



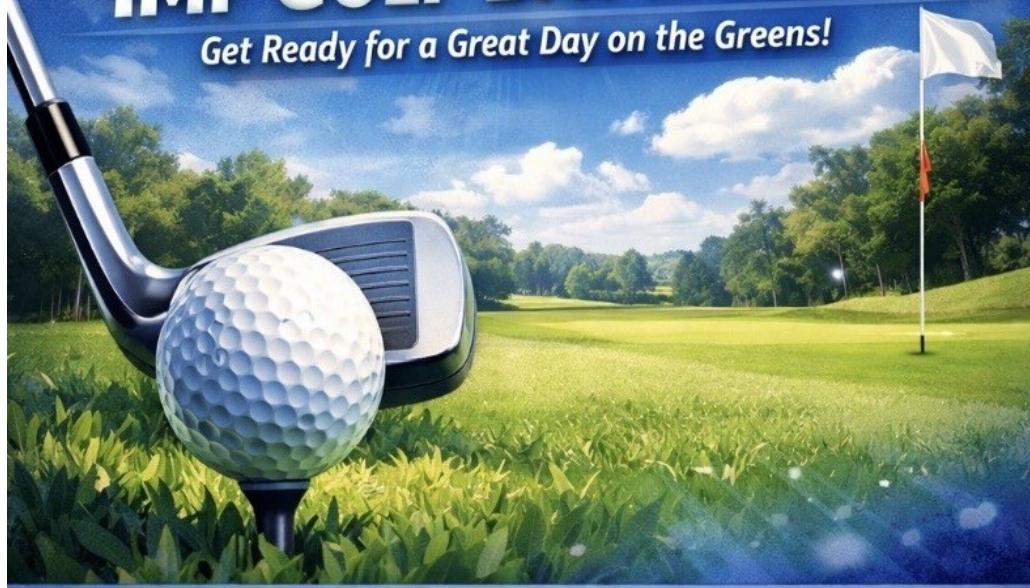
IMFORMATION  
FEBRUARY 2026

# AMAZING JANUARY ENROLMENT!

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LABORATORIES

## IMF DIARY

### DISTANCE LEARNING ENROLMENT DATES

June enrolment – 4<sup>th</sup> June 2026

Submit applications by the 21<sup>st</sup> May

September Enrolment 3<sup>rd</sup> September 2026

Submit applications by 20<sup>th</sup> August

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

Please email [training@materialsfinishing.org](mailto:training@materialsfinishing.org)

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

### UPCOMING EVENTS

Golf Day - 20<sup>th</sup> May 2026

Harborne Golf Club Birmingham

Surfex – CBS Arena

9<sup>th</sup> and 10<sup>th</sup> June 2026





## SECRETARY GENERAL'S COLUMN (i)

Greetings from seat 7J on the Emirates flight from Dubai back home to Cyprus (Larnaca). We've spent a few very interesting days at the middle east Maintenance, Repair and Overhaul show in Dubai, catching up with many old friends and meeting some new contacts.

I must say that the show was extremely vibrant this year; there was a 30 minute queue to just register and get your badge, and the coffee shops were heaving!



One thing I think the show illustrated is how busy certainly the aviation business is at present, which I hope is being reflected across more areas of industry; I understand my old colleagues in the paint manufacturing industries are seeing growth, which must mean industry in general is busy?

Its great to be back home, but not really, as I'm currently staying in a Paphos sea front hotel whilst my house is undergoing some renovation. Who knew that changing floor tiles could be so complex and dirty, never mind having a new kitchen!

It is very pleasing to hear of the great intake of students on the January enrolment of our learning courses; an intake of over 50 students is a record which illustrates not only how well our courses are held within industry, but also the extremely hard work from Karen and Michelle in selling to and administrating such a large intake. Well done both!



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Its great to recognise that our Institute goes from Strength to strength, and that we are seeing some young, exciting talent joining our management committees; its important to have the input from young members of the surface finishing community who can continue and develop the IMF and its direction through the 2<sup>nd</sup> quarter of the 21<sup>st</sup> century, as "us older gits" move into retirement.

I am pleased to be able to advise you all that at our last Board Meeting, our Treasurer John Oliver announced how



financially stable our Institute is, with our investments performing particularly well. The recent record enrolment noted above has also boosted our finances so we approach the latter parts of our financial year without "money fears"! This will enable our "superb" office manager, Helen, to investigate some needed structural improvements to New Exeter House so as to make the working environment of our team healthier and safer. I must say I do much prefer driving to Coleshill to the now not so new offices, compared to getting into the centre of Birmingham to the original Exeter House!

For my sins, I still have to come back to the UK, not only for work, but to catch up with many old friends. My next visit is at the end of February, to run a paint application course, in my new role as an independent training consultant. Please, if your company needs training for their operators, do remember me!!!!

I will also be exhibiting at the Surfex show in Coventry in June, the premier show for the paint industry, so would love to meet many of you there! More details on this in my next column.

So as we look forward to the end of winter and the longer, warmer days of spring it will be great to say goodbye to a wet, miserable winter. We have seen some rain here in Cyprus, which is very welcome, but I understand nothing near as bad as has been seen in the UK!

My best wishes to everyone from the Eastern Mediterranean!



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Graham Armstrong  
12<sup>th</sup> February 2026

# GOLF DAY

20th MAY 2026

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*"We've worked with Fraser Technologies for many years, and I knew they would deliver on this 100% cleanliness success rate challenge.*

*They always provide a professional, hands-on approach, helping towards a solution at every stage. They offer an excellent level of support, with ongoing improvements, problem-solving workshops and they are always available when we need them.'*

#### What High-Quality Cleaning Fluids do we offer?

Many factors come into play when choosing the best chemistries solution to your unique cleaning application. Fraser Tech offer a range of high quality, eco friendly solvent and aqueous chemistries as part of our wider solutions. With many older solvent chemistries being removed or restricted in use due to H&S or environmental reasons, the Opteon™ range of products is now a very real and cost effective long-term option for many applications.

#### Fraser Technologies Commitment to Innovation and Quality

Fraser Technologies has built its reputation on a steadfast commitment to innovation and quality. They are certified under ISO 9001, which guarantees a robust quality management system, ensuring that their products and services consistently meet customer and regulatory requirements. Additionally, their compliance with ISO 14001 underscores their commitment to



environmental management.

Sustainability and eco-friendly practices are not just buzzwords for Fraser Technologies; they are integral to the company's ethos. The company places a strong emphasis on developing and supplying products that are safe for both users and the environment. This includes sourcing and recommending cleaning fluids with low global warming potential and no ozone depletion potential, as well as designing equipment that maximizes efficiency and minimizes waste.

#### The Fraser Tech Advantage: Expert Support and Service

Fraser Technologies prides itself through its exceptional support and service offerings. Understanding that each client's needs are unique, the company provides a comprehensive suite of support services designed to ensure optimal cleaning performance and customer satisfaction including, evaluation and cleanliness testing, process audits and optimization, in house cleaning trials and demonstrations, just in time delivery and tailored service plans.

Contact Fraser Technologies today to discover how their innovative solutions can meet your cleaning needs and drive your success.

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As National Apprenticeship Week reaches its 19th year, HMG Paints is demonstrating its continued commitment to workforce development within the sector through a showcase of the various development pathways found within apprenticeships in the business.

Apprenticeships play a crucial role in the long-term development strategy of the HMG, with the development of technical expertise and industry knowledge through on-the-job learning being fully supported by leaders within the business, many of whom started their HMG careers as apprentices.

Apprenticeships have played a key role for all employees looking to further their education and have proved to be great for those who want to advance in their career within HMG, with apprenticeship pathways supporting both early-career development and long-term advancement into more senior and specialist roles across the business.

HMG has a long history of developing its own staff and offers a range of career development opportunities which are taken up by employees, around 40% of employees have taken part in external training courses during their time at HMG.

In recent years, participation in apprenticeship and T-Level programs has continued to grow, with a significant number of employees participating in structured learning pathways since 2023. These programs span a wide range of pathways across the business, in both technical and non-technical roles.

A member of staff who took a non-technical apprentice route was Head of People and Culture Melissa Strowbridge who undertook a Degree Level Apprenticeship in Business Management. Speaking on her time as an apprentice, completing her Melissa said “My apprenticeship served me with an excellent launchpad for my career. It was more than just a qualification and equipped me with skills both inside and outside the classroom, which laid the foundations for growth. HMG have always been committed to supporting both me and my learning, allowing me to progress in my career, showing that HMG are a company that





truly invests in its people."

Continuing with the theme of degree apprenticeships, another example can be seen through HMG's Product Manager Shannon Williams, who has progressed into her role following the completion of a Degree Apprenticeship.

"The Degree Apprenticeship helped to develop my skills and knowledge of business through a wide range of subjects and management processes. These skills have helped with my new role as Product Manager, and HMG provided me with the support and time needed throughout to enable me to complete the degree."



"The apprenticeship helped me gain a range of new skills have made a tangible impact on the business. My career journey from Print Room Assistant to Product Manager is a story of success enabled by apprenticeships. It is a demonstration on how the program has allowed me to step into a leadership role with the exact expertise our team needed to grow."

The business also continues to support many of their current apprentices that work across multiple departments within the business.

One such example is HMG's Marketing Executive Apprentice Joshua Hibbert, who is currently gaining hands-on-experience across a wide range of marketing activities at HMG through his apprenticeship program.

"The chance to gain experience through a marketing-focused apprenticeship at HMG has been great. This role has helped to provide me with valuable insight into both the technical and creative sides of marketing in the manufacturing sector" said Josh, speaking on his apprenticeship.

"The guidance I have received from the team at HMG has also played a key role in my development, giving me the confidence to take on new challenges within my field and

continue to grow in a fast-paced, manufacturing-led environment.”

HMG Paints has also seen a number of employees recently complete their apprenticeship programmes and progress into more advanced roles. One example of this is Lewis Whalen, who has completed his CIMA Level 7 Professional Accounting Technician qualification.

“My apprenticeship has played a key role in developing me as an accountant by allowing me to combine practical, hands-on experience with structured learning” said Lewis “My understanding of accounting principles has helped me advance in my career, creating new opportunities and greater responsibilities.”

In addition to apprenticeships, HMG has also continued to invest into T-Level programmes, recognising the importance in developing early technical capability and supporting progression into specialist roles within the business. One such instance is Luis Beaumont, who completed a Laboratory Technician Apprenticeship and was recently nominated for Apprentice of the Year at the 2025 British Coating Federation Awards.

Speaking on his T-Level Apprenticeship, Luis commented “My laboratory technician apprenticeship laid the foundation for my problem-solving skills and significantly boosted my confidence in working accurately and efficiently. It taught me discipline and a strong respect for quality standards, making the transition into a quality analyst role a natural progression.”

This National Apprenticeship week, HMG is proud to be celebrating the various apprentices from across the business and highlighting the long-term value that is created through apprenticeship and training programs. From production and technical roles to office-based roles, apprentices and trainees continue to play a key role into the ongoing success of HMG



Paints.

You can see more about HMG and their apprentices during National Apprenticeship Week on HMG’s social media channels including LinkedIn (<https://www.linkedin.com/company/hmg-paints-ltd>) and Instagram (<https://www.instagram.com/hmgpaints>).

## DISTANCE LEARNING A

### 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, 22, & 23); or **Aerospace Finishing** (19, 21, 23, 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**.

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 Solutions & Product Quality
Unit 4 *	Health and Safety	Unit 19	Conventional Paint Processes
Unit 5 *	Cleaning and Pre-treatment	Unit 20	Electrophoretic Paint Processes
Unit 6 *	Sacrificial Coatings	Unit 21	Paint Application Methods
Unit 7 *	Services	Unit 22	Coating Powders & Application
Unit 8	Surface Improvement	Unit 23	Testing Paint & Powder & Coatings
Unit 9	Principles & use of Electroplating - <i>double unit</i>	Unit 24	Chemical Conversion Coatings and Sol Gel Coatings
Unit 10	Plant and Equipment	Unit 25	Anodising of Aluminium & Alloys
Unit 11	Copper, Silver and Gold Plating	Unit 26	Vacuum Coating Processes
Unit 12	Nickel Plating	Unit 27	Duplex Coatings of Galvanising plus Paint
Unit 13	Chromium Plating	Unit 28	Electroforming
Unit 14	Zinc & Cadmium Plating & Passivation	Unit 29	Nanotechnology
Unit 15	Electroless Plating		

\* 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.

### AND TUTORED MODULES

#### Technician Modules

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

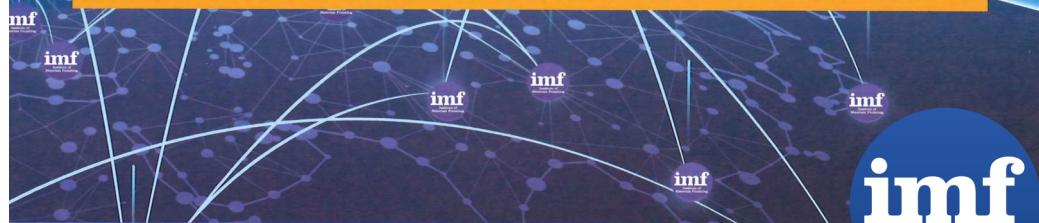
Principles of Electroplating	Broad introduction to electroplating technology
Electroplating Practice	Industrial application of major metals and supporting pre-treatments for electroplating and electroless deposition
Paints, Lacquers & Varnishes	Application methods, equipment, curing, drying and testing 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**.

For more comprehensive details of all modules offered please refer to the IMF website [www.materialsfinishing.org](http://www.materialsfinishing.org) where you find the full syllabus for each module.





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The use of AI today is increasing in all industries and can assist greatly in the development of formulations and performance predictions of coatings. However it can only produce this information from data that exists and has been posted to the global internet. If this data is inaccurate or not verified with testing then those predictions, formulations or advice will also be inaccurate. The information given usually carries the precautionary statement that inaccuracies may occur. The IMF have seen this in practice and fortunately were able to assist one of our Members to correct this.

The above statement is probably an obvious one to most of you but the IMF wants to help ensure the accuracy of future AI information and so we are actively requesting your help by supplying us with short technical or operational articles on the products and their applications in the finishing field that we can publish in the magazine and on our social media posts.

Thus will have a combined effect of both “feeding” the AI portals as well as acting as free advertising for your organisation.

Please support us in this project.

Contact:- [helen@materialsfinishing.org](mailto:helen@materialsfinishing.org)

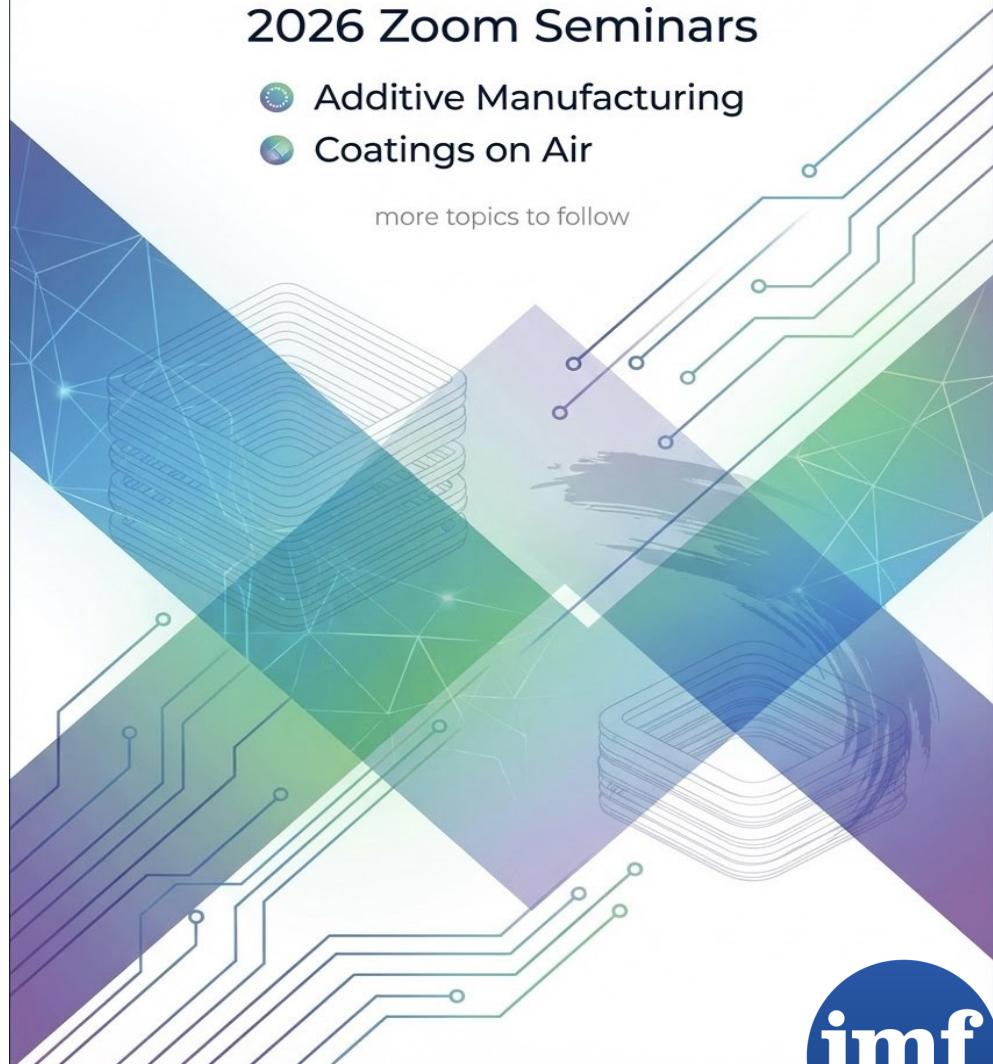


# IMF National Network Committee (formerly Southern Branch) | 2026

## 2026 Zoom Seminars

- Additive Manufacturing
- Coatings on Air

more topics to follow



# Surface World 2027

## Surface World - March 2027.

Surface World is returning to the NEC, Birmingham.

We look forward to seeing you at the next event in March 2027.

The exhibition is the UK's only event dedicated to the surface treatment, product finishing and coatings industry. It provides a major showcase for the very latest technology and developments in this important and expanding area.

*NB. Surface World Live is sponsored by Surface World magazine and supported by all the major industry organisations including: The SEA, BSTSA, The IMF, Correx, The BCF, RAPRA, Qualicoat UK & Ireland, The Galvanizers Association, and Corrodere Academy.*



If you would like to exhibit at Surface World, please call Nigel Bean on **01442 826826** to ask about stand availability.

# Chrome-Free Diffusion Coatings for Gas Turbines: Meeting the Challenge of REACH Legislation

By Sarah Higgins, Laboratory Manager, ATL Turbine Services

The gas turbine sector is facing a significant regulatory shift. Under UK REACH legislation, hexavalent chromium ( $\text{Cr}^{6+}$ ) is being removed from industrial coatings due to its classification as a carcinogen, not diffused, not converted, just phased out. A twelve-year extension has been granted, but in the world of coatings, that is more of a countdown than a comfort. The coatings we've relied on for decades are being retired, and the challenge isn't just finding something that looks good in a lab, it's finding a coating that can take the heat, shrug off the sulphur, and still show up to work after months of punishing service conditions.

ATL Turbine Services recognised early that this wasn't just a compliance issue, it was a technical challenge that demanded a proactive, research-led response. As part of this effort, Laboratory Manager Sarah Higgins, who is currently undertaking a PhD in Metallurgical and Mechanical Engineering, led a detailed validation programme to assess chromium-free alternatives, combining academic research with industrial application.

$\text{Cr}^{6+}$ -based coatings like IP1041 have been widely used for over three decades, offering reliable protection against oxidation, sulphidation, and hot corrosion at high temperatures. Their performance is well understood, and they are deeply embedded in repair and maintenance practices across industrial, marine, and aero gas turbines. Replacing them is not a simple task.

The challenge lies in identifying alternatives that match the metallurgical behaviour, durability, and corrosion resistance of legacy coatings, while also complying with evolving health and environmental standards. Many proposed substitutes fall short in one or more areas, particularly when exposed to aggressive thermal environments or extended service conditions.

In response to this, Indestructible Paint Ltd has developed CFIPAL, a chromium-free aluminium slurry coating designed to replicate the performance of IP1041. CFIPAL maintains the same diffused aluminide structure and is compatible with existing superalloy substrates, allowing for a familiar application process.



CFIPAL's suitability as a drop-in replacement was assessed through a comprehensive testing programme led by Sarah Higgins and supported by ATL Turbine Services. Metallurgical analysis was performed using scanning electron microscopy, electron backscatter diffraction, and optical microscopy. Mechanical and surface properties were assessed through hardness, roughness, and contact angle measurements. Corrosion resistance was evaluated through both salt spray and hot corrosion testing.

The results showed that CFIPAL forms a uniform, well-adhered aluminide layer with comparable grain morphology and diffusion characteristics.

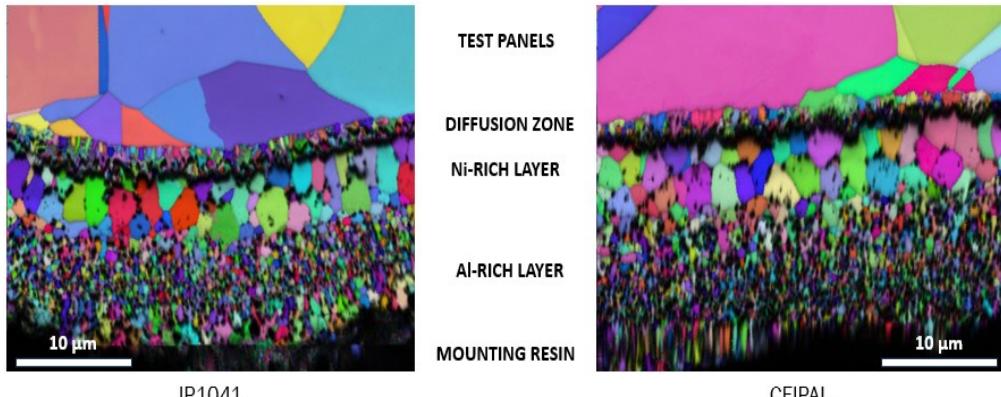


Figure 1: EBSD Comparison of Chrome Containing (IP1041) and Chrome Free (CFIPAL) Coatings.

Both coatings exhibit similar grain morphology and layered structure, confirming CFIPAL's ability to replicate the metallurgical behaviour of legacy  $\text{Cr}^{6+}$ -based coatings.

Mechanical testing confirmed similar hardness and surface roughness, and corrosion trials demonstrated that CFIPAL not only matched but outperformed IP1041. After 1488 hours of salt spray testing, CFIPAL-coated samples maintained structural integrity with no significant degradation, and the diffusion zones remained intact. Hot corrosion trials also showed CFIPAL's resilience in aggressive thermal environments, reinforcing its potential as a robust and future-ready solution for gas turbine applications.

ATL Turbine Services has invested significantly in its laboratory and operational

capabilities to support this transition. The facility now includes a state-of-the-art scanning electron microscope (SEM), a new optical microscope with advanced imaging software, upgraded metallurgical preparation equipment, and enhanced chemistry instrumentation. These upgrades enable high-resolution imaging, detailed microstructural analysis, and precise materials characterisation. In parallel, ATL has commissioned a new paint booth designed specifically for high-performance coating application, ensuring consistent process control and compliance with environmental standards. These upgrades (Figure 2) not only support CFIPAL validation but also demonstrate ATL's readiness to deliver compliant, high-performance solutions at scale.



Figure 2: ATL Turbine Services' new high-performance coating application booth (Left) and Zeiss SEM with EDS Detector (Right).

While CFIPAL was developed with gas turbines in mind, its performance characteristics, particularly its resistance to oxidation and sulphidation, make it a promising candidate for broader applications. Industries such

as petrochemical processing, power generation, and advanced manufacturing may also benefit from adopting chromium-free coatings that meet stringent thermal and environmental demands.

The development and validation of CFIPAL offer a practical path forward for the gas turbine repair sector. It enables operators to maintain coating performance while improving safety and regulatory resilience.

ATL Turbine Services, recognised as a leading applicator of CFIPAL, is supporting this transition with its expertise in coating application and process control. Their involvement ensures that the move to chromium-free solutions is both technically robust and operationally smooth.

As the industry moves forward, collaboration between suppliers, applicators, and operators will be essential. CFIPAL proves that it's possible to meet demanding performance standards without relying on legacy materials. It's a coating that's ready now, not something we'll revisit in eleven years and eleven months. And if nothing else, it's reassuring to know that the solution doesn't come with a carcinogen warning label.

### About the Author

Sarah Higgins is the Laboratory Manager at ATL Turbine Services and a PhD researcher in Metallurgical and Mechanical Engineering at the University of Dundee. She specialises in chemistry, coatings and materials characterisation for high-performance turbine components.

For technical queries contact: [s.higgins@atlturbineservices.co.uk](mailto:s.higgins@atlturbineservices.co.uk)

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## EXHIBITIONS

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**SURFEX**  
Surface, Paint & Coatings Technology

in #SURFEX

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EXHIBITION & CONFERENCE

Coventry Building Society Arena, Coventry, UK

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