

The Southern Branch - Metal Finishing meets Conservation

The Southern Branch of the IMF held a mini symposium entitled "Metal Finishing meets Conservation" on Wednesday 18th May at Silvabronz Chrome Plating Specialists in Alton Hampshire.

The meeting was designed to promote an understanding of how "Metal Finishing" (particularly electroplating) can be used in conservation.

The first speaker, Michael Neilson, was from the British Museum. Michael is a replication specialist and is responsible for the production of facsimiles of very old and ancient important artifacts that have often been lying under the earth for hundreds of years. Often treasure hunters, using metal detector equipment, make these finds which end up at the British Museum and once the information about the find has been substantiated, copies (facsimiles), are made to the exact precision detail in every respect so that they can then be viewed at other museums around the world.

Michael explained how he carried out the replication using electroforming techniques and how important it was to retain as much detail as possible from the original.

Electroplating solutions such as copper, silver and gold are all used in the process together with enameling and colouring. Many photographs were shown both of the original and the facsimile and it was impossible to tell the difference between them.

The following speaker was Russell Jones from Silvabronz. Silvabronz are chrome-plating specialists primarily for the classic car and motorbike restoration.

Russell explained how parts (often in a terrible condition) arrive at his plating shop and what the customer often expects as a result. He went on to describe how parts are stripped of the previous coating revealing the base material which sometimes ends up in a worse state than was thought to be, and how processes have to be carried out in order to achieve a finish that sometimes was better than the original. Obviously the more that has to be carried out the higher the cost and this has to be explained to the customer before any work is carried out.

Russell further explained that, in order to maintain the high quality that his customers expect, it was very important to maintain a high degree of housekeeping on the plating solutions and stressed the importance of maintaining very clean electrical DC connections. The final speaker was John Burgess from AGAS Electronic Materials who presented a paper



John Burgess showing the difference between trivalent and hexavalent chromium

Michael Neilson showing how parts are prepared for plating (below)



Russell Jones showing the type of parts that arrive for plating

on Chromium plating. The paper gave a history of the process and placed a high emphasis on why chromium was required and its importance in preventing corrosion.

The mechanism of how corrosion takes place was demonstrated in a series of slides and why the need for using nickel (either as a single coat or as a duplex coat) was very important. John went on to describe some of the advantages & disadvantages of using hexavalent chrome and this was followed up with the latest trivalent chromium technology as a "safer" replacement for the more toxic hexavalent process.

"REACH" was discussed and its impact on the process and finally samples of trivalent and hexavalent chrome were shown.

At the end of each presentation, questions were taken by the speakers, which led to a good constructive discussion amongst the audience.

The committee of the Southern Branch felt that the evening was very successful and would like to thank Michael Neilson, John Burgess and especially Russell Jones who was our host for the evening and who also laid on food for everyone afterwards.

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Innovate UK announces an exciting new funding call for research into Manufacturing and Materials

On May 9th InnovateUK opened a new call for research funding by UK based companies in Manufacturing and Materials. Total funding is planned for £15million, with £5 million for small projects and £10million for larger, collaborative ones. The scope for manufacturing includes coatings, new product introduction, process and remanufacturing, whilst for materials, the scope includes metals and intermetallics, polymers, composites, nanomaterials, ceramics, smart materials and joining dissimilar materials, but neither list is inclusive. The funding level for small businesses is 70%, whilst medium sized is 60% and large is 50% of eligible costs. The smaller projects are for up to 12 months with grants of up to £100k and can be for a single SME, whilst larger ones must be collaborative and can be between 12-36 months, but with at least one SME as a partner. The closing date for applications is July 6th 2016.

If any IMF member is interested in discussing this further, with the objective of possibly seeking funding, please contact the Science Committee at Exeter House."

Further details can be found at:
www.gov.uk/government/publications/funding-competition-manufacturing-and-materials

Indestructible Paint Highlights key issues to distinguished visitors

Specialist industrial coatings manufacturer, Indestructible Paint Ltd. has been delighted to welcome two distinguished guests to its Birmingham manufacturing facility. Managing Director Brian Norton hosted a visit by Baroness Lucy Neville-Rolfe and Anthea McIntyre MEP, who were keen to see for themselves Indestructible Paint's approach to providing a highly specialist service to many of the world's leading industries. The company's commitment to research and development, which has underpinned its success for many years, was of particular note.

"Both ladies expressed interest in a range of issues and acknowledged concerns about challenges faced by small to medium sized enterprises such as ourselves," comments Brian Norton. "In particular, the REACH regulations came under the spotlight – especially their associated bureaucracy – and, in this connection, we were delighted to present aspects of our R & D work, especially in aerospace, which focuses on coating developments that specifically address the obligations associated with REACH."

Training, and the acknowledged skills gap, also featured in the discussions that ranged from local access issues to EU legislation.

"We are proud to have been approached to host a visit by such important guests and believe it reflects favourably on our position as

a leading specialist manufacturer within West Midlands' industry," adds Brian Norton. "It was a pleasure to meet both ladies – and their colleagues – and I hope we were able to provide a useful insight into what are widely seen throughout our industry as important issues."

Anthea McIntyre replied ; "It was a great pleasure to visit Indestructible Paint, it is a shining example of the exciting, go ahead, specialist businesses we have in the West Midlands. "We were hugely impressed by their commitment to research and development and were able to get a better understanding of the challenges they face with the complexities of EU legislation. "Small businesses like Indestructible Paint are essential to the growth and prosperity of our region and I will do all I can to support them."



Dyne Technology to exhibit the future of Plasma Treating technology at PDM Event, Telford

Dyne Technology, the UK and Ireland's number one supplier of Plasma Treatment equipment will be attending PDM Event 2016, taking place on June 14th and 15th.

Plasma Surface Modification is the unsung problem solver throughout the UK and Ireland's manufacturing industries when facing the problems of adhesion to low surface energy materials, such as "non-stick" plastics. As materials' finishing engineers will know all too well, achieving a strong adhesion to these materials is at best difficult but often impossible.

Dyne Technology will be exhibiting the future of Plasma Treating technology at PDM Event to help Plastics, Moulding, Composites, Recycling and Packaging professionals solve their problems of adhesion. You can find the team on stand A006 on June 14th and 15th at the Telford International Centre.

Why visit us? Witness the PlasmaTEC-X, our all new Atmospheric Plasma system which has revolutionised Plasma Treating technology. The PlasmaTEC-X is over 50% smaller than traditional Atmospheric Plasma units, but is more powerful than ever before. You can now operate eight nozzles from one controller via a daisy chain system, saving you all important floor space. Packed full of revolutionary features, this intelligent Plasma Treatment system was designed to ensure optimum performance around the clock and still bring savings to your bottom line.

Join the Plasma revolution on stand A006 and witness this incredible technology in action. Can't wait? No problem at all, email Demy-May Butler, Marketing Manager at demy@dynetechnology.co.uk or call 01543 411 460



The Presidents Column by Graham Armstrong

It seems that I'm always having to write up my thoughts when I'm away from the UK: this time I'm attending the Surfair conference for coatings and surface treatments for the aerospace industry. This is a bi-annual event held in Biarritz, France: I can think of worse places for a conference and exhibition!

The last few weeks seem to have flown by, probably because this is a very busy time for our industry. Since my last note in IMFormation, I have attended a further meeting of the industry wide cross-sector group, which as you know is deeply involved in helping industry cope with the requirements of the REACH regulations.

The group is very pro-active and last month gave a thirty minute presentation on the effects of the regulations, particularly with respect to SME's to the Chemical Industry Stakeholders Group, which includes representatives of government. As yet no report on the outcome of the meeting has been circulated, but once I receive this, I will pass onto you, our members, as usual through Helen from the office.

Another benefit to the Institute of our involvement with the cross sector group, is regular updates from other members of the group who monitor the "goings on" in Europe and pass out briefing notes; again we could nine to circulate these to our members.

You will remember that one of my goals was to establish closer links with other institutes and industry bodies, and as I'm from the paint industry, I have close links with the British Coatings Federation. I have recently heard, through them, that titanium dioxide is again being considered for listing under REACH, following a dossier raised by the French.

CEPE, the Europeans printmakers association are "treating this matter as a high priority, and re planning a strategy to support the efforts of the TDMA to defend TiO2 through every step of the forthcoming evaluation process".

This is worrying as TiO2 is so widely used in so many industries. Through the BCF and CEPE, I will keep a watching brief and continue to report to you. Apart from the "joys" of REACH, there are other initiatives that keep both myself, and members of the institute management occupied.

Paul Lansdell attended the latest meeting of CETS during April, and has reported that this association seems to be becoming more pro-active in it's support for the surface finishing and engineering industries in Europe. This is pleasing to note, as we had fears that it was beginning to lose direction. We will continue to support the activities of the regulatory affairs group, although their next webex meeting in the last week of May may be difficult to support.

During early June, I will be attending a group set up by the IOM3 surface engineering division, which meets about every quarter with a main aim of devising systems and training to attract youngsters to our wide and varied industry. The next meeting will be reviewing initiatives being looked at in other industries to see what we can learn.

The institute exhibited at the recent MACH show at the NEC; we would like to have been able to report a vibrant show, but as this was held over 5 days, only the middle three were in any way busy. We did meet some old and new friends, and used the show as the launchpad for our new "practical training courses" in organic paint and powder application. Our first course is now being arranged with a specific client for June, to cover the application of coatings onto composites.

June also sees us attending the Subcon show, again at the NEC; we expect this to be more vibrant than at MACH, as the show will be over 3 days. We hope to see many of you there!

On a social note, Barry Gay and I have been invited to the Engineering Councils Presidents reception, to be held in London on the evening of Thursday June 23rd: we must remember to vote before we travel!

I hope you find these notes of interest; I promise I will try not to repeat myself every issue!

Pexa invests for growth in France

For several years Pexa has provided an excellent service to the aerospace industry in France. Pexa supplies surface coatings and treatments to aerospace, defence and other high tech industries including oil & gas and electronics. Pexa has decided to expand its team in France and has recruited Mr Christophe Mondou to represent its business and to provide technical service and support to customers in the Southern half of France. Christophe has many years' experience in technical sales roles and has an excellent track record in supplying the aerospace manufacturing sector.

Jean-Paul De Almeida, head of Pexa's business in France said "With the appointment of Christophe we can provide our customers in France with a much more frequent and dedicated service. I will continue to take care of our customers in the North from our offices in Paris while Christophe will be available to provide a responsive and personal service in the South. Both our customers and suppliers will benefit from this investment. In addition we will be able to provide a better service to neighbouring French speaking countries such as Morocco".



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