



**Touchdown:** Boeing 787 Dreamliner ZA002, powered by Rolls-Royce Trent 1000 engines, completes its first flight. The second example to fly, it features the livery of launch customer ANA of Japan.

### Offshore wind industry courts Midlands aerospace

UK aerospace skills and capacity are in demand for work on projects such as the world's largest offshore wind power installation, the £2 billion London Array wind farm.

The array is one of 37 UK offshore sites earmarked for development by 2020. Some 6,000 turbines are planned.

Supplying, installing and operating these turbines will require a manufacturing and support services industry comparable in scale to that of North Sea oil and gas.

The potential work includes the design, tooling and manufacture of large composite structures, aerofoil/blade design, engineering testing and analysis, gearboxes and drive train component design and manufacture, forgings and castings, sensors and control systems, radar mitigation technology, helicopters and robotic vehicles (ROV), MRO and operations management.

Free help is available through the Department of Energy and Climate Change (DECC) UK Renewables Service to identify opportunities and plan an approach if appropriate. For more details, contact [jeremy.tait@ukrenewables.com](mailto:jeremy.tait@ukrenewables.com) ▲ [www.ukrenewables.com](http://www.ukrenewables.com)

# Midlands applause greets first flights

## Region's specialists support B787 and A400M

THE first flights before Christmas of new Airbus and Boeing aircraft were milestones for a host of Midlands aerospace companies whose specialist skills have contributed to each programme's success.

More than 60 Midlands companies contributed to the Airbus A400M military transport which flew in Spain on 11 December, while a long supply chain took delight in news from Seattle that the Boeing 787 Dreamliner completed its maiden flight on 15 December.

The A400M programme involved many Midlands companies in supply of parts and specialist skills for the aircraft's intensive development and testing phase. While production contracts are limited because the UK is not a major buyer of the type, key Midlands product technology capability at Tier 1 supply chain level was developed and adapted for the precise mission of the A400M. This capability includes flap actuation, a specialisation of Goodrich Actuation Systems of Wolverhampton, design of tyres by Dunlop Aircraft Tyres of Birmingham, emergency locator transmitter

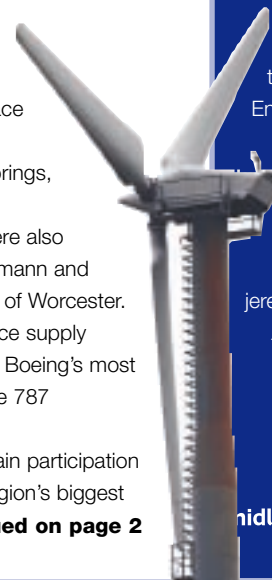
systems from HR Smith of Leominster, Herefordshire, and heat exchangers from HS Marston of Wolverhampton.

Contributing manufacturing expertise for production of the airframe and its TP400 engine are Midlands companies Mettis Aerospace of Redditch, Doncasters, Premier Aerospace of Coventry and G&O Springs, also of Coventry.

Specialist engineering services were also supplied by Worcester's Froude Hofmann and Resource Engineering Projects, also of Worcester.

Meanwhile, the Midlands aerospace supply chain shared the achievement when Boeing's most technologically advanced aircraft, the 787 Dreamliner, flew on 15 December.

The main gateways for supply chain participation in the 787 have been three of the region's biggest



Continued on page 2



midlands aerospace alliance

## Applause greets first flights

Continued from page 1

names in aerospace: Derby-based Rolls-Royce – through the fuel-efficient Trent 1000 engine which powered the aircraft on its maiden flight; Aero Engine Controls, located in Birmingham and Derby – through the sophisticated electronic controls for Trent 1000; and Moog Aircraft Group of Wolverhampton (formerly Smiths and GE Aviation) – through the high-lift actuation system for the aircraft's wings.

Other leading Midlands companies are

on the programme as direct suppliers to other major aerospace players, mainly in the USA. These include Meggitt in Coventry and Redditch-based Mettis, which supply components to the aircraft's alternative GE GEnX engine programme, and ITP Engines UK in Leicester, Lincoln and Rugby which also supports the GEnX programme. In

addition, Mettis supplies key components to Hamilton Sundstrand for the 787's air management system.

The Trent 1000 – the fifth member of Rolls-Royce's engine family – is itself a major programme. Many Midlands-based specialist companies which are traditional Rolls-Royce suppliers are participating in it. They include Bulwell Precision Engineers, Bromford Industries, Burcas, C&H Precision Finishers, Clamonta, Eaton Aerospace, G&O Springs, Jet Blades Engineering, JJ Churchill Engineering and Manthorpe Engineering.

A significant part of the Trent 1000 test programme was aimed at proving the reliability of the new electric start and power generation system as well as the completely revised 'more-electric' testbed facilities at Hucknall, near Derby.

Rolls-Royce selected Aero Engine Controls in Birmingham to develop a next-generation engine electronic control (EEC) system for the Trent 1000. The new EEC is lighter, more reliable and boasts six times the control power of earlier full authority digital engine control (FADEC) systems.

Aero Engine Controls suppliers in the Midlands, such as Leicestershire's Semelab, are also participating through the Trent 1000 engine controls system, as are several further firms.

As part of its work on the 787's high-lift actuation system, Moog set up full-scale wing rigs at its Wolverhampton site, one representing each wing.

MAA chief executive Andrew Mair commented: "Our unique position in the world aerospace industry as suppliers of the most technologically sophisticated aircraft systems – from engines to electro-mechanical and electronic components – puts us in a strong position to benefit whether Airbus or Boeing is winning the global sales war. Supplying these aircraft programmes will create business and support jobs for decades to come."

**Stop Press: Bombardier and Boeing speak to Midlands aerospace**

**This year's West Midlands aerospace cluster forum takes place on 23 March. The forum is sponsored by Advantage West Midlands' Aerospace Cluster Opportunity Group. The day will focus on how companies can identify and plan to win new aerospace market opportunities. Keynote speaker Bombardier is already confirmed. The event will be held at the prestigious Millenium Point venue in central Birmingham. Meanwhile, Boeing will present on defence market opportunities at a 3 March iNet event (below). See [www.midlandsaerospace.org.uk](http://www.midlandsaerospace.org.uk) for details.**

### AEROSPACE INNOVATION SUPPORT PROGRAMME (AeISP)

## MAA work bears fruit for East Midlands aerospace firms

A NEW MAA support project for the East Midlands aerospace industry is yielding results after just a few months.

The aerospace innovation support programme (AeISP) run by the MAA has successfully helped several East Midlands companies meet new customers and suppliers, collaborate with universities, market themselves better, identify further funding opportunities and network more effectively.

The programme, which is funded by the East Midlands Transport iNet, East Midlands Development Agency (*emda*) and the European Regional Development Fund, has had notable success with fostering university/business collaboration through new 'technology nodes'.

AeISP manager Stan Payne explains: "A university with expertise in a specific technology acts as the node for a network of businesses with a common

interest in that particular technology. Businesses provide the university with expertise and advice on industry trends, and gain access to research opportunities of which they might not otherwise have been aware."

Small businesses signing up to join a node qualify for a £1,000 grant. There is no financial commitment for the business.

The first two nodes to be set up are in composites technologies (University of Nottingham / University of Derby) and precision engineering technologies (University of Nottingham). Each already has a network of several businesses.

"If you currently have a relationship with a university and are not receiving funding, you may be eligible for a grant," said Stan.

For more information, please contact the MAA at [admin@midlandsaerospace.org.uk](mailto:admin@midlandsaerospace.org.uk).

## Technology in focus with AeISP

As part of its mandate, the MAA's AeISP has already run successful events covering subjects as diverse as aerospace opportunities in India and China, composites technology, weathering the downturn and how companies can work more effectively with research organisations.

Among future topics are:

- ❖ UAV markets and technologies (28 January at Pride Park, Derby),
- ❖ Defence markets and technologies (3 March, Coventry Chamber of Commerce)
- ❖ New aerospace engine technologies (tba March)
- ❖ Machine tool innovation and technology (tba March).

For details, see the MAA website [www.midlandsaerospace.org.uk](http://www.midlandsaerospace.org.uk)

## MAA funds joint industry-university tyre research

THE MAA has awarded £120,000 funding for research into modelling technology that could reduce the time and cost of aircraft tyre development.

Led by a team from Dunlop Aircraft Tyres (DAT), which is making a significant investment, the project is being run in conjunction with the University of Birmingham's School of Mechanical Engineering, with support from Airbus UK.

It will explore ways in which modelling can improve the design process for aircraft tyres and accelerate the development of advanced products.

The results could help airframe, landing gear and wheel and brake manufacturers reduce design time and cost.

The project is part of the MAA's aerospace technology exploitation programme (ATEP), supported by the European Regional

Development Fund and Advantage West Midlands.

"This funding and the support of the University of Birmingham and Airbus gives us the opportunity to research new ways to use the very latest modelling technology to make advancements in aircraft tyre design," says DAT chairman Ian Edmondson.

▲ [www.midlandsaerospace.org.uk](http://www.midlandsaerospace.org.uk)

▲ [www.dunlopaircrafttyres.com](http://www.dunlopaircrafttyres.com)

## Strong demand for MAA Farnborough pods

MAA members will need to be quick to book exhibition space on the MAA's stand at the Farnborough International Airshow.

At year-end, 11 of the 20 exhibition pods available had been booked for Farnborough, which runs from 19-25 July, and MAA programme administrator Emma Burgess expected there would be keen interest in the remaining spaces when members looked at their 2010 calendars.

"July seems a long time away now but it will be on us faster than we expect," she said.

