still believe it can be improved upon, we have begun to create a suite of Elcometer standards covering our range of instruments and the inspection methods for which they are used.



One such standard where we believe improvements can be made is the SSPC DFT measurement standard PA2, specifically the way it deals with the use of scanning technology.

To that end, we have developed an Elcometer standard for measuring DFT using scanning probes, such as the Elcometer 456 UltraScan probe.

In the standard, we outline how to calibrate the gauge when using the scanning mode and also a measurement technique to make the most of the gains that can be made by using this technology.

Taking Readings

When taking readings the probe should be firmly held by the sleeve in a similar manner to holding a pen.

The probe should be placed on the coated surface perpendicularly (90 degrees to the surface), in a positive manner but not too firmly that the probe might damage the coating.

The sleeve should slide down the probe as it is placed onto the coated surface until the sleeve itself comes into contact with the surface thus ensuring a more accurate reading is taken.

Normal probes should not be dragged across the surface. This will damage the probe tip and possibly the coated surface. Only probes fitted with a protective plastic cap should be used to perform scanning DFT measurements - such as the Elcometer 456 Ultra Scan Probe.

Having calibrated the gauge using the specific method for Ultra scan probes, measurements can be taken in either *standard mode* or one of the scanning modes within the gauge. In the Menu selecting *Setup* then *Measurement Mode* allows the user to choose between these three modes when an Ultra Scan probe is connected.

The two scanning modes are *Auto-repeat* and *Scan mode*. When using a Scan Probe in "Scan" or "Auto Repeat" mode, the probe cap must be fitted to avoid damage to the probe tip.



Auto-Repeat Mode

In *Auto-Repeat Mode*, a coating thickness reading is taken approximately every half a second when the probe is slid across the coated surface. Each individual dry film thickness (DFT) reading is stored into the memory.

Scan Mode

When the *Scan Mode* is selected from the gauge menu, the user can slide the Scan probe over the entire surface area. When the probe is lifted off the surface, the gauge displays the average coating thickness value, the highest thickness and the lowest dry film thickness values of the entire scan. Each set of three dry film readings (average, high and low) are displayed on the run graph and stored into the gauge's memory.

Note: Independent studies have shown that using the Auto-Repeat scanning method of taking readings provides a greater number of readings at a much faster rate and with a reduced spread of readings leading to a more accurate measure of DFT.



The user can develop their own method for measuring the DFT of a coated surface using a scan probe and several methods are featured in various standards, some are more complicated than others, but to ensure readings representative of the DFT of a surface are taken, a repeatable method should be used.

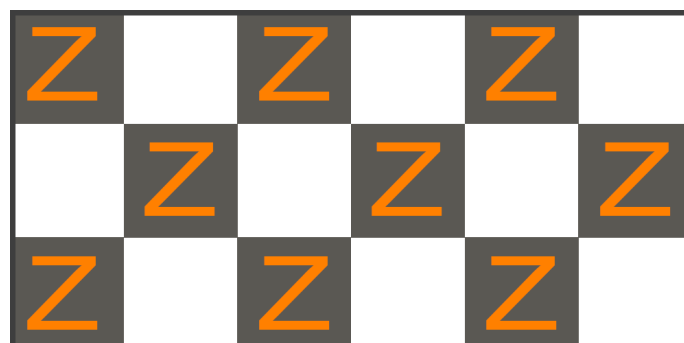
The Elcometer Scanning DFT Test Method

Choosing 5 readings, each an average of 3 individual spot measurements, over a 3m x 3m square area does not fully characterise the coverage area.

It is often known that thickness readings can vary from top to bottom of a wall and/ or around voids, for example, providing a means to choose the good areas to inspect over the bad, or vice-versa.

Elcometer's new test method avoids this by dividing each area under investigation into imaginary chessboard squares, each approximately 1m x 1m.

Using the Auto-Repeat Mode, the user initially scans each black (or white) area using Z-shaped scan, as shown below.

