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#### **DIARY**

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#### **IMF DIARY**

#### GN

AGM – 29<sup>th</sup> November – Windmill Village Hotel Coventry 11 am - 3 pm invitations to be sent out shortly

#### DISTANCE LEARNING START DATES

Apply by Friday 5th January for start date 19th January 2024A.

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**

It was with regret that the Southern Branch had to cancel the seminar due to be given late September on Cold Metal Spraying but this will be scheduled for either later in the year or early 2024. (Keep an eye out for information on the website).

At present there are no new webinars in the pipeline relating to course work but the varying committees are in discussion about looking at providing webinars for Technician courses. One approach is to look at carrying out interactive tutoring whereby students could attend a live broadcast which would enable that student to be in a similar environment to that of a college.

At the moment, it is early days, but we believe that this could prove very useful to those who really want to get a better understanding of the subject and also gain a Technician Certificate.

## SECRETARY GENERAL'S COLUMN (i)

Oh dear I'm being chased again, but this time it's Barry as he tries to put the October issue of IMFormation to bed! I do have a bit of an excuse, as I'm just back from a business trip to Singapore and the United Arab Emirates.

I must admit there is definitely something in Global Warming if Abu Dhabi is anything to go by: it was 40°C when we were there in the first week in October, and whilst everywhere is air conditioned, just walking about 10 paces from the car to a client's office the heat was enough to overpower one!



It's great to be able to travel "long haul" again, and it was very noticeable how full the planes were both on the way out to Singapore and back from Dubai. I hope this is a good sign for the recovery of industry and commerce as we approach the end of another trading year.

Here in the aerospace engineering coatings industry, it's manic, and my company had another record month in September, our second within the last year! I hope this reflects across all our finishing industries!

Due to me travels I missed the recent Surface World show, held at the NEC in the first week of October, where the IMF sponsored the show and looked after the central networking stand. I understand there was tea and coffee available, so I do hope that those of you who went to the show availed yourself of this facility and had a chat with some of the team there.

There are some exciting times ahead, especially with our working relationship with the Oil & Colour Chemists Association. On Tuesday 21<sup>st</sup> and Wednesday 22<sup>nd</sup>, OCCA are holding the "Surcon 2023" conference, which we at the IMF are supporting. In fact, our President, Karl Ryder will be presenting a paper on the Wednesday entitled "Electrochemical and Spectroscopic properties of electronically conducting polymers". I'm sure the conference team at OCCA would welcome attendance from IMF members.

During 2024 the IMF will also be supporting the "Surfex" conference and exhibition to be held at the Coventry Building Society arena on the 4<sup>th</sup> and 5<sup>th</sup> June. Again, the IMF will be supporting this event, and it is possible we will arrange a conference session during the 2 days.



A final thought for 2014 is to repeat the very successful joint IMF/OCCA golf day, held in May this year. I have already received approaches from teams who took part earlier this year, so will talk to Helen and Ann-Marie of OCCA to see if something can be put together.

This will be the last issue of Information before our Annual General Meeting, to be held at the Windmill Village Hotel in Coventry of the 29<sup>th</sup> of November 2023. I really look forward to meeting as many of you as possible at the AGM, so please make sure you register with Helen to attend.

## **SURCON**

# SURCON 2023 Inspiring Colourful Futures

Tuesday 21 and Wednesday 22 November 2023 Warwick Conferences, University of Warwick



www.materials-finishing.org

### **BRITISH STANDARDS INSTITUTE**

The Institute of Materials Finishing has sponsored an involvement with the British Standards Institute (BSI) for more than a decade.

The BSI takes a very dominant role in the formulation of European and International Standards as well as writing and reviewing the documents adopted nationally.



The existence of these standards is of

paramount importance since these provide the framework for quality requirements for multi-national original equipment manufacturers. They set realistic expectations in many different markets and guide manufacturers in the selection of materials or processes needed to meet performance requirements.

I chair STI/33, the committee responsible for electrodeposited coatings and anodising and sit on FME/9 which is responsible for fastener standards. These committees meet twice each year; European and International Standards Committees come together every twelve months.

Although there is a number of interested parties represented on these committees, we would like more applicators of finishing processes; please let the IMF know if you are interested in helping.

We are currently working on a revision of the standard governing zinc electroplating to separate the performance requirements of hexavalent chromium passivates and trivalent



systems to avoid the latter being covered in two different standards. It is important to keep the document for hexavalent systems up-to-date since its use is likely to remain authorised in specific uses for many years to come.

John Oliver

### **SURFACE WORLD 2023**

The IMF were pleased to again have the opportunity to be present at Surface World 2023, at the NEC Birmingham. We presented the range of education courses we offer for the surface finishing market which range from Foundation level up to Technician grade alongside our other activities such as webinars and expert advice. The interaction between both the visitors and the exhibitors confirmed the growing interest and demand for such training.







The ever changing conditions that finished products are asked to perform against necessitates a level of knowledge operators, designers, specifiers and applicators that needs to be maintained.

There were many OEM's who also expressed their need for support in these areas.

The IMF would like to thank the hosts for the excellent organisation and support given to us



## **AGM**

#### **IMF AGM 2023**



To be held at

Windmill Village Hotel
Birmingham Road,
Allesley
Coventry
CV5 9AL



10.45 am – Arrival – Coffee and Biscuits on arrival.

11.00 am – Morning Session Commences

2 lectures followed by Presentation of awards.

12.30 pm - Break for Lunch

1.45 pm - Afternoon Session Commences

3.00pm - Finish

For more details contact Helen on 0121 622 7387

or email helen@materialsfinishing.org

## **EDUCATION AND TRAINING (i)**

## THE INSTITUTE OF MATERIALS FINISHING

INTERNATIONALLY RECOGNISED QUALIFICATIONS We are a leading provider of technical training and skills development for employers and individuals. IMF courses lead to recognised qualifications and cover a wide range of materials finishing and surface engineering applications.

IMF tutored courses, distance learning and corporate training underpin business performance and enable profitability.

#### **Foundation Module Basic Surface Finishing**

Develops fundamental understanding from 29 Units of which a student studies 15, including 7 mandatory units. One of three core technology blocks are chosen, either **Electroplating** (8, 9, 10 & 18); **Organic Coating** (19, 20, 21, & 23); or **Aerospace Finishing** (19, 21, 24 & 25), each comprising 5 units plus 3 optional units relevant to the student or their employer – all units are listed below.

Two pieces of marked coursework are required and on passing an examination a student is awarded the **Foundation Certificate**.

			ř
Unit 1 *	Surface Finishing	Unit 16	Alloy Plating & Composites
Unit 2 *	Corrosion	Unit 17	Printed Circuit Board Processes
Unit 3 *	The Environment & Surface Finishing	Unit 18	Electroplating - Care & Maintenance of
Unit 4 *	Health and Safety		Solutions & Product Quality
Unit 5 *	Cleaning and Pre-treatment	Unit 19	Conventional Paint Processes (Double unit)
Unit 6 *	Sacrificial Coatings	Unit 20	Electrophoretic Paint Processes
Unit 7 *	Services	Unit 21	Paint Application Methods
Unit 8	Surface Improvement	Unit 22	Coating Powders & Application
Unit 9	Principles & use of Electroplating	Unit 23	Testing Paint & Powder & Coatings
	(Double unit)	Unit 24	Chemical Conversion Coatings and
Unit 10	Plant and Equipment		Sol Gel Coatings
Unit 11	Copper, Silver and Gold Plating	Unit 25	Anodising of Aluminium & Alloys
Unit 12	Nickel Plating	Unit 26	Vacuum Coating Processes
Unit 13	Chromium Plating	Unit 27	Duplex Coatings of Galvanising plus Paint
Unit 14	Zinc & Cadmium Plating & Passivation	Unit 28	Electroforming
Unit 15	Electroless Plating	Unit 29	Nanotechnology
Official	Licetioics Fideing		

<sup>\*</sup> Mandatory units

On achievement of the **Foundation Certificate** candidates may wish to progress to the **Technician level modules**, please see over the page for details.

## **EDUCATION AND TRAINING (ii)**



#### **Technician Modules**

Develops in-depth knowledge for key finishing technologies and their application and best practice methods.

Principles of Electroplating Broad introduction to electroplating technology

Electroplating Practice Industrial application of major metals and supporting pre-treatments for

electroplating and electroless deposition

Paints, Lacquers & Varnishes\*\* Application methods, equipment, curing, drying and testing of solvent and

water based industrial finishing processes

Powder Coating Application methods, testing, environmental, health & safety topics

Environment, Health & Safety Legislation information on environmental, health & safety topics

Materials Science Manufacture, properties and examination of materials which require

various forms of coating or treatment to meet service life needs

Automotive Surface Finishing\*\* Applications specific to the automotive industry

Electroforming How electroforming can be used to manufacture components and tooling

On successful completion of four marked assignments and passing an examination, a student is awarded a **Technician Module** certificate.

Passing two Technician modules leads to the award of **Technician Certificate**.

Passing four Technician modules leads to the award of **Advanced Technician Certificate**.

\*\* These modules together cannot rate towards the award of a Technician Certificate

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INCREASE PROFITABILITY

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IMPROVE QUALITY

IMPROVE QUALITY

MAXIMISE PRODUCTIVITY

DESIGNED TO UPSKILL YOUR WORKFORCE

## ATOTECH (i)



Leading surface-finishing solutions

# The optimal solution for long life cleaning MKS' Atotech UniPrep system, a combination of advanced cleaning processes and oil elimination equipment

#### MKS facilitates high efficiency cleaning and degreasing in standard production

Cleaning and degreasing of a metal substrate's surface are essential for all highperformance paint applications. To ensure efficient pretreatment coating deposition, uniform paint coverage, and adequate corrosion resistance, organic and inorganic soils or contaminants must be removed from the surface.

For organic soils, conventional alkaline cleaners provide the necessary degreasing characteristics to prepare the metal for pretreatment. However, these cleaners often operate at elevated temperatures (55 - 80 °C), have a short solution life and a declining cleaning efficiency as the organic soils build up. Additionally, conventional cleaners often contain phosphorus, boron and alkylphenol ethoxylates (APEs), all compounds considered substances of concern with increasing regulation globally, while also being a maintenance and wastewater treatment burden.

UniPrep® cleaners are the ideal alternative to conventional degreasing products. UniPrep® processes are capable of extended solution life promoting the natural degradation of

organic soils removed and emulsified during the cleaning process. By achieving this, UniPrep® cleaners create a more efficient and stable process for applicators, requiring less frequent cleaner make-ups and

## ATOTECH (ii)

reducing wastewater treatment burden. UniPrep® long life cleaners are formulated without phosphorus, boron, and APEs, providing a solution for environmentally conscious applicators.

UniPrep<sup>®</sup> cleaners also offer the unique advantage of low temperature operation, a highly sought-after process trait by applicators seeking reduced energy costs and improved carbon footprint. By utilizing sophisticated surfactant systems in combination with robust builders, UniPrep<sup>®</sup> cleaners can efficiently function at low to ambient temperature without compromising performance.

For superior process versatility, the UniPrep<sup>®</sup> cleaner portfolio offers a wide range of products developed for spray and/or immersion mode, ideal for pre-paint applications as well as rack and barrel plating suitable for various industries such as automotive, heavy machinery, construction, white goods, or furniture industry.

A natural by-product of cleaning stamped or formed metal parts is the introduction of oil into the degreasing solution. These soils often limit the solution life of conventional cleaners, resulting in frequent make-ups. With a goal of continuous process improvement MKS developed specialized oil elimination equipment,

UniPrep® ISOtect, an easy-to-implement turnkey auxiliary equipment, to further enhance the efficiency of UniPrep® long life cleaning processes. Suitable for the use with all UniPrep® long life cleaning processes but especially effective in high oil loading applications, UniPrep® ISOtect equipment improves the efficiency of oil degradation. Further enhancing cleaning consistency and solution life, UniPrep® ISOtect offers applicators a simple-to-use integrated system that will improve nearly all aspects of the cleaning process, including chemical consumption, maintenance requirements and overall operational costs.





## ATOTECH (iii)



Image 1: UniPrep<sup>®</sup> spray application in white goods manufacturing



Image 2: UniPrep® ISOtect oil elimination equipment



## **ATOTECH (iv)**

#### Contact

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#### **About Atotech**

Atotech, a brand within the Materials Solutions Division of MKS Instruments, develops leading process and manufacturing technologies for advanced surface modification, electroless and electrolytic plating, and surface finishing. Applying a comprehensive systems-and-solutions approach, Atotech's portfolio includes chemistry, equipment, software, and services for innovative and high-technology applications. These solutions are used in a wide variety of end-markets, including datacenter, consumer electronics and communications infrastructure, as well as in numerous industrial and consumer applications such as automotive, heavy machinery, and household appliances.

With its well-established innovative strength and industry-leading global TechCenter network, MKS delivers pioneering solutions through its Atotech brand – combined with unparalleled on-site support for customers worldwide. For more information about Atotech, please visit us at atotech.com.



#### FRASER TECHNOLOGIES

# Are You A 3m<sup>®</sup> User? Start To Find A Suitable Alternative Now

You may have heard the latest information from 3M® that they will exit from PFAS manufacturing in the near future. If you are a current 3M® PFAS product user you will need to start to find alternative chemistries. Find out what steps you have to take below.

## What is the update from 3M®?

3M® have announced that they will stop manufacturing the Novec HFE materials by the end of 2025. Please go to our website to see a copy of the notice. They also have stated in a letter sent to all their customers that they cannot guarantee supply and that current users should be looking at alternatives as quickly as possible.

## Are you a current 3M<sup>®</sup> user? If yes what does the update from 3M<sup>®</sup> mean for you?

While there are no immediate issues with supply it would be prudent to consider your options before the supply of the 3M® materials becomes an issue. Frasers can help with direct drop in alternatives to the Novec materials as well as alternative technologies

such as water wash and solvent recovery systems etc.

## What alternatives are available for me to switch to?

There are a few direct drop in alternatives available, but it should be noted that many of these contain HFE materials manufactured by 3M®. These can sometimes be hidden away and not openly declared so it is important to know what is in any alternative you are considering and the source of these materials. Frasers can assist with evaluating your current application and offer free advice on legal compliance and safe. available alternatives such as the Chemours Opteon™ speciality fluids which are direct drop in alternatives.

## What to be aware of before you switch?

Suitability of equipment, material compatibility, product performance and legal compliance are just some of the key areas to look at here. At Frasers we can run application trials with suitable alternatives and advise on alternative chemistries and or equipment if relevant.



## When do I need to make the switch?

You can either be proactive and line up suitable alternatives in advance or wait until supply ends or is interrupted. The choice is yours but, but supply will stop and switching systems can sometime take time, so allow time for this. If you are not wanting to make any immediate changes that will be ok, but we would definitely suggest putting this into your diary for January 2024.

#### What shall I do now?

We are currently offering free 3M® switch reviews for any customers who are wanting some advice on when they should make their switch and how the process would work for them, as remember every application is different. Contact us today to get this in your diary to avoid any disruption to not only your cleaning supplies/procedure but more importantly your production line.

For more information, please contact us:
Tel: 01506 443058 | E-mail: sales@frasertech.co.uk | www.frasertech.co.uk

## **GOLF DAY**

## IMF **GO**LF DAY 2024

If you are interest in joining us for our Golf day in May 2024 Please email

Helen@materialsfinishing.org

For More information.



# 8

#### **FISCHER**

## Measuring Made Easy - And now FREE...

## Do your product coatings meet specification? Have you been supplied the right materials?

Using the latest instruments and techniques, Fischer will test your samples for free and quickly report the results'. We are a German original equipment manufacturer and we support customers control their processes, reduce scrap and cut costs.

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- Validate your measurements and process capability
- Take corrective action to prevent non-conformity
- Check 'goods in' from suppliers and verify that they comply with the Certificate of Conformity
- Prepare for an audit
- Plan new process/product development
- Save money and time!

To arrange your free sample testing please contact us:

Fischer Instrumentation (GB) Ltd

www.fischerinstrumentation.co.uk

+44 (0) 1386 577370 mail@fischergb.co.uk

\*Subject to availability







#### **EXHIBITIONS**





