

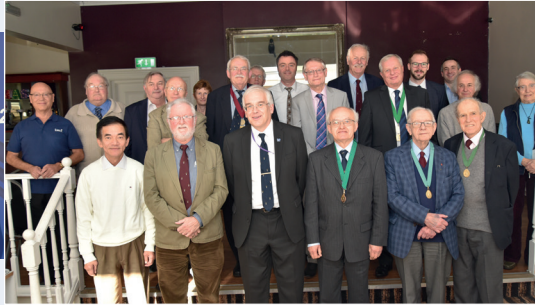


information

This year's AGM was held at the Cobden Hotel in Birmingham
Thanks to our two speakers for their presentation:



Dr. Guillaume Remy
Warwick University



Stuart Downie
Super Yacht Finishing

★ THE AWARDS WINNERS WERE: ★



Best Student
at Foundation Level
Nicholas Veale



Gold Medal
Anne Chapman



Best Student
at Technician Level
Ruben Dario Camacho Burgos

Silver
Award
Peter Farr

Pexa - Preparation and characterisation of acrylic-polyurethane-based waterborne anticorrosion coating on galvanised steel.

Authors: AK Singh, S Alam and N Rani.

Jim Kape Memorial Medal

Areas of concern in an anodised dissimilar friction stir weld of AA5083 and AA6082 aluminium alloys. U. Donatus, G.E. Thompson, S. Morsch and I.-L. Tsai
94(2), 70-75.

Canning Bi-Centenary Medal

Development of chromate-free coated steel sheet with high corrosion resistance and conductivity
T. Matsuda, K. Tsuchimoto, A. Matsuzaki, K. Croes and V.J. Gelling
94(5), 231-235.

Westinghouse Prize

Electrodeposition of copper-tin alloys using deep eutectic solvents
A.P. Abbott, A.I. Alhaji, K.S. Ryder, M. Horne and T. Rodopoulos
94(2), 104-113.

Wishing all our Members a Merry Christmas and Prosperous New Year

imf diary

IMF Events

9th February 2018
Education Enrolment Date

9th - 13th April 2018
MACH 2018

19th - 20th September 2018
Surface World NEC

Northeast Branch

Saturday 24th February
Dinner Dance

Thorpe Park Hotel & Spa Leeds
Live music by the sensational
OKTCQuiz & Raffle

All welcome

Contact John Torr FIMF
j.torr@tesco.net or 077 666 58401

Keep in Touch

Please make sure we have your contact details up to date. Any changes please contact David on 0121 622 7387 or email: david@materialsfinishing.org

The IMF tells Parliament about the importance of surface engineering.

The IMF is an associate member of the Houses of Parliament's Parliamentary and Science Committee (PSC) and was invited by the committee to submit an article to their Science In Parliament journal extolling the importance of the surface engineering industry. This article has now been published in the recently issued summer edition of Science in Parliament and its content has been previously published in both IMFormation and TIMF. In summary, in 2015/16 the surface coatings industry contributed an estimated £13.5bn to the UK economy and through improving surface characteristics and performances, it positively impacted products valued at about £173bn, directly adding value to 50% of the UK's £358bn total manufacturing sales. The article also highlighted some of the benefits derived from the industry as well as some of the issues and opportunities it faces.

Trevor Crichton (Science Committee)

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Secretary General's Column, October 2017

This has been a busy six weeks, with much activity taking place particularly with the external co-operation with allied associations to promote the materials finishing and surface engineering industries.

Following on from the first meeting of the trailblazer group in October, the two groups formed at that meeting have been preparing draft standards for apprentice schemes for both levels L1-L3 and L5-L7. These have been circulated to all interested parties and are currently under review. I hope to be able to give more details of these proposed schemes as the review process finishes.