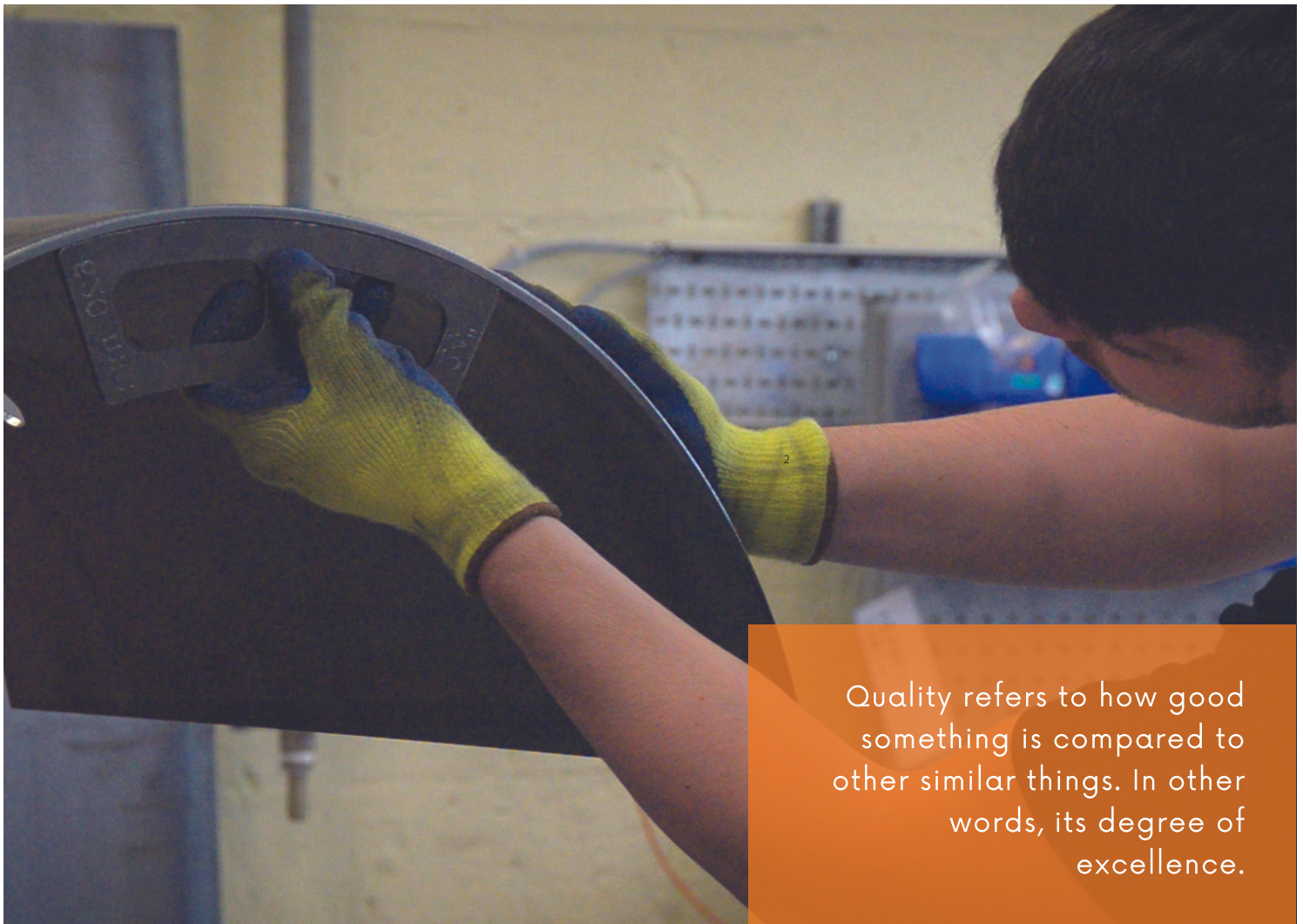


Each measured area is recorded as a separate batch within the gauge, and the scan for each checkerboard square should take a maximum of 10 seconds - equivalent to at least 20 readings.

Should any scanned area be found to be outside the required coating thickness specification, the user should then inspect each adjoining white (or black) square - thereby fully assessing the extent of the non-conformance - before moving onto the next black (or white) square.

Any area with welded supports such as ladders, hand rails, etc. can be individually assessed.

For more information on the new Elcometer Scanning Test method, please contact techsales@elcometer.com



Quality refers to how good something is compared to other similar things. In other words, its degree of excellence.

WHAT IS QUALITY?

by Scott McAteer, Group Quality Manager - UK

When used to describe people, quality refers to a distinctive characteristic or attribute that a person possesses. In this sense, we can also use the term for things. If I think that Mary's best attribute is her honesty, I can say "Mary's best quality is her honesty."

In business, especially manufacturing, it is a measure of excellence. In this context, it can also refer to a state of being defect-free.

The term contrasts with the word 'quantity.' When somebody says 'how much,' we think about quantity. If they say 'how good,' on the other hand, we think about quality.

Quality Management

At Elcometer, there are many aspects to quality. It refers to both goods and services. The key aspects of how good or 'fit for purpose' an item or service is, is rooted in the concept of quality management, which covers four areas.



