Congratulations to all our students who passed Distance Learning exams taken in June 2021!

**Foundation Certificate** -
9 passes, 10 Merits and 3 Distinctions

**Technician Modules** –
2 passes, 9 Merits and 5 Distinctions

Our next start date for all Distance Learning courses is 10th September 2021; you may enrol from 1st August 2021

For more information on some of the courses available see the Outside Back Page
IMF DIARY

ANNUAL GENERAL MEETING

7th December 2021

DISTANCE LEARNING START DATES

Friday 10th September 2021

You may enrol from now

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

Revision session for students studying and taking examinations on Electroplating.

7th September 2021 at 19-00

Driving the Electric Revolution & Ready for Electrification

28th September 2021 at: 19-00

For full details see page 6
Gosh, how life has changed! Gone are the dark, dismal days of being confined to working from home, with minimal contact or physical interaction with other human beings. Now we are allowed some degree of return to normality, it is such a treat to be allowed back into my company’s offices and to visit customers again. In fact, I’ve had so many requests to “come and see us” from clients, admittedly still only in the UK, that in the last month I’ve hardly had time to think, let alone put my thoughts to this column.

So, if this copy of IMFormation is a little late in arriving, please blame me for not getting my thoughts down in print to meet Helen’s deadline!

It is encouraging to see business start to return to something approaching pre-pandemic levels, although there is still a way to go before all of us can regain our full confidence.

Certainly it is encouraging to see new projects being started across quite a range of materials finishing processes, which I am sure bodes well for the future.

We still have the spectre of REACH hanging over us, and I’ve recently heard a rumour that ECHA are considering a clamp down on coatings containing “authorised” chemicals, to include strontium chromate and chromium trioxide for sale to New Customers within the EU. In my humble opinion, this must be considered as a restriction of trade, but as the EU consider Great Britain as just another small country, I can’t really see us winning the battle.

Within the aerospace industries, with
which I and my company are closely linked, there is an initiative to go for re-authorisation of chromium trioxide and chrome salts. By closer defining the end uses, and with companies across the supply chain, it is hoped that a simpler, better defined application will be submitted to enable continued use of these chemicals after the first authorisation ends in September 2024. If your company is involved in aerospace and needs further information on this scheme, please let me know and I’ll forward more information.

I’ve kept the hot news until last, so please sit down before reading further!

The Institute is moving, hopefully within the next few weeks! Having offices within the centre of Birmingham has become an increasing issue for both Helen and Karen, and those volunteers who continue to need to attend. The introduction of the clean air charge to the centre of Birmingham, allied to an increasingly difficult commute were major contributing factors.

Whilst we had no real plans to move, we received an offer to purchase Exeter House, which was, frankly too good to turn down. Helen and I therefore started to look for alternative premises, close to but outside the metropolis of Birmingham, to take account of easy access both by road and public transport. It’s great to be able to report a self-contained, detached office building in a small courtyard in Coleshill was found which better suits the Institutes purpose than the old Exeter House.

It’s even more encouraging to report that there will be a cash surplus as “New Exeter House” was considerably less than we were offered for the current offices. The proposal was approved unanimously by the board of trustees, so Helen, Karen and I are now going through the traumas of solicitors, and the nightmare of buying and selling property! Hopefully by the time of the next issue of IMFormation, we’ll be happily ensconced in our new bright and cheerful offices.

Graham Armstrong

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ReGaIL
Recovery of Gallium with Ionic Liquids

ReGaIL is an Innovate UK funded project that has successfully demonstrated the feasibility of recovering gallium and other metals from WEEE sourced LEDs using "Green Chemistry" by way of Deep Eutectic Solvents (aka Ionic Liquids). More excitingly, the developed technology is not limited to just gallium and could be applicable to a wide range of other metals.

Gallium is a Critical Raw Material and is mainly sourced from China; it is found as a trace element in conjunction with a variety of minerals, the most common being ores such as sphalerite and bauxite. It also occurs in minerals such as diaspore, germanite and occasionally in coal. Gallium is used in many industries, but primarily in electronic circuits, semiconductors, and LEDs, where it is usually found in compound semiconductors such as gallium arsenide, or phosphide and nitride.

Gallium has many interesting properties, not least being its low melting point (29.8°C), so it can melt in the hand. It also readily forms stable intermetallic compounds with many other metals. These properties can create issues when recovering the metal using conventional techniques.

The technology being developed is not limited to gallium, so if your business has an interest in metal and materials recovery, the consortium may be able to help you.


