the enews

The new knowledge hub for coating inspection equipment

Celebrating 70 Years

In this issue

Issue One

introduction

Welcome to the eNews!

Michael Sellars - Managing Director

Welcome to the first issue of the Elcometer eNews, a six-monthly digital newsletter to keep you informed and to share your success stories across the Elcometer network.

It's been a busy 2017 for us all, on top of a 24% increase in unique visitors to elcometer.com, over the last 12 months the official Elcometer YouTube channel has grown dramatically. Featuring over 55 product videos, we now have nearly 1,000 subscribers. Recent videos have included ElcoMaster® tutorials as well as a series of 'how to' videos on products such as viscosity flow cups and the Elcometer 500.

With subtitles available in 20 different languages, the videos have become popular all over the world, with the channel reaching 250,000 views, totalling over half a million minutes of watch time!

Elcometer has also grown significantly this year, not only have we expanded our manufacturing facility by acquiring an additional 7,000m² (75,000 square feet) right next door to our existing factory, but we have also opened a new office in Dubai, tripled our sales office in Holland and opened a second sales facility in northern Germany. In addtion to all of the above, we have also acquired Blastline Limited, manufacturers of portable blast machines.

Our UK team has grown by over 10% since July 2017. We would particularly like to welcome Michael Gallacher who joined Elcometer as Group Quality Manager in July and Nick Ball who joined Elcometer in October as Sales Director; formally the Marketing Director for Sherwin Williams. Nick comes with a lot of experience in the coatings industry helping us to grow in our chosen market sectors.

Working with Standards and industry bodies around the World is key to our success, and we are delighted that Chris Beninati, Sales Manager at Elcometer Inc., has been voted on to the Board of Directors of the Powder & Coatings Institute (PCI).

I would like to say a special thank you to all those who attended the World Conference. We have received such positive feedback from you all, so we shall try to do one every 5 years.

This eNews is for all of us, so please get involved. If you are attending an exhibition, running training courses on our products or have a case study or an interesting story on different industry applications, please let us know so that we can share it around the World. Just email your story along with photographs to **enews@elcometer.com**.

Seasonal Shutdown

The shutdown dates for all our offices over the festive period are as follows:

- **Elcometer Limited**
  Close: From Friday 22nd December
  Re-Open: Tuesday 2nd January
- **Elcometer Sarl**
  Close: From Friday 22nd December (2.30pm)
  Re-Open: Tuesday 2nd January
- **Elcometer SA**
  Close: From Monday 25th December
  Re-open: Tuesday 2nd January
- **Elcometer NL**
  Closed: Monday 25th December, Tuesday 26th December and Monday 1st January
- **Elcometer GmbH**
  Close: From Friday 22nd December (12 noon)
  Re-Open: Tuesday 2nd January
- **Elcometer KK**
  Close: From Saturday 30th December (12 noon)
  Re-Open: Monday 8th January
- **Elcometer (Asia) PTE Ltd**
  Closed: Monday 25th December and Monday 1st January
- **Elcometer Inc**
  Close: From Thursday 21st December (12 noon)
  Re-Open: Tuesday 2nd January
- **Elcometer Houston**
  Close: From Thursday 21st December (12 noon)
  Re-Open: Tuesday 2nd January
- **Elcometer UAE**
  Closed: Monday 1st January 2018

Trade Shows

We would like to make you aware of the following trade shows in the New Year:

- **SSPC 2018:** New Orleans
  15th – 18th January 2018
- **World of Concrete**: Las Vegas
  23rd – 26th January 2018
- **Germanischer Lloyd:** Hamburg
  24th – 25th January 2018
- **Rencontres de la Peinture Anti Corrosion:** Paris, France
  20th – 21st March 2018
- **Corrosion 2018:** Phoenix, Arizona
  15th - 19th April, 2018
- **Megarust 2018:** San Diego, California
  2nd – 24th May 2018

If you are attending any trade shows, don't forget to let us know. Send details of your story along with photographs to **enews@elcometer.com**.

Elcometer - Leading Innovation Since 1947

Starting out in 1818 the original family business was in chemicals. Just after the end of WWII, following an opportune meeting at a hardware shop, the first ever gauge, the Elco Meter, was developed in 1946.

The original Elco Meter was launched in 1947, sold at a price of £10.50 each. The same year, our first export sale took place.

This first export was to BAMR, a family owned business in South Africa - the third generation of which, are still our distributors to this day.

Export has grown since then to now account for 90% of all our sales, through over 80 distributors and 10 offices around the world - but it all started with BAMR.

Ever since the first Elco Meter was launched, Elcometer has been a company of product innovation with a series of industry firsts.

1946/7: World's 'first' coating thickness gauge.

1959: World's first transistor dry film thickness gauge – ElcoTector.

1970: World's first pocket sized dry film thickness gauge with single tipped probe.

1973: World's first single probed, dual ferrous, non-ferrous gauge – the Elcometer 150.

1978: World's first digital dry film thickness gauge - Elcometer 250 Minitector.

1981: World's first microprocessor dry film thickness gauge – the Elcometer 255.

1986: World's first dry film thickness gauge with alphanumerics.

2000: Elcometer 456 – World's first menu driven, graphics display, dry film thickness gauge.

2007: Elcometer 456 Mk 3 – World's first dry film thickness gauge with Bluetooth®.

2011: Elcometer 465 Mk 4 – World's first dry film thickness gauge with user upgradeable firmware.

2012: World's first surface profile gauge for convex substrates – Elcometer 224.

2015: World's first NDT gauges with Bluetooth®.

2015: Elcometer 130 – World's first field-based, soluble salt profiler.

Over the last 10 years there has been some significant changes:

January 2011: Acquired Dakota Ultrasonics.

March 2011: Launched the new Elcometer 456 Mk IV.

October 2011: Opened Elcometer in Tokyo, Japan.

April 2014: Built a modern Machine Shop.

May 2014: Opened Elcometer Houston.

2016: Acquired Crabtree Lane building, 75,000sq ft, nearly 7,000m²

2017: Opened Elcometer in Dubai, UAE.

Michael Sellars - Managing Director

Over the last decade, even with global financial crashes, oil prices dropping and cyclical industrial trends, as a business we have witnessed incredible growth.

This has been made possible through innovation in research and development, investing in our people and concentrating on maintaining our existing product ranges whilst improving their quality and productivity.

Over the last ten years we have launched over 100 models including:

5	Adhesion Products
14	Dry Film Thickness Gauges and Probes
9	Surface Profile Gauges
5	Gloss Gauges
11	Surface Cleanliness/Salt Gauges
5	Porosity Detectors
12	Climate Gauges
8	Physical Test Equipment Products
10	NDT Products

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But our development does not stop there. We have also continually upgraded our ElcoMaster® data management software for PC and mobile devices.

In the last 6 years ElcoMaster® has been downloaded by almost 40,000 users across the globe.

However, the real key to our success is working in partnership with you, our customers and distributors. By working together and listening to each other we have built relationships that have spanned decades, together - we have all grown stronger.

Global Coatings Market - Trends & Outlook

Nick Ball, Sales Director, presented an overview of the global coatings market's trends and outlook.

The global coatings industry in 2016 was worth $121 billion and, in terms of coatings sales, just 10 global players make up 55% of the market.

The market is still forecasting to grow between 2 – 6%; naturally emerging economies are taking the majority share of this growth over the next few years.

A key area for us to recognise is that over 60% of this market is driven by compliance and specifications, this means our key focus areas remain as the protective, marine, oil, wood, automotive (inc. refinish), packaging and OEM coatings sectors.

Whilst Elcometer is represented at global specification committees, to ensure we remain compliant, we still need to be aware of regulations that drive your own local markets.

Perceived value for our products varies through the "customer value chain", true sales success is often achieved by selling the solution to the asset owner rather than the contractor.

Opportunities exist for us with our faster return to service testing equipment which will strike home with this key audience.

Moving forward, it would be fair to say the coatings market is transitioning to provide more complex solutions beyond just "paint", with the use of complex substrates, software and intelligent coatings being the norm.

In a similar vein, Elcometer's software and recording capabilities offer key solutions to ease site maintenance and speed up inspection reporting making us a key partner for such forward thinking companies.

Whilst we can't predict what future technologies will truly emerge in this sector, we work with our sales regions to keep abreast of current trends and respond accordingly.

We rely on you all to remain vigilant and keep us updated on the latest activities in your regions.

Nick Ball - Sales Director

Surface Profile v Surface Roughness

David Barnes, Group Technical Manager and Paul Abbott, Service Manager at Mahr UK Plc presented a paper that focused on the difference between surface profile and roughness and the techniques used to measure surface profile.

Surface profile is a measure of the depth of a blasted profile. Roughness is a combination of the depth of the profile and the peak count in a given linear direction.

For any coating to perform successfully, prior to its application, it is important that the required surface profile is created. The paper discussed the different techniques used to measure surface profile.

The Elcometer 125 measures grit or shot blasted surfaces by comparing the blasted surface to a reference coupon. Although they are low-cost and easy to use, they should be used as a reference only as the results are subjective and depend on the opinion of the user.

The Elcometer 122 Replica Tape provides a permanent replica of the surface profile which can then be measured using a thickness gauge, such as the Elcometer 123.

Although this is time consuming, it is more accurate than the comparators and can measure virtually any profile that is used in the protective coatings market.

The most accurate technique is by using the Elcometer 224. These gauges measure from 0-500µm.

Paul Abbott - Service Manager, Mahr UK Plc

They are fast and reliable and have memory for storing batch data which can be downloaded to a PC to produce a permanent record of the measurements, making it quicker and easier to produce reports.

For more information about the Elcometer 224, click here.

Soluble Salt Profile: Bresle to Elcometer 130SSP

Craig Woolhouse, Business Development Manager, outlined recent developments in the measurement techniques used to understand the presence of soluble sodium chloride salts on pre-coated surfaces.

The first part of the review focused on the key aspects and limitations of the historical methods used over the past 25 years.

It then progressed to a detailed analysis of the research and development work done by Elcometer to establish equivalence of the two Bresle Patch and Saturated Filter Paper Methods.

This work demonstrated proven equivalence of the two methods and introduced a feature of the latest Elcometer 130SSP gauge which can be set to indicate Saturated Filter Paper salt test results in 'Bresle' equivalent mode.

The discussion then began to question the validity of simply measuring 'average contamination' values when, in reality, the feature being assessed actually produces 'random concentrations' rather than averages.

The paper then culminated in the introduction of the Elcometer 130SSP gauge which represents an industry breakthrough in the measurement of soluble sodium chloride salts on a pre-coated surface.

Craig Woolhouse - Business Development Manager

The validity of the new measurement technique was proven and the interest shown by the wider coatings inspection industry was discussed.

For more information about the Elcometer 130SSP, click here.

The Scanning Probe v SSPC PA2

Joe Walker, Vice President of Elcometer Inc. presented an overview of two US Navy sponsored projects:

The first being a National Shipbuilding Research Program (NSRP) commission in which four private shipyards performed side by side dry film thickness testing (DFT) using the Elcometer 456 with Ultra/Scan Probe and the New Elcometer 456 Industrial Protective Coating (IPC) Gauge.

These Elcometer gauges, and the industry changing test methods that they represent, were compared with the current US Navy specified test method for DFT measurement.

The results showed the Ultra/Scan probe and IPC completed inspections in a fraction of the time and with greater precision than the US Navy's referenced test method.

The presentation went on to reference a follow up study performed by the Naval Research Laboratory and Vision Point Systems in which the findings from the NSRP Shipyard study were replicated using the latest application and analytical tools in a rigorously controlled laboratory environment.

The data from these pioneering research projects were sufficient objective quality evidence for the US Navy to amend their coating specifications and include the revolutionary technologies contained in both the Ultra/Scan probe and the 456 IPC.

For more information about the Scanning Probe, click here.

Joe Walker - Vice President, Elcometer Inc

Focus on Quality

Presented by Michael Gallacher, Quality Manager, this paper focused on quality at Elcometer.

Quality at Elcometer is based around our core values: Pride, Ownership, Focus and Initiative, where each employee is encouraged to identify improvement opportunities. In the past, our quality management system has focused on quality assurance but as the complexity of our business and products has evolved, we have identified that there is a need for change. We have already began working on enhancing our management systems and processes to include more quality control elements. We are also working to develop the organisation's capabilities, introduce cost of quality measures to drive improvement projects and evaluate the structure the quality team to meet future needs.

Communication is key to how we move forward and with the introduction of our new complaint management system, we are already starting to see improvements in structure, the way we capture and analyse issues, and feedback of information on reported issues.

We have established our roadmap for the quality function: using ISO9001:2015 preparation as our foundation, this will allow us to build knowledge and understanding through education and awareness programs. With our goal of a cultural change, from the quality team responsible for quality aspects, to one where all employees understand how they contribute to top quality performance saying "I own quality".

Michael Gallacher - Quality Manager

What Conditions Affect Adhesion Testing?

Presented by David Barnes, Group Technical Manager, this paper focused on the pull-off method of adhesion testing as outlined in ASTM D 4541 and similarly in ISO 4624.

The pull-off method involves gluing a test dolly to the coated surface and then exerting a force perpendicular to the surface in an effort to remove the dolly from the substrate.

The force at which this occurs and the type of failure obtained is recorded as a measurement of the adhesion properties of the coating.

In-depth research undertaken by Elcometer investigated the effects of any deviation from the required method in every aspect of the test.

Each aspect was examined in turn, the results tabulated and the potential effect on a valid test discussed.

The variables tested included:

- Mixing the adhesive
- Araldite v Loctite
- Dolly design
- Surface preparation
- Curing temperature
- To cut or not to cut
- Applying the load

The tests concluded the following;

The 2 pack epoxy adhesive should be mixed as close as 1:1 as possible.

The glue manufacturer or type is irrelevant, providing the bonding strength is greater than that of the coating being tested.

The base of the dolly should be as thick as possible within the design limits of the dolly.

David Barnes - Group Technical Manager

An abraded coating surface, and a blasted dolly surface give the best combination for a successful adhesion test.

Whilst an increase in temperature may speed up the cure time required, testing should be at "room temperature" wherever possible to ensure the best results.

If dolly cutting must be done, pre-cutting is preferable.

Gloss Measurement

Business Development Manager at Elcometer, Colin Bennett, outlined recent and future developments in Elcometer's gloss measurement range.

The presentation began by discussing the history of gloss measurement at Elcometer. Elcometer have supplied glossmeters for over 40 years, the original product being the Elcometer 256. In 2014 Elcometer began to manufacture their glossmeters inhouse.

Huge development came with the launch of the Elcometer 480 in 2015, this meter boasts advanced features such as batch memory, scanning mode and data output to ElcoMaster®. The success of the Elcometer 480 was immediate and sales of glossmeters increased by 60%.

Colin concluded his presentation by explaining the theory behind the glossmeters and Elcometer's plans for future development of the Elcometer 480 and other glossmeters.

The Elcometer 480 Gloss Meter

For more information on the Elcometer 480 Glossmeter range, click here.

ElcoMaster® - The Glue That Binds Us

Business Development Manager Colin Bennett and Jan Lindenaar, Sales Manager, Benelux reviewed ElcoMaster® Data Management Software and how it has transformed inspection reporting.

Colin began by giving a brief history of the software, explaining that Elcometer was one of the first in the industry to develop such software. ElcoMaster® was established at a time when the PC market was booming and there was an increased demand for professional inspectors. The need for gauges with batch memory was increasing as businesses were pushing for more professional inspection reports in a paperless environment.

ElcoMaster® was the solution to these demands - it cut down inspection time, as professional reports are produced in seconds. There is no longer a need to write down measurements with a pen and paper as all data can be uploaded onto a PC and turned into professional reports at the click of a button.

Colin Bennett - Business Development Manager

Over time ElcoMaster® was developed into an app for Android smartphones and eventually iPhones. Colin demonstrated some of the capability of today's software and explained the recent update of the app which now includes a bar code input.

Jan concluded the paper by discussing the benefits ElcoMaster® brings to sales. He described ElcoMaster® as a 'game changer' and a solution sale, adding that there is no equivalent platform in the market. ElcoMaster® can be downloaded free of charge and once a customer has a positive experience using the software, sales of other gauges that are compatible with ElcoMaster® follow.

For more information about ElcoMaster®, click here.

DFT on Concrete Substrates

Craig Woolhouse, Business Development Manager, presented a paper focused on explaining the techniques used to measure coating thickness on non-metal substrates.

The discussion explained the technique of ultrasound and how that measurement philosophy is used in the coating inspection sector.

The techniques required to get the best results from the new Elcometer 500 gauge were discussed and also reference was made to the key differences between the Elcometer and Defelsko measurement philosophies.

Reference was made to applications that are difficult to measure and the presentation explained how best to recognise and overcome those concerns.

Craig Woolhouse - Business Development Manager

The presentation was concluded by discussing future developments that are currently in development to widen the application scope of this measurement technique.

For more information on the Elcometer 500, click here.

Tomorrow's Innovations

In keeping with our decades of product innovation, Michael Sellars, Managing Director previewed six new product and software launches due in the next six months.

The ElcoMaster® Mobile upgrade launched shortly after the conference, features a bar code scanner to allow the user to scan paint label information directly into the inspection report, GPS locations for live readings and collection templates, allowing the user to follow inspection work instruction from uploaded diagrams.

New products launching in the future will include new dry film thickness gauges, new gloss meters and a new take on surface profile.

The main attraction at the sales conference was the preview of Elcometer's future product range development for the blasting industry, taking Elcometer and the blasting industry to the next level.

Exhibition at the Elcometer World Sales Conference

Working with Standards

All Elcometer products are designed to comply with national and international standards. We have a team of experts working with standards bodies around the world, ensuring we have products fit for purpose, exceeding the demands of our customers.

Elcometer works closely with standards bodies such ASTM and ISO and industry bodies like ICorr, NACE and FROSIO, participating at board level or through committees to ensure industry best practice is pursued and end users have a voice.

Whereas ASTM is predominantly used in the Americas, ISO standards are used either directly or adopted by other committees throughout the rest of the world.

ASTM is member led and anyone can join whilst ISO is run by a committee. ASTM and ISO offer standards on virtually every subject in virtually any industry sector.

Elcometer have worked specifically with SSPC over the last decade and Bill Worms, Executive Director and Bob McMurdy, Business Development Manager from SSPC, presented a paper on their society during the conference.

Bill Worms, Executive Director, SSPC

SSPC has developed and published over 100 standards for surface preparation and the application and inspection of protective coatings in the industrial protective coatings markets.

The society shares joint standards with organisations such as NACE and ICRI. Elcometer has worked closely with SSPC to develop their PA2 standard for dry film thickness and their PA17 standard for surface profiling.

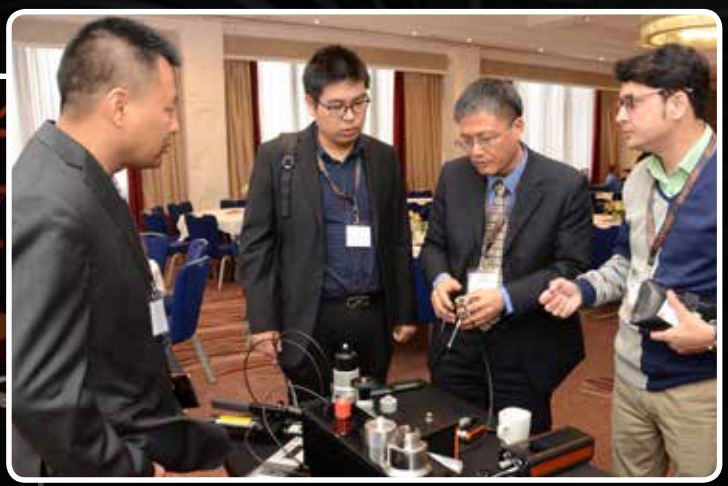
SSPC is also one of a very few organizations that offers training to craftworkers in the industrial protective coatings markets.

Elcometer plan to further improve their relationship with each of these industry bodies in the future in order to ensure our products continue to comply with standards from around the world.

seminars

seminars

exhibition



exhibition

gala dinner

gala dinner

gala dinner

gala dinner

history of elcometer

To celebrate 70 years of Elcometer, we have put together a timeline of the history of the company.

1818

Business is founded by Barratt Carrington Sellars, manufacturing starch and soap, under the name of Sellars & Co Starch & Soap Manufacturers, based in Newton Heath, Manchester.

1850s

Company name changes to East Lancashire Chemical Co. and moves to new premises in Droylsden, Manchester.

1890s

Company begins to make cement as well as soap and the ELCO brand name (**E**ast **L**ancashire **C**hemical C**o**) is born.

Post War

Business run by John Carrington Sellars, the grandfather of the current owner, Mr Michael Sellars. John Carrington Sellars expands the business into the manufacture of measuring instruments.

1962

Peter and Ian Sellars take over the business following the death of their father, John Carrington Sellars. The company is renamed Elcometer Instruments Limited.

1978

Elcometer is awarded The Queen's Award for Export.

1983

Ian Carrington Sellars takes 100% ownership of the Company.

1986

The Company premises continue to grow with 8 extensions including the addition of a purpose built production facility. The original shop floor becomes the new R&D facility.

1990

Elcometer is awarded the Queen's Award for Technology.

1995

Having spent most holidays of his youth working at Elcometer, Michael Sellars, Ian's son, joins the family business.

2003 B F

Elcometer purchases two leading manufacturers of physical test equipment in Belgium and France. The companies become part of the Elcometer worldwide business network.

2003

Elcometer purchases a leading manufacturer of concrete inspection equipment in the UK, adding a new range of equipment to the product portfolio.

2007

Elcometer celebrates its 60th year and opens its new headquarters on the same site, doubling the factory space and adding new production, office and training facilities.

2008

Michael Sellars takes over the company following the sudden death of his father and the company is re-named Elcometer Limited.

2011 USA

Elcometer purchase an ultrasonic NDT corrosion thickness and flaw detectors company in the USA.

2011 J

Elcometer open their new office in Tokyo, Japan.

2012

The Manchester site is further extended with the addition of more factory space and production facilities.

2014 USA

Elcometer open their new office in Houston, Texas.

2016

Elcometer purchase Blastline Limited who design and manufacture portable blast machines.

2016 bel

Elcometer purchase the adjoining site on Crabtree Lane, almost doubling the floor space to 10,730m² (115,500 sq.ft.).

2017 UAE

Elcometer open their new office in Dubai, UAE.

elcometer®
1947- 2017

Celebrating 70 years of Elcometer with staff and distributors at our new Crabtree facility.

elcometer®

SLI-0076 Issue 1