1 Quality Planning

This is a means of developing the goods, systems, and processes required to meet our customers expectations.

In many cases, Elcometer tries to exceed them.

2 Quality Assurance or QA

QA is a program for the systematic monitoring of all aspects of production, a project, or a service.

The aim is to make sure that Elcometer meets or exceeds the required standards.

3 Quality Control or QC

QC is a system in manufacturing of maintaining standards. Here, the focus is on the finished product, i.e. making sure it is defect-free and meets specifications and standards - predominately through visual inspection and testing of products.

While QA focuses on what happens after Elcometer makes the product, QC focuses on what happens before completion.

4 Quality Improvement or QI

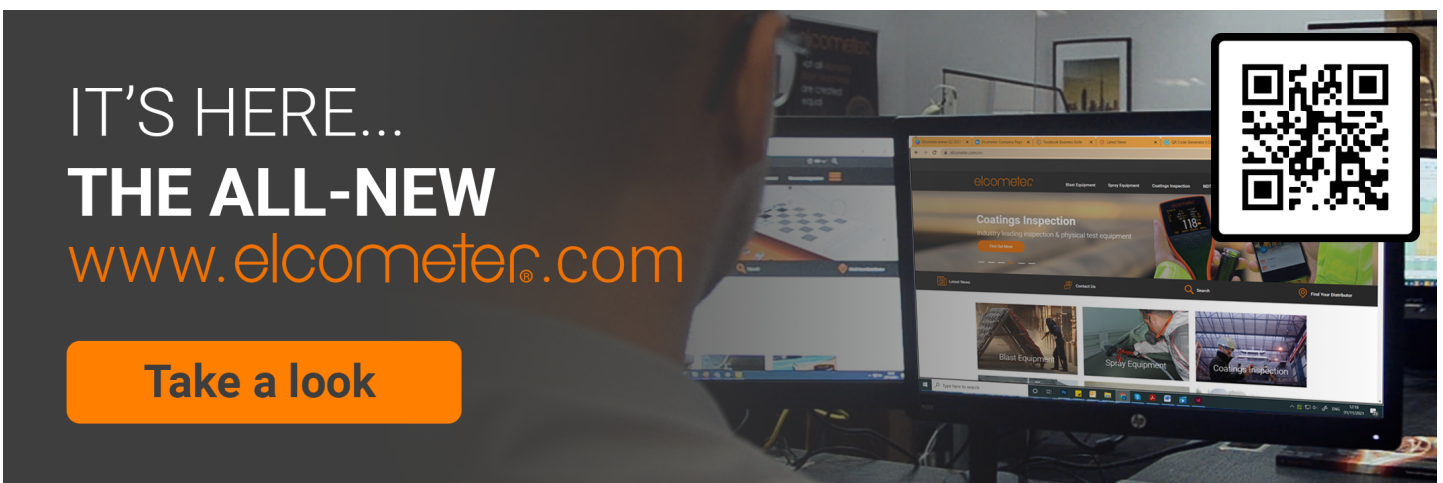
QI is the systematic approach to the elimination of waste and losses in the production process. Often it also includes the reduction of waste and losses. QI involves weeding out what is not working properly, and either improving it or getting rid of it.

IT'S HERE...

THE ALL-NEW

www.elcometer.com

Take a look



The background image shows a modern, two-story brick office building with large windows and a glass entrance. To the left of the building is a parking lot and a row of flagpoles flying various international flags, including the United Kingdom flag. The scene is set on a clear day with a blue sky and some clouds. In the foreground, there is a green lawn.

INSIDE ELCOMETER

Ten offices
around the world.



By concentrating on our core values, Elcometer has grown into a global network with representation in over 170 countries.



Inside Elcometer

Our People, Our Values

OUR VALUES

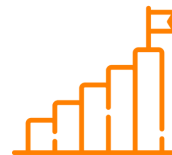
by **Nicki Campbell**, HR Director

Having clear company values helps to ensure that we are all working towards the same goals. They also support the company vision and shape its culture. Our Core values are:



Pride

We are proud of where we work and the work we do.



Achievement

We believe that just enough is not enough.



Ownership

We take responsibility for what we do and how we do it.



Focus

We know that if it is not acceptable to us it is not acceptable to our customers.



Ethics

We treat our customers, suppliers and colleagues fairly and with respect.



Initiative

We are encouraged to identify opportunities for improvement and offer solutions.

SUPPLY RESILIENCE, RISK MANAGEMENT AND STOCKING POLICIES

by **Barry Holmes**, Operations Director

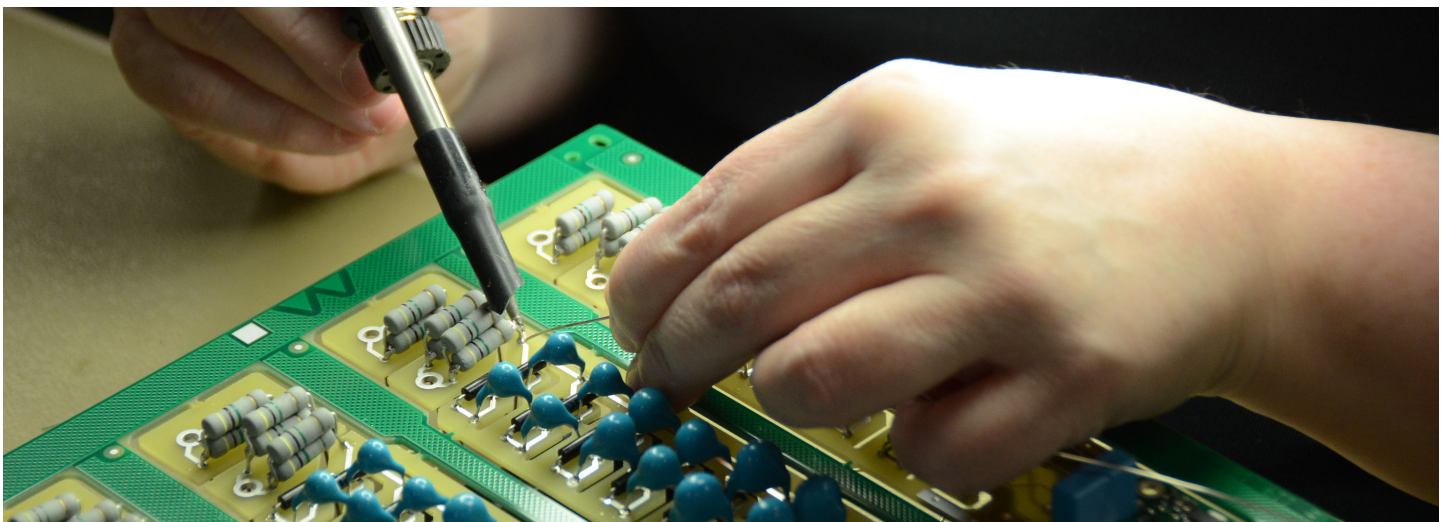
The issues with global supply chains have been well publicised and felt around the world. Shortages have occurred across a vast spectrum of materials, components and products affecting almost every manufacturer. As is always the case when demand outstrips supply, prices rise and supply becomes harder to secure.

During the height of the global lockdown, when home delivery prevailed, packaging materials were in such high demand that cardboard was referred to as 'beige gold'. Semiconductor shortages have impacted many industries, particularly high-tech manufacturers, such as Apple, Samsung and Cisco, that have microprocessors at the core of their products. Elcometer's electronic gauges are all based on similar microprocessors. The effect of these shortages has been dubbed 'Chipageddon'.

The automotive industry has been particularly impacted by semiconductor shortages with Toyota warning that its global output in September would be

reduced by 40%. Lead times for new vehicles are now typically six months. The automotive industry was the pioneer of the Just in Time (JIT) manufacturing philosophy which is based upon absolutely minimal stockholding with component supplies arriving only immediately at the point they are required and not before. JIT works very well when demand and supply are smooth and predictable, neither of which has been the case in 2021.

Whilst titans of industry have failed to meet customer demand and expectations, Elcometer has largely been able to maintain its normal level of service and availability throughout the pandemic. This achievement is due, in part, to our stocking policies and risk management. We have implemented many lean initiatives in Operations over the last 15 years and these are quite apparent to anyone who visits Elcometer's factory, however, we have intentionally avoided pursuing any lean initiatives in terms of stock; we are knowingly and deliberately 'overweight' in terms of inventory.





With over 7,100 finished products comprising 6,257 unique subassemblies (or manufactured parts) and 13,532 components, Elcometer's supply chain is extremely complex. Maintaining supplies of these purchased and manufactured parts during the pandemic has been challenging, but through the efforts of Elcometer's Global Purchasing, Planning and Manufacturing departments we have succeeded in doing so.

Many of our purchased parts are supplied from a single or sole source. This represents an unacceptable risk so we deliberately hold stock at several levels. In the UK we typically hold 4 weeks' stock of fast-moving finished products and more for the slower moving SKUs with greater demand volatility. Our offices and distributors around the world typically hold a further 4 weeks' stock for their local markets.

In the factory, we also hold stock at subassembly and component level so that our overall typical stocks equate to around 4 months' demand. Our risk-based approach to inventory management means that for some components we may hold up to 12 months' stock across all of the different levels. This is particularly true for semiconductors that are typically sole-sourced to minimise our exposure. This stocking policy may be an anathema to lean manufacturing practitioners, but it has acted as an insurance policy that has served Elcometer and our customers well during the pandemic.

Our Epicor ERP (Enterprise Resource Planning) system allows us to manage this inventory in real-time across 81,500 different physical locations over the entire site. Any time a part is moved the barcode representing its location is scanned and updated so we know precisely where all materials are located at any given time.

Each movement is logged within Epicor. Since Epicor was introduced in July 2013 there have been more than 29,000,000 material transactions. Our stocking policies are embedded within the planning parameters in Epicor so that our purchasing and manufacturing plans are automated. The excellent performance of our teams and our investment in inventory, systems and processes allow us to continue to be able to offer an excellent level of service to customers even in such unforeseen circumstances as a global pandemic.



40 YEARS SERVICE

Janet Finn, Receptionist at our Headquarters in Manchester, hit a huge milestone this year – her 40 year anniversary working with Elcometer. e-news caught up with her to see what's changed over the years, here's what she told us...

So, Janet, 40 years is a long time! Have you always had the same job role?

I've always worked on reception, but my duties have changed immensely since I started at Elcometer in 1981. I used to type all the quotations and proforma invoices for the company on a manual typewriter, this being before the age of computers and the internet, and used a tic-a-tape telex machine – something many of you will never even have heard of!

When I started with the company I used an old fashioned plug telephone board, before moving onto a small PBX machine. We now use the computerised system and VOIP which has a lot more features and extensions than the switchboard I first used.

And how has Elcometer as a company changed?

The company has grown immensely in both employee numbers and product range. Over the years we've had some unusual product application requests; my favourite being a visitor from United Biscuits who wanted an instrument to measure how much chocolate they put on their biscuits. I enjoyed his visits as he always brought samples with him!

Perks of the job! What's made you stay at Elcometer all this time?

I enjoy the variety of the job and talking to people from all over the world. I've made a lot of friends, and am still in touch with some of our retirees. I've never felt the need to move jobs as things are always changing here.

What are some of your highlights of the past 40 years?

I've had some memorable experiences here including Royal visits by the Duke of Kent. One other that I remember, though not an enjoyable one, was when the company was the target of an armed robbery and I was under my desk on the phone to the police reporting the crime.

I also met my husband here and my daughter worked here briefly as an intern in the marketing department.

I remember being asked when I got home after my first day with the company if I like it or not. I said 'I'm not sure, but I'll see how things go'. The job must have grown on me as I'm still here after all these years!

Thanks for chatting with us Janet, and on behalf of everyone at Elcometer, congratulations and thank you for all your hard work over the past 40 years!



25 YEARS SERVICE

Congratulations to Production Team Leader, Lindsey Wolstencroft who recently celebrated her 25th anniversary at Elcometer!

Starting in 1996 as a Production Operative, Lindsey is now a Team Leader – heading up the production line that manufactures the Elcometer 480 Glossmeters.

On behalf of everyone at Elcometer, congratulations and thank you for all your hard work.



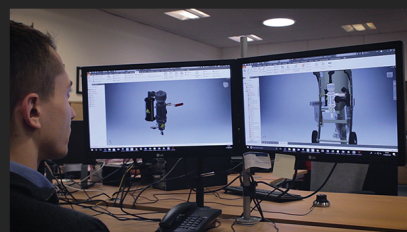
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AN INTERVIEW WITH...

Jerry Tan,
General Manager - Elcometer Asia

You began your role as General Manager for Elcometer Asia in March 2019, what involvement did you have in the industry prior to this role?

For the past 25 years, I had the opportunity to experience and work in a diverse spectrum of industries across Asia, from operations to key account and distribution management. Working closely with Michael Sellars (Managing Director) and the team, I have been able to work and contribute to Elcometer, through the knowledge and skillsets I have acquired throughout my career.

A lot has happened since 2019, including the worldwide pandemic, how has the industry in Asia coped and what have you done to handle the situation?

Working from home continues to be the default arrangement for most companies in Singapore, we have split our team into 2 groups, alternating between home and office on a regular basis. To keep the communication amongst us, Monday mornings are reserved for meetings together with all team members, while Tuesday mornings are dedicated sales team meetings. It is tough, but we have all coped well.

Unlike the previous crippling financial crisis in 1997 and 2008, most Asian businesses, including Elcometer Asia, 'were caught by surprise and not prepared when Covid-19 struck early last year. Nevertheless, the team and I decided that we had to constantly adapt to a volatile business environment - across 13 individual countries in Asia - from Day 1.

We believe in maintaining the balance; to continue moving the operation and business forward, while ensuring it's done in a safe manner for all of us, despite the frequent disruptions faced due to lockdowns.



Thanks to the strong support from our customers and distributors, we are pleased the business has been growing in line with the company's expectations since the very beginning of the pandemic.

It was great to see your team exhibiting at ChinaCoat at the end of last year; do you have any other exhibitions planned?

Due to the uncertainties in the region, major regional exhibitions have either been postponed or cancelled. Despite all the changes forced upon us, we have in fact not only participated in a number of virtual trade exhibitions during the past 12 months but have also had the privilege to partner and co-sponsor a number of targeted industry events with organisations such as AMPP.

It is still very difficult to travel - especially to China, nevertheless, one of our key distributors is representing Elcometer at ChinaCoat in mid-November.

We heard you have just moved into new offices, why is that?

Our office, despite growing in size over the years, had been in the same location for more than 20 years.

The main reasons for the move to a new office are to continue using Singapore as the company's strategic regional hub, to increase and enlarge our business footprint in Asia, to better serve our growing network of customers and distributors and to cater for our expanding product range.

We know your team has expanded, how are your new employees settling in?

JJ Fong was my 'first new employee' and has adjusted well into the family. In fact, he has just successfully attained his CIP Level 1 certification and is already looking at the next level.



Plans for the new office space in Singapore

Ginny and Hanapi, have also joined our growing team, in the middle of the pandemic - earlier this year. They too have been coping and settling well in their individual roles. Everyone is excited about the future.

WELCOME BACK!

We'd like to welcome back Daniel Lomax! Daniel undertook a one-year industrial placement here at Elcometer in the Research and Development department whilst studying for an undergraduate degree in Electrical and Electronic Engineering at Manchester Metropolitan University. Since graduating, he has returned to Elcometer as a Test & Support Engineer.

During his one year placement, Daniel was given the opportunity to familiarise himself with industrial software that was not available at his university and see the full product life-cycle from the very start to end - as new products are being developed and others were being redesigned.

Daniel said, "Throughout my placement year I was fortunate enough to be surrounded by many well experienced and highly-skilled engineers in multiple disciplines that were happy to pass on their knowledge and give advice".



After graduating, Daniel was offered the role of Test & Support Engineer in the Product Improvement team. This role involves providing assistance in the development of new projects and supporting in sustaining existing products.



At Elcometer, we are very keen to support our growth plans through the development and promotion of internal talent.



Inside Elcometer

Training & Development

DEVELOPING INTERNAL TALENT

by **Nicki Campbell**, HR Director

Training and personal development go hand in hand and we support individuals who want to progress their careers with exposure to broader work-based experiences, as well as sponsorship for learning and development initiatives, where it underpins their progression.

The appraisal process is in place, not only to look at areas of strength in performance but to highlight areas for development and growth. This is a joint undertaking by both manager and individual, where the individual also takes a big part in their own personal development.

This quarter, we are pleased to announce the promotions/change in jobs of the following employees:

- **Debbie Jones** – Team Leader to Production Manager

- **Karen Finnigan** – Team Leader to Production Manager
- **David Dunscombe** – Software Engineer to Senior Software Engineer
- **Chris Hughes** – Manufacturing Manager to Repairs Manager (Interim)
- **Morgan Perkin** – Welding & Fabrication Apprentice to Welder / Fabricator / Fitter
- **Chris Pearson** – Welding & Fabrication Apprentice to Welder / Fabricator / Fitter

We would also like to congratulate Debbie Jones and Karen Hampson who completed the following training:

- **Debbie Jones** – Operations & Departmental Manager Level 5
- **Karen Hampson** – Team Leader/Supervisor Level 3

BUILDING A CAREER AT ELCOMETER

by Nicki Campbell, HR Director

We have profiled two individuals this quarter, who have developed their careers at Elcometer where their commitment to their own learning and development has clearly made a significant contribution to their success.

DEBBIE JONES

Production Manager (Probes & CTG)



Debbie started her career with Elcometer in June 2003 as a Production Operative in the Probes Team. Back then there were just six people working in the department;

but two years later production lines were put into place and Debbie was promoted to Team Leader; heading up between 13-20 operatives on the line.

Debbie has since completed a number of development courses, including NVQ Level 2 and 3 in Team Leading and training in Managing Teams and Business Improvement Techniques. More recently Debbie completed the ILM Level 3 & Level 5 in Operations & Departmental Management - receiving a distinction in both.

Debbie says "Over the 18 years I have been at Elcometer, I have learned a lot and have been well supported both in my roles and personal development - this had led to my recent promotion to Production Manager. I am now responsible for both the Probes and CTG lines and am looking forward to further contributing to the improvements and success of the Production team at Elcometer".

KAREN FINNIGAN

Production Manager
(MAP/HV/PTE/ADH/Factored)



Karen began her career at Elcometer in 2014 as a Team Leader in the MAP/HV/PTE/ADH/Factored team and though her own dedication and hard work as well as training and

development, supported by the company, has now been promoted to Production Manager.

Karen says "Having already completed my CMI Level 3 in Leadership and Management before I started my role at Elcometer, I was keen to follow up with the Level 5 certificate. During an appraisal with my manager, I asked if this would be possible. My manager agreed and was very encouraging, even allowing me to manage specific projects which were beneficial to my coursework results".

After completing the Level 5 certificate, Karen was promoted to Production Manager. Karen's day-to-day activities include monitoring production processes, productivity rates and product standards and implementing quality control programmes. She also organises the repair of any damaged equipment and ensures her team are working in a safe environment.

GOING THE EXTRA MILE

by **Nicki Campbell**, HR Director

This quarter we are recognising those who go the extra mile in looking after customers and colleagues, demonstrating a great work ethic in the process.

LIAM ESAW

Business Systems Assistant - UK



"Liam offers continued support in a number of Internal Departments as well as our overseas offices. Notably this quarter he has demonstrated exceptional levels of

support in our Service & Repairs Department. Consistently polite and obliging, he endeavours not just to help but to proactively analyse processes to correct existing problems and improve inefficiencies."

Elizabeth Rimmer, IT & Business Systems Manager

KYLE WALLDER

Test & Support Engineer (R&D) - UK



"Kyle has shown ownership of and initiative in his work through following probe developments beyond his responsibility of testing, into analysis and improvement of the designs, often

investing overtime in order to deliver a good solution to the business. This is alongside his consistent achievements in his university studies. Kyle certainly demonstrates the company values on a consistent basis and works extremely hard to get the job done."

Shane Goff, Product Development Manager

ROB SOMERVILLE

Field Sales Executive, UK



"Our largest abrasive blast machine customer, wanted to meet us to discuss ways that we could work together even more closely in the future but the only date they could make

was right in the middle of Rob's honeymoon.

Rob and Connie had been married a couple of days beforehand and yet he persuaded the new Mrs Somerville that he should come into Head Office to see our valued customers. Making matters a little more complicated, Rob's friend was getting married that very afternoon. So, a very smart Mr Somerville entertained one of our biggest customers without mentioning a word of the personal circumstances of the day.

I'd like to thank both Rob for going the extra mile and he didn't even ask for the time back in lieu of the day. I'd also like to thank Connie for releasing him temporarily from his honeymoon!"

Neil Beswick, UK & Ireland Sales Manager

LISA IKIN

Cleaning Operative - UK

Lisa has gone above and beyond in helping cover sickness and holidays over the last few months. She comes in early to help me cover the work so that the building is clean and ready for the next day. Thank you Lisa!

Lynsey Bedwell, Cleaning Supervisor

GAYNOR SMALLEY

Internal Sales Executive - UK



Gaynor is often the 'engine room' of UK Sales, throughout the pandemic, Gaynor has been "ever present" in our sales office. Her commitment to helping our customers in the UK

is certainly part of the reason we only saw a minimal reduction in sales during the 2020/21 financial year. As Gaynor was often the only person on site for UK Sales, she had to deal with much more than just her regular duties. Taking credit card payments for all regions and was often running down to the warehouse and back (300 meters each way) to pick up stock for collection at Reception, meeting customers through the front door, organising demonstration equipment to be sent out to our external sales teams and being instrumental in helping to train our newest recruit, Freya Ashworth on Epicor and other company processes.

Gaynor has done all of this, always willing to do more than is expected and does so with a great attitude."

Neil Beswick, UK & Ireland Sales Manager

CATHERINE LUND-BARKER

Marketing Manager - UK



"Catherine has an amazing volume of work on, more words to manage than Harry Potter in many different languages but she always finds time to coach & support staff, with a focus on

the best choices for the customer, not just professionally but personally as well. Leading from the back, highlighting others' wins/achievements whilst downplaying her own, ensures that staff always put the customer first, be that internal or external, personal or professional. I really appreciate that."

John Grimshaw, Product Manager

RALF THEESSEN

Bereichsleiter Strahltechnik,
Elcometer Germany



"Whilst Ralf has commercial responsibility for Germany he has been helping our colleagues in Elcometer BV (The Netherlands) with customer technical queries, as well as

trial set up and more recently, assisting with the mechanical refurbishment of abrasive blast machines needed for customer trials in the Netherlands. Ralf is passionate about all things blast, always upbeat and there to help any colleagues at a moments notice, when it could be so easy for him to say - sorry I only deal with Germany, not my problem".

Nick Ball, Sales Director

WHO'S NEW?

by **Nicki Campbell**, HR Director

We would like to formally welcome the following new starters who have joined the business this quarter. We have now recruited a total of 24 positions so far this year and are still actively recruiting.

BEN ANDREW

Customer Support Engineer - UK



Ben joined the Technical Support team as a Customer Support Engineer. Ben will undertake an NDT Apprenticeship to gain the knowledge to support Elcometer's NDT

division and its distribution network. Ben studied Physics at West of Scotland University and most recently, has been working in the Finance department at The Co-Op, but is keen to take on a more technical role.

STUART BROOKS

Repairs Manager - UK



Stuart Brooks joined the Repairs team as Repairs Manager. Stuart will be responsible for running the Repairs department. He will also assist with the implementation of Continuous

Improvement (CI) initiatives, to achieve a 'best in class' service to our customers.

RALF ELIAS

Field Sales Representative
Elcometer Germany



Ralf joined Elcometer GmbH as Field Sales Representative. Ralf will work from his home office in North-Rhine-Westphalia and will mainly focus on coating inspection

and NDT gauges but will also generate leads for all product divisions. Ralf joins Elcometer with over six years of experience in the protective coatings industry.

JONATHAN HOCK

Project Manager - UK



Jonathan Hock joined the Research & Development (R&D) team as Project Manager. Jonathan will be responsible for the R&D project plans and delivery in product

development. Jonathan brings with him strong experience in project management, engineering and product development; in particular from the heating systems industry.

ED MCCORMACK

North American Automotive Paint & Bodyshop Segment Commercial Manager - USA



Ed joins Elcometer Inc. with over 28 years' experience in the automotive industry, having spent a considerable part of his career working for DuPont and Axalta. Ed will be introducing

Sagola's range of premium paint application products to the North American PBE market.

ZAIGHAM (ZEE) QURESHI

Graduate Mechanical Design Engineer - UK



Zee recently joined the Product Management team as a Graduate Mechanical Design Engineer. Zee is a student at Loughborough University, studying towards a Masters

in Mechanical Engineering and is spending his industrial placement year at Elcometer.

LARA TURNER

Data & Materials Controller - UK

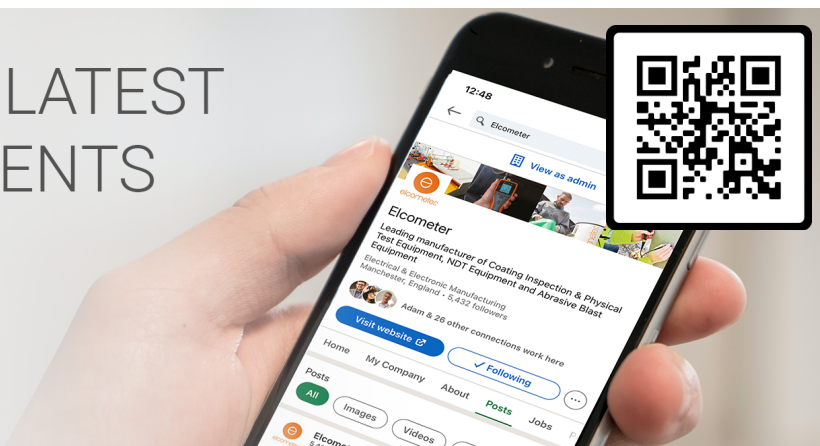


Lara joined the Machine Shop team as Data & Materials Controller. Lara will be very busy over the coming months, ensuring that the methods and costs for machined parts within Epicor are

correct, laser programs and ancillary equipment work instructions are accurate, consistent and kept up to date.

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Want to tell the world how and why you use Elcometer equipment?

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A close-up photograph of a person wearing a grey lab coat with red piping and blue gloves. They are holding a medical device with a blue hose and a metal nozzle. The background is a blurred clinical setting.

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