Further details can be obtained from any partner or the project website: www.gallium-recycling.co.uk.
Driving the Electric Revolution & Ready for Electrification

Date: 28th September 2021    Time: 19-00 hrs

The IMF are pleased to be able to present the above seminars which are very applicable to modern day “Green” revolution.
“Driving the Electric Revolution” will be presented by UK Research & Innovation. It was launched in 2019 as part of the Industrial Strategy Challenge Fund (ISCF) programme. It is needed in order to reach net zero carbon emissions where industries of all kinds must move to clean technologies and electrification.
“Ready for Electrification” will be presented by Steven Norgrove from Warwick University and has been initiated to raise awareness of the sweeping changes, across many sectors, that the move away from internal combustion engines will bring.
The seminar will be held over Zoom and we are looking forward to an exciting and interesting evening.
If you wish to join us and register, then please contact:
Helen@materialsfinishing.org

Revision session for students studying and taking examinations on Electroplating.

This will be held on the 7th September 2021 at 19-00 over Zoom.

The session will give students, who are taking their upcoming examinations in Electroplating, the opportunity to ask questions on areas that may be of concern in this subject.

It is a new venture by the IMF and it is hoped that students will obtain a better understanding of the subject.

To book your place on this please contact either:

helen@materialsfinishing.org
OR
karen@materialsfinishing.org
Cutting carbon through cleaning

*Graham Fraser, MD of Fraser Technologies, discusses how changing the chemicals used in cleaning processes can significantly reduce carbon footprint.*

There has never been a bigger focus on reducing carbon emissions. Almost daily, we’re seeing businesses make net zero pledges, as more people realise that we must all act now to safeguard a liveable climate for future generations.

For organisations looking to meet emission goals, every element of the business process should be considered, and a good place to start is with cleaning. A very simple switch can have a major impact, especially for those who haven’t recently checked what products they use.

Cleaning solvents were historically guilty of very high Global Warming Potential (GWP) and had detrimental effects on the atmosphere. However, a new generation of solvents has been developed specifically with the environment in mind and are far less harmful than comparable solutions.

GWP is one method for measuring the impact a gas will have on the atmosphere, where 1kg of CO₂ = a GWP of 1. For companies manufacturing gases, and for those purchasing and using them, it is critical to manage environmental impact by keeping the GWP as low as possible.

As a business, we too are committed to reducing emissions, and only offer the most sustainable products on the market. For example, Opteon™ SF80 from Chemours has an ultralow GWP of less than 2.5, compared to common F-gas solvents that can have a GWP of up to 11,000. The impact that this simple switch can have is incredible – and it is as effective (and in some cases more efficient) than competitor products. Not only does it help meet lower carbon goals, but it can also improve the cleaning process and save money.

**How much carbon be saved by switching solvents?**

Many businesses have already made the switch to lower GWP solvents and have proven the positive effect it can have. We recently worked with an aerospace manufacturer to find an alternative to the high-GWP solvent they were using. We switched their solvent to SF80 and assisted in optimising their processes to reduce solvent consumption.

This change reduced their overall usage of solvent by 28%, saved them around £30,000 per year, and significantly reduced their carbon emissions. The CO₂ emissions created by the customer were previously equal to driving 143 times around the world. With the switch to SF80, the new emissions are the equivalent of driving from Edinburgh to Moscow. The statistics on global warming are stark, and even more alarming is that current targets fall short on solving the climate crisis.

This issue can be almost exclusively attributed to harmful gases in the atmosphere, and we can fix much of this by making small changes in all that we do. When it comes to cleaning processes, the solution is already available, with more environmentally friendly solvents that yield the same results, Making this change could be one of easiest ways to meet your company’s carbon goals, while playing your part in protecting our world.

To find out more, visit frasertech.co.uk or call 01506 443058
INDESTRUCTIBLE PAINT GAINS EXTENSION FOR CHROME REPLACEMENT DEVELOPMENT

Indestructible Paint Ltd.’s commitment to developing alternatives to chrome-based products has been enhanced through a further focus on the aerospace industry by the performance paint and coatings manufacturer. The company is set to continue its commitment to this key field of corrosion protection for light alloys – one of the most challenging application areas – as a result of new chrome replacement target dates that have now been set for specific products by the European Chemical Agency (ECHA).

“REACH authorisation for specific products that use pentazinc chromate octahydroxide has been granted for 12 years to January 2031,” says Brian Norton, Indestructible Paint’s Managing Director, at the company’s Birmingham office. “This relates to supplies of a particular anti-corrosion primer that is used by our aerospace customers on components that relate only to flight operations such as engine fan cases and fuel tanks.” He points out that time is now available for thorough certification of the latest generation of Indestructible Chrome Free Coatings that meet the demands of these harsh environments.