During November, the IOM3 initiative to promote surface engineering in schools held the first "teachers conference" titled "Surface Engineering, it's more than skin deep", at The Boilerhouse in Grantham. Seventeen secondary teachers, all involved in STEM activities, along with 9 sixth form science students attended the one-day event. The morning plenary session featured presentations about materials finishing and surface engineering and the necessary part this plays in everyday life, and detailed how the majority of everyday items we all use benefit from some form of surface treatment. The papers were well received and initiated some interesting questions and discussions.

In the afternoon, three practical sessions took place, to include both brazing and vitreous enamelling. During this session, the IMF ran a demonstration of electrophoretic paint application and LED UV light curing which was very well received and again stimulated detailed discussion. My thanks go to Janet and Peter Hope of LVH Coatings for the loan of the demonstration unit, and for allowing the novice that was me to "play" with their kit!

The initial brief of the conference, to stimulate an interest to teach surface engineering in schools, was I think met by the day's activities, and I am aware of positive feedback from the teachers who attended.

Following on from the Cranfield meeting in the summer, a remit was given to senior figures within interested Institutes and industry associations to look at a possible Leadership Forum for materials finishing and surface engineering, to promote a united view of our industry to government and other interested bodies. The initial meeting was held during November, and was attended by senior representatives of IOM3; SEA; Vitreous Enamellers Association; BCF, with myself representing the IMF. The general view was that such a forum would be beneficial to promote our important industries, and the team present have been tasked with putting together terms of reference and modus operandi before a follow up meeting in the new year. As this group progresses I will keep members updated on what could

be a highly beneficial initiative.

I was good to meet those members who attended the annual general meeting at the end of December, but slightly concerning at the reducing numbers of members attending! We were treated to two excellent technical papers; Stuart Downie gave an insight into the complex and time-consuming finishing of Super Yachts, and was followed by a presentation on non-destructive scanning techniques by Guillaume Remy from the University of Warwick. As usual we also enjoyed the first Christmas lunch of the year! Congratulations must go to Helen for the usual superb organisation!

Noting the reducing numbers of attendees, we are looking at possible alternative ways of arranging the AGM, with a suggestion of a mid-afternoon start, running into early evening, so as not to fully tie up the working day. Any thoughts from members would be gratefully received!

You may have heard of some new regulations coming into force in May 2018 concerning the storing of company and individual data by all types of organisations, including technical institutes. Called the "General Data Protection Regulations", or GDPR for short, these new regulations are primarily to protect both individuals and companies from having their personal data readily available. However, for bodies who use data to communicate with members, as we at the IMF do, there are some onerous new rules we must follow to avoid what are predicted to be large fines.

Members of our team will be attending training conferences of these new regulations in the new year, but certainly we will need to communicate with you to seek permission to retain your data before May 2018.

May I take this opportunity to wish you all complements of the season, and a happy, healthy and prosperous new year!



Graham Armstrong
December 2017

Our Hong Kong Fellows

The IMF has several FIMF members resident in Hong Kong, active in the surface finishing industry throughout Asia. Including Clive Whittington of C.M.Whittington & Associates Ltd, Dr William W.Y. Lo of Hong Kong Productivity Council and Dr Andrew C.Y.King of Hawking International Far East Group, pictured here.

Over the past three years they have co-operated on original research projects to prevent nickel release from decorative bright electroplated articles in the context of nickel acquired contact dermatitis. A subject that has a huge impact upon Hong Kong Companies manufacturing watches, costume jewellery, mobile phones, plus other hand-held electronic and consumer products.

'Nickel Allergy' sometimes occurs when nickel containing articles are in prolonged and direct contact with skin, leading to corrosion of elemental nickel by sweat, liberating sufficient nickel ions to be absorbed through the skin and initiate an allergenic effect. EU 'Nickel Restrictions' legislation imposes limits on the amount of nickel released from such articles but permits a non-nickel surface coating that can ensure the rate of nickel release is within a given limits after two years of normal use. Official CEN tests for coated items cover simulated wear and corrosion, followed by determination of nickel release, and articles cannot be placed on the market unless they pass these tests.

The original work of Clive Whittington and William Lo has taken two paths requiring a non-nickel top coat over bright nickel that will prevent nickel release and pass the authorised CEN test methods for simulated wear and corrosion under EN 12472, followed by determination of nickel release under EN 1811:

An electrodeposit of chromium from either a hexavalent or a trivalent electrolyte.
An electrophoretic coating directly over bright nickel deposit.

In the latter area, Andrew King was able to provide test specimens of moulded ABS plastics, copper-bright nickel plated, plus a cathodic polyurethane electrophoretic top coat that passed the nickel release tests with flying colours.

The first stage of this work was reported in Transactions during 2015 and was awarded the Canning Bi-Centenary Award last year.

Download:

www.tandfonline.com/doi/full/10.1179/020296715Z.000000000253

A full report on all the latest work will follow in the New Year.



New opportunity with Industrial Strategy Challenge Fund

The Government's recent announcement to eliminate the sale of new petrol and diesel cars and vans from 2040 provides new opportunities and challenges to both the transport and electrical energy storage industries, such as in the development of new electrode surfaces and chemistries. It will also open up new challenges in developing the circular economy and green chemistry, as the demand for reusable and recyclable systems will increase.

In conjunction with this target date, the Government has also announced the flagship Industrial Strategy Challenge Fund, committing £1 billion over the next 4 years. This new opportunity is designed to help deliver a step-change in the UK's ability to turn its research strengths into commercialised products and is aimed at enabling businesses of all sectors to unlock markets and industries of the future in which the UK can become world-leading.

The IMF and its members, both the high technology companies and the academic members, have excellent capabilities in manufacturing technology through

electrochemical approaches. They are regularly recognised by industry in the UK and overseas in key areas including low voltage electrodeposition (< 10V), higher voltage electrophoretic deposition (> 10's V) and electrostatic spraying (> 100's V) to manufacture coatings on metals, alloys, composites and polymers. Whilst the IMF and its members are predominantly focused on the established businesses for coatings manufacture (e.g. marine, aerospace), IMF's science committee recognises the growing challenges and opportunities for coatings manufacture in the new electrochemical energy storage sectors e.g., Lithium-ion batteries and supercapacitors of all types.

This call for interests is to create a dialogue around the key themes of the UK's Industrial Strategy Challenge Fund for energy, specifically about how IMF and members can help the UK to deliver 'the development, design and manufacture of batteries that will power the next generation of low carbon electric vehicles'.

For further communication, please get in touch with Trevor Crichton at IMF Head Quarter, Exeter House, Birmingham, B1 1NQ, United Kingdom.

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A-Gas Em Travel to Prague



Jonathan Sellars, Mark Nicholls and Graham Woodward travelled to Prague last week to attend the Alufinish GmbH International Sales Meeting which focused on two main topics - coating and anodizing. Whilst in Prague they also had a chance to enjoy various excursions organised by Alufinish and their distributor for the Czech Republic.



IMF Southern Branch Skittles Night

The IMF recently held a skittles night at the Northbrook Arms near Winchester. This event is held most years and is in conjunction with the AGM.

The attendance was well represented and the Northbrook Arms provided us with an excellent buffet which was certainly well received.

Most people joined in with the 9-pin skittles and as always, a large amount of chat and banter was handed out by the participants which led to a fun evening.

Prizes which were donated were given for the highest male and highest female together with other prizes depending upon the skill level.

All in all it was a very successful night and hopefully we will continue the tradition next year.

**John Burgess - Publicity Officer
(IMF Southern Branch)**



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We aim to interview for this post in the New Year.

Kynar® University 2017, Dubai



ARKEMA hosted its third Kynar University in Dubai specially focused on coating with KYNAR 500® PVDF based paint, and the launch of its Kynar Aquatec® water based PVDF restoration coatings.

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