The IMF and OCCA
Are pleased to announce
A golf day at

The Windmill Village Hotel and Golf Course
Coventry

24th May 2023

£45.50 per golfer to include
Bacon Roll and Coffee
on arrival and Lunch / Dinner

For more information contact
helen@materialsfinishing.org

www.materials-finishing.org
DISTANCE LEARNING START DATES

22nd May for start date 2nd June 2023
28th August for start date 8th September 2023

You may enrol up to 30 days in advance of the start date.

Please note that all course fees must be paid in full before any course materials can be released.

Please contact Karen Yates by email karen@materialsfinishing.org

You can find details of courses and qualifications on our website - https://materials-finishing.org/

UPCOMING WEBINARS/SEMINARS

21st February
Webinar on Paint & Trivalent Chrome. Speakers: Paul Holder (Indestructible) and Harry Pemberton (PMD Chemicals)

28th February
Webinar on “Sacrificial Coatings”

7th March
A must see webinar on how to save energy on your processes

21st March
Webinar on Zip & Zinc alloy plating

All information on how to join the above is available on the Materials Finishing website (www.materials-finishing.org)
As usual, I’m late in putting these notes together, so the editorial team of IMFormation have had to chase me to put some words to paper!

I claim an excuse, being so busy at Indestructible that I have to make the time away from the office to put my thoughts together.

I hope Indestructible are a representative example of the increased activity in materials finishing, and that all our members, both individual and sustaining, are seeing this same sort of growth. Long may it continue and help to build back UK Plc.

It was pleasing to see so many students registering for both our foundation and technician education courses for the intake at the end of January: I hope this is another indication of sustained growth within our industry that defies financial predictions!

I must admit I worry this is a short-term phenomenon, especially on hearing the financial forecasts for growth from the other IMF, but I must admit I was slightly shocked by their prediction that the UK will see negative growth this year: this is not what I’m seeing? Let’s hope the performance is not as bad as they are predicting, although I understand a “mild” recession could be beneficial.

As we are now well into 2023, we need to remind ourselves and our painting colleagues reference the need for training in the handling and use of Isocyanates, which comes into force on the 24th August 2023. This basically requires any person working with or using diisocyanates to have attended a training course in their safe handling and use. It will be the responsibility of employers to ensure their workers have been trained before the deadline date.

This is not, however, as onerous as it sounds; the training can be completed through an on-line course with costs being kept low at 8 Euros per trainee: a much simpler method than at first envisaged.

The news of the revision of registration dates for chemicals under UK
REACH, released at the end of last year was welcome. The next stage which will be addressed this year is the submission of dossiers to both ECHA in Europe and the HSE in the UK for the re-authorisation of chrome salts and chromium dioxide, for specific uses in the aerospace and allied industries, along with a defined use on industrial and power generation turbines. The current authorisation expires in September 2024, but it is hoped that a re-authorisation can be confirmed well before this date.

There are some exciting events in the pipeline for the IMF, not least a golf day to be held late spring/early summer. This is being organised in conjunction with the Oil & Colour Chemists Association (OCCA) and we think will be held at the Windmill hotel and leisure centre on the outskirts of Coventry. Planning is underway, but its probably at bit early yet to confirm everything. Look out for more details in the next edition of IMFormation, and on the IMF website. I am sure this will be an enjoyable day, and an ideal opportunity to network with your peers within the materials finishing industries. It’s particularly pleasing to start co-operating on social events with an allied institution like OCCA, and I hope this will be the first of many such occasions.

Hopefully by May we should be seeing some warmer weather; As we near the end of winter, I don’t think this has been a particularly harsh one, although quite cold on several occasions. I know we still have March to get through, and remembering the “beast from the east” from 2018 lets not celebrate an easy winter too soon!

Graham Armstrong
February 2023
A warm welcome to our new group of students who joined our distance learning courses on the January 2023 Session.

It was a very busy enrolment with 29 Foundation and 7 Technician module enrolments, we look forward to seeing you all at exam time in June/October and hopefully presenting you with a certificate afterwards!

Our next exams are 20\textsuperscript{th} and 21\textsuperscript{st} June 2023, if you are due to take an exam on one of these days please remember to submit your coursework to me by 30\textsuperscript{th} May 2023.

Our next start date will be 2\textsuperscript{nd} June 2023 and application forms for courses should be submitted to me by 22\textsuperscript{nd} May 2023.

Contact me karen@materialsfinishing.org for further information on courses and costs; you can also find details on our website including the syllabus for the Foundation Certificate and each of our Technician Modules.

Karen Yates
Education and Membership Manager
It is with deepest sadness that we have to report that Dr John Peter George (Peter) Farr has died. Peter was a twin brother to Elizabeth and was born in Bristol in 1931. He then went on to study chemistry at the University of Birmingham between 1948 and 1955. After graduating and obtaining his PhD, Peter served his National Service in the Royal Navy Scientific Service at the Services Electronics Research laboratory (SERL) in Harlow, Essex where he ran an electroplating shop that contributed to restoring the radar network in the eastern Mediterranean. Peter’s time at SERL greatly influenced his later interests as he continued with this liaison for the rest of his professional career. In recognition of his long-term services to the Ministry of Defence, in 1988 he was made Honorary Senior Principle Scientific Officer at the Ministry of Defence (RSRE Malvern).

Peter returned to the University of Birmingham in 1958 as one of the first two-year DSIR Post-Doctoral Senior Research Fellows in physical chemistry, where he studied the electro crystallisation of metals. This post influenced the rest of his life, and he would often fondly reminisce about the impact that the late Dr John Randle’s, also in the department, had on him. In 1959 Peter as appointed as a Joseph Lucas Research Fellow in the University’s Department of industrial Metallurgy (later to become the School of Metallurgy and Materials); he held this post for 14 years, after which he was appointed to the teaching staff, where he remained until his retirement in 1998.

Peter first became involved in the (then) Institute of Metal Finishing in1961, becoming a Fellow (FIMF) in 1993. Two years later he first served on the IMF’s Council, when he established its Science Committee, so that the Institute could better focus on the rapidly changing technologies that surface engineering was undergoing. Peter also initiated the Institute’s membership of the Parliamentary and Scientific Committee, where he played a very active role for the following 20 years by providing a communications conduit that interfaced between the surface engineering sector and Parliament.

In 1998 he became the Institute’s Senior Vice President and was President from 1999 to 2001. His Presidency was during a turbulent and uncertain period for both the Institute and the surface engineering sector in general, but Peter determinedly guided us through these times and left us in a very solid and robust state with a greatly increased exposure and status.

Peter was granted the Freedom of the City of London in 2000 and as a Freeman, he was eligible to drive a flock of sheep across London Bridge. He did consider using this freedom but could not borrow a flock to drive!

Peter was always very keen to take on voluntary tasks, including the editorship of numerous prestigious and globally accredited scientific journals. He felt very privileged that his professional employment allowed him to take on voluntary editorial positions such as editor of “Electrodeposition and Surface Treatment”
between 1972 and 1975, when it became “Surface Technology”, for which he was editor until 1986, when it became “Surface and Coatings Technology” where he remained as editor until 1988. In 1991 he became Editor-in-Chief of our publication “Transactions of the Institute of Metals Finishing” – a position he held until 2001 when he became Honorary Editor until 2010. Peter then became Honorary Editor Emeritus, a position he held for the remainder of his life. During this period, he oversaw the transition of Transactions to “Transactions of the Institute of Materials Finishing”, as our Institute changed its name to better reflect the diverse nature of surface coatings and engineering.

In recognition of his efforts both within the IMF and the surface coatings and engineering industries, the Institute has awarded Peter many awards and he became the most awarded individual the Institute has ever honoured for personal and voluntary contributions. In 2004 Peter was given the Hothersall Memorial Award – a biannual award given to individuals in recognition of their outstanding service to the materials finishing industry. This was a followed in 2010 with him being awarded to Institute’s Gold Medal – the highest accolade we can bestow on any person, for outstanding personal, scientific or technical achievements relevant to the objectives of the Institute. Until this date, this award had only been given 13 times since the Institute’s inception in 1925. In 2017, despite him being officially “retired” for almost 20 years, Peter was awarded the Samuel Field Silver Medal, made to any Member who is deemed to have given extraordinary voluntary service to the IMF.

Peter’s voluntary contributions to surface technologies were not limited to the IMF; during his early career, he was also closely involved with the Royal Society of Chemistry, which he joined in 1958. He was later elected as a Fellow (FRSC) and served on the Industrial Physical Chemistry Group from 1976 until his official retirement from the University of Birmingham in 1998; between 1990 and 1995 he was the group’s Chairman. During his membership of the Group, Peter represented the RSC in several meetings with the Czechoslovak Academy of Science in 1979, 1983 and 1989.

Throughout his career, Peter was a great proponent of close liaison between members of surface science’s academia and industry; from 1990 he diligently worked on the Society for Chemical Industry’s Electrochemical Technology Committee, helping to provide an interface for mutual collaboration.

Typical of Peter’s personal interest in others, he was very concerned about the welfare of students and during his time in President of one of the University Halls of Residence, he provided some much needed pastoral care to many of the students who found their changes in lifestyle to be challenging. He also voluntarily served on numerous University bodies and in his final years within the University, he was a University Harassment Advisor. Not content with his academic life, Peter would use some of his vacations to enthusiastically teach students to sail on Coniston Water and introduced many others to the delights of fell walking and occasionally, skiing in Aviemore.

Peter married Dr Margaret Rose in 1970 and they had two daughters – Abigail and Naomi, all of whom survive him and to whom our condolences are sent.
Solvent Cleaning offers solution to reduce energy bills

As energy prices continue to soar, businesses across the country are seriously considering where efficiencies can be made and costs can be cut. Graham Fraser, MD of Fraser Technologies, looks at how a simple switch can have a significant impact on energy usage.

For organisations that require component cleaning and degreasing, switching products can significantly impact energy usage without affecting cleanliness levels. In fact, in many cases, reconsidering cleaning solutions can deliver higher quality results, while also minimising time, cost, and the environmental impact.

Superior cleaning technology – like the new generation of solvents – provides a number of efficiencies. It makes the job easier, faster, and the lower temperature required means that the energy requirements of the system are much lower. Increased automation also saves operator time as the parts only require handling at the start and end of the process rather than constant monitoring throughout.

Using products from the Opteon™ range from Chemours™, such as SF80, reduces weekly CO² usage by 75%, reduces weekly fluid consumption by 50%, and reduces the cost of average daily consumables by eliminating water treatment. One of our aerospace customers found success with sister product, SF79, which has a 100% cleanliness pass rate, is more efficient, and has reduced lead times and costs.

Are solvents safe to use?

Cleaning solvents were historically guilty of very high global warming potential (GWP), which is used to represent the equivalent of CO² being released into the atmosphere, where 1kg of CO² = a GWP of 1. While they once had seriously detrimental effects on the atmosphere, the new generation of solvents have been developed specifically with the environment in mind and are far less harmful than comparable solutions.

Opteon™ SF80 is an extremely safe, non-flammable, and environmentally friendly solvent with no ozone depletion potential, an ultra-low GWP (<2), and does not contain any products regulated under F-gas regulations.

SF80 is also an effective replacement for nPB, TCE, HCFCs, PFCs, HFCs and HFEs solvents, and is becoming known as the leader within a variety of cleaning applications such as vapour degreasing, oil and grease removal, precision cleaning, high solvency defluxing, and silicone removal, amongst many other uses.

The impressive cleaning results of new generation solvents speak for themselves, and the industry is seeing a strong transition from aqueous to solvent systems.

We’ve had real success with transitioning clients on to more efficient solvent solutions as they seek higher levels of cleanliness and increased efficiencies. A well-known, Midlands-based, leading aerospace engineering company made the transition, and they said:

“The 100% cleanliness success rate is exactly what we were looking for. The process is significantly more efficient, which has in turn reduced our lead times and costs. This reduces the cost of the engine and the time spent on the process, which ultimately allows for increased innovation and guarantees the brand’s quality.”

Contact Fraser Technologies today to find out how much money we can save you!
Indestructible Paint – a Midlands-based company which makes high-performance coatings that withstand an incredible 1,000°C – is celebrating strong growth during a climate of challenge, thanks to its investment in both people and innovation. Last year, its cutting-edge coatings – which are primarily used on aircraft and turbines – were instrumental in increasing sales by 20% in 2022 with further growth forecast this year.

Thanks to this growth, Indestructible Paint has been able to create new, highly-skilled jobs in its laboratory to enable further investment in R&D and expansion in the market.

Steve Berry – the company’s recently-appointed laboratory manager – has over 40 years’ experience working to develop new products and is excited about the months ahead, particularly as the company is launching a greener, chrome-free coating to the market, the result of ten years’ dedicated research and a revolution for the industry.

Steve enjoys helping younger chemists to develop their potential and will be nurturing the careers of two recruits to the laboratory – Chris Williams and Marcus Wheatley – who are taking up newly-created roles.

“I’m looking forward to getting more hands-on experience in the world of research and testing which I only glimpsed at university,” says Chris, who is delighted to be joining as an Apprentice R&D Technician following a degree in chemistry. “There are many opportunities here at Indestructible Paint to learn more practical skills and grow my knowledge of the chemical industry in a motivating and supportive environment.”

Marcus has had a varied career and developed an interest in coatings when working for a well-known commercial paint company. Having discovered what he really wanted to do, he thought the opening at Indestructible Paint would be the perfect opportunity.

“The company develops so many advanced products that there is a wide scope to learn and develop,” says Marcus. “It was initially daunting as there is so much to learn but I’ve been surrounded by support and am now working toward qualifying as a Laboratory Technician.”

Indestructible Paint is excited to see careers flourish in its laboratory and to be working together to grow through rapid advancements in sustainable coatings.

For more information or to arrange an interview, contact Loretta Milan on 07773 773060 or at loretta@origineur.com
UPCOMING WEBINAR

How Energy Efficiency is Achieved with ClearVUE.Zero

The IMF is pleased to be holding a webinar on 7th March 2023 at 19-15 hrs aimed at companies who are looking to reducing their energy bills together with their carbon footprint.

“2023 is crunch time for the UK and climate change as the Governments plans to reach Net-Zero and their method to get there, is inadequate and unlawful. ClientEarth and Friends of the Earth challenged the Governments plans to get to Net Zero in court and won in July 2022. Greg Hands the Minister for Energy & Industrial Strategy (at the time) signed off the Net Zero strategy without having the legally required information on how carbon targets would be met. The UK is legally bound to meet the agreements it made as part of the CCA 2008 and it has until March 2023 to revise its strategy. This means the advice businesses have acted on to date, and the current pressure to reduce carbon emissions is not enough and businesses can expect the pace and pressure to rapidly ramp up. This coupled with the commitment at COP27 to reduce emissions by 68% by 2030, businesses can expect seismic changes to reduction and reporting measures to hit them very soon. Being energy efficient saves money and improves the environment – it’s that simple. The repercussions of doing nothing and ‘standing still’, could be catastrophic from a business perspective. Your business could be impacted by loss of supply chain, greenwashing allegations, losing contracts / tenders, being refused bank loans (an ‘at risk’ company), loss of investment, reputation and / or compliance & legislation”.

Please come and join us for what will be a very interesting and informative evening.

To register, please copy and paste the information below into your web browser.

We look forward to seeing you.

Become an Acknowledged Leader in Surface Engineering and Materials Finishing:

Industry Recognised Training Courses from the IMF.

Are you involved with the application of coatings to enhance and protect your products? Do you need to meet client specifications to ensure the longevity of your components? Does the complex world of surface engineering and materials finishing cause you headaches?

If so, the courses offered by the Institute of Materials Finishing (IMF) could be your solution!

The IMF have been promoting knowledge in the surface finishing industries, both inorganic surface treatments including plating and the application of organic paints, lacquers and varnishes for many years. Large numbers of engineers and technicians across a multitude of industries have benefitted from the knowledge gained to enhance their careers, their standing within industry and the ability to problem solve the many challenges they face in their daily working lives!

Starting with the Foundation level course, students gain knowledge on all aspects of materials finishing, specifically aimed at their own industry requirements, but to include sections on Health & Safety, the Environment and Surface Finishing and Corrosion Protection. There is no need for a science background to be able to successfully complete a foundation course.

The Foundation Course requires study of 15 sections and requires the submission of 2 marked assignments followed by an end examination. The course, conducted by distance learning will take 16 weeks to complete. There are three specific study routes to choose from; electroplating, organic coatings and aerospace finishing.
On successful completion, the student is awarded the Foundation Certificate.

To follow on, students can then elect to progress to the Technician level modules, which give more in-depth knowledge for key finishing technologies, their application and best practice methods. Again, both inorganic and organic technologies can be studied to match the industry requirements. There is a choice of eight modules, which provide study in applicable areas of surface finishing best matched to your needs.

Like the Foundation course, study is by distance learning, and the student is required to complete four marked assignments and pass an examination.

Passing two technician modules leads to the award of Technician Certificate; passing four modules leads to the award of an Advanced Technician Certificate.

If you feel your career could benefit from being a recognised specialist in your particular branch of Surface Engineering or Materials Finishing, then contact the IMF today. Speak with our training manager Karen Yates on +44 (0)121 622 7287 or e-mail at karen@materialsfinishing.org.

Move your career to the next level and join the finishing community and all the benefits that gives through the IMF.
JOIN US!
Fischer Hands-on! Workshop
Measuring With XRF

Date: Thursday 16th March 2023
Time: 10-3 pm
Location: Fischer office, Pershore, WR10 2JL

Agenda details:
- The Fundamentals of XRF
- Developing an application (DefMA structure) and influences affecting readings
- The Importance of Calibration
- Getting Hands-on!
- Interpreting Data – making measuring meaningful!
- Question and Answer Session

To join us for this event please register by contacting
Georgina McWhirter
Email: gmcwhirter@fischergb.co.uk
Phone: 01386 577370

www.fischerinstrumentation.co.uk
Precision Cleaning – Own the process and cut the costs

With the cost of living continuing to rise and energy prices doubling, Graham Fraser, MD of Fraser Technologies, discusses the ways businesses can cut costs and increase efficiencies through cleaning, without reducing on quality.

When it comes to component cleaning, compromises can rarely be made on levels of cleanliness, but there are opportunities to make cost savings by ensuring the system being used is the most suitable for the items being cleaned. In many circumstances, investing in the correct equipment and chemistries can lead to a much more efficient and cost-effective process.

While it may seem counterintuitive, an investment and initial cost outlay in the short term could lead to significant efficiencies and cost savings in the medium and long term.

For organisations that currently clean components by hand, there are a number of immediate benefits of automation. Items can be cleaned in batches; it’s an extremely fast activity (in many cases, just a few minutes!); it is much less labour intensive, freeing up the time to get on with other jobs; and the level of cleanliness can be controlled, so every item is consistently, perfectly clean.

We recently started working with an engineering client that had been cleaning components by hand after moving away from solvent cleaning years ago. They found the process was laborious – with staff often spending an hour or two on cleaning parts to ensure oil and residue was removed from each component, and they were fully dry before use.

They began a contract manufacturing high-reliability, plated parts that were retaining a significant amount of grease and residue. In a bid to improve the cleaning quality and save time on the factory floor, they approached Fraser Technologies to look at alternative solutions. While this organisation had - quite rightly - moved away from old generation solvents, Fraser Technologies was able to introduce them to the new generation of solvents that have been developed specifically with the environment in mind and are far less harmful than comparable solutions.

One such product is Opteon™ SF80 from Chemours. SF80 has an ultralow global warming potential (GWP) of less than 2.5, unlike common F-gas solvents that can have a significantly higher GWP. SF80 is just as effective as these damaging competitor products – and in many cases can be even more efficient.

Installing one of our best-selling Solvent machines – which is compact, good value for money and extremely simple to use – along with SF80 has revolutionised their cleaning process. Parts are now consistently spotlessly clean, they can clean more at a time, and the process is complete in just minutes – with no need for rinsing or drying. They’ve found it to be less messy, more efficient, and it also has a positive impact on the team as it is silent and all enclosed, so a much safer and less distracting process.

In the current climate, all investments need to be able to demonstrate a return, but when it comes to cleaning, the return is literally clear to see. An efficient process saves time and money, while also ensuring quality – protecting the reputation of the business and keeping clients happy. When considering investing in cleaning – can any business afford not to?

For more information, please contact us:
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  + Uniformity mapping of samples as large as 300mm
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