“However, the overall company strategy, which has been a key focus of Indestructible Paint’s highly regarded research and development department for a number of years, is to continue development of products that can replace those that include chrome pigments,” adds Brian Norton. In Indestructible Paint’s case, this has pointed towards developing specific anti-corrosion primers that are particularly relevant to one of the world’s leading aerospace manufacturing companies.

“The agreement to extend the use of this particular primer beyond the sunset date for pentazinc chromate octahydroxide recognises the importance and complexity of the subject – which, of course, has an important health and safety significance,” continues Brian Norton. “We continue to be committed to working towards the goal of chrome-free products and to developing our already advanced coating solutions with leading manufacturers in this sector, and look forward now to our further work in the areas defined by the ECHA’s extended timeframe.”

Indestructible Paint Ltd.
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Website : www.indestructible.co.uk
HMG Paints launch new Fence and Shed Paint colours

The UK’s largest Independent Paint Manufacturer expand Fence and Shed Paint range of colours for Summer 2021. Available online and through distribution across the country, the new colours are already being utilised in gardens ahead of the next heatwave.

The newly launched colours can be viewed online at shop.hmgpaint.com with swatches available to view in many HMG distribution outlets. Whether you like traditional timber colours, statement colours or light pastels, this colour selection covers a myriad of popular shades. The Fence and Shed Paint offers a premium quality water-based, protective finish for use on rough sawn wood and can be used on fences, sheds, other garden areas and furniture.

Reviewing the product, K.Jones a professional Painter and Decorator commented “I was recommended to use this by a painter and it was lovely paint. Went on so nicely and really, happy with the colour. Service was excellent, the online chat function means you can get great help pretty quickly and delivery was fast too. Would 100% use again.” HMG’s new innovative water-based MSH colourants have been used across the range and provide excellent colour retention and weather fastness to ensure the colour stays brighter for longer, as well as superior coverage meaning users get more value for their money.

“After a successful reception of the Fence and Shed Paint in 2020, we are delighted to be launching new shades for Summer 2021.” Commented Danny Cleary, Sales Director, HMG Paints Ltd. “Over the past year we have seen a plethora of customers convert to HMG Paints’ Fence and Shed Paint after being tired of doing numerous coats with competitor products. Sales for HMG’s fence paints are on the upturn once again in the warmer weather and we are excited to be stocking the range including the new colours.” Commented Brian Green, Director of Topdec Decorating Supplies.

The Fence and Shed Paint can be applied by brush, roller, or spray application. HMG Fence and Shed Paint is available for purchase at https://shop.hmgpaint.com and through HMG distributors. Find your local distributor now at - https://shop.hmgpaint.com/find-stockist/

Features and benefits

- Fast drying
- Water based
- Low Odour
- Safe to use around plants and pets
SURFACE WORLD 2022

REVISED DATES:
2nd & 3rd MARCH 2022

Sponsored by The Institute of Materials Finishing
Proud supporters of the British surface finishing industry

- See the latest technology and new products
- Discuss business with new and existing suppliers
- Take advantage of the exclusive show offers
- Watch live demonstrations
- Get advice from experts in the industry
- Your industry under one roof over two days
- The only exhibition in the UK dedicated to the surface finishing industry

SURFACE WORLD LIVE
NEC, BIRMINGHAM
2nd & 3rd MARCH 2022

FREE ENTRY

Why not beat the queues and register online. Visit www.surfaceworld.com, just click on the registration banner and enter your details.
OTHER EXHIBITIONS

ADVANCED ENGINEERING 2021
3rd & 4th November 2021 at the NEC

MACH 4–8 April 2022
NEC Birmingham UK
machexhibition.com

SURFEX 7-8 June 2022
The complete event for surface & coatings technology
EXHIBITION INDUSTRY INSIGHT SURFACING SCIENCE TECHFOCUS THE CUTTING EDGE Ricoh Arena, Coventry, UK

IMFORMATION AUGUST 2021
Foundation Certificate in basic surface finishing

Choose a Technical block either Electroplating, Aerospace or Organic and then another 3 units of your choice, further details available on our website [http://www.materialsfinishing.org/education.htm](http://www.materialsfinishing.org/education.htm)

If you have already achieved the IMF Foundation Certificate why not enhance your skills further with one of our Technician Modules -

There are 8 modules to choose from:

- Principles of Electroplating
- Electroplating Practice
- Electroforming
- Paint, Lacquer & Varnish
- Powder Coating
- Automotive Surface Engineering
- Health, Safety & Environmental
- Materials Science

If you pass two Technician modules* you would be eligible for the Award of Technician Certificate, this qualification is recognised by the Engineering Council.

*The Automotive and PLV modules cannot be chosen together towards receipt of a Technician Certificate

For further details and costs please contact Karen Yates - karen@materialsfinishing.org