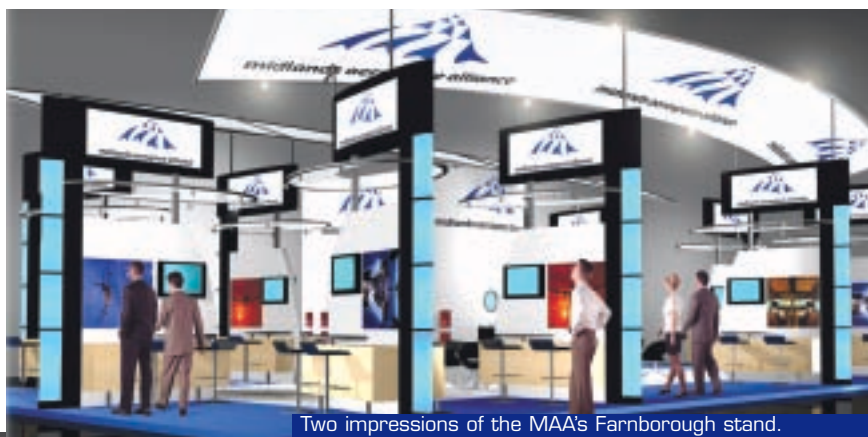
Each pod has been given equal space and importance in the stand layout and can be customised with a small LCD panel, PC or DVD player. The stand features an informal meeting area with literature display racks, kitchen and storage area, the MAA reception desk and graphics promoting aerospace in the Midlands.

Participating with the MAA in major events such as

Farnborough has paid dividends for many members. As one put it: "Exhibiting with the MAA helps put a good corporate face on the business, and it takes all the headaches away... it would cost a lot more if we were to do all that alone, so the MAA is a big plus."

The MAA team works with stand designers and show organisers to give members an inclusive price to participate and a professionally finished home base with none of the worry about setting it up.

Says Emma: "A pod stand gives you an excellent spot of your own to meet with new and existing clients. It provides that all-important physical presence to represent your company, with the MAA taking



Two impressions of the MAA's Farnborough stand.

enquiries while you go and meet with key contacts."

Exhibitors also receive two exhibitor passes, five daily entrance tickets, entry in the official show catalogue, publicity and promotion through MAA channels, use of all the common facilities on the stand and support from MAA staff throughout the show.

In addition, because the MAA stand will be part of the 'UK village' in the busy Hall 1, exhibitors will have access to the meeting room area organised by UK Trade and Investment.

For more information, please contact Emma at

[admin@midlandsaerospace.org.uk](mailto:admin@midlandsaerospace.org.uk)

### MINE HOST...



Would your company like free exposure through the MAA? That's what you receive when you host an MAA event.

We are always looking for new venues for our events in the Midlands – interesting factories and facilities, conference and meeting rooms of all shapes and sizes.

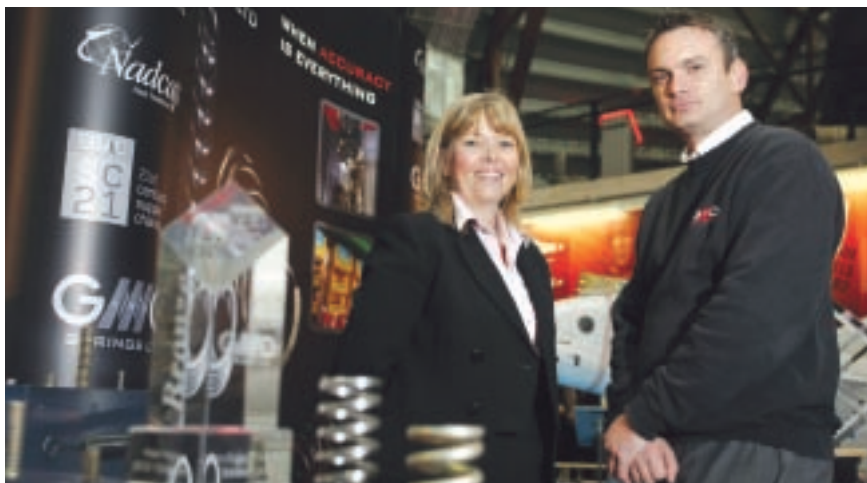
If you have facilities that could host an MAA meeting or event, please contact us at [info@midlandsaerospace.org.uk](mailto:info@midlandsaerospace.org.uk)

❖ The MAA will be sharing space with other aerospace alliances at the Airline Purchasing and Maintenance Expo on 5-6 May at Olympia, London. Members interested in exhibiting at the expo are invited to contact the MAA for details.

▲ [www.ubmaviationexhibitions.com](http://www.ubmaviationexhibitions.com)



## news from the maa



Steve Boyd with Annette Oliver, supply chain VP for Aero Engine Controls (AEC).

### G&O Springs wins region's first bronze

**ADS** **SC21** REDDITCH-based G&O Springs has become the one of the first West Midlands companies to receive a recognition award within the 21st Century Supply Chains (SC21) programme, as reported briefly in the last issue of *AIM*.

Managing director Steve Boyd, receiving the bronze award at the SC21 Dissemination and Taskforce Event at RAF Cosford, said the "results have been tremendous" from G&O's involvement with SC21.

G&O employs 24 people at its factory in Redditch, and secured the bronze award after a company-wide commitment resulted in major enhancements in quality, reductions in cost and significant improvements in on-time delivery.

Cliff Johnson, Manufacturing Advisory Service – West Midlands SC21 project manager, announcing G&O's award, said: "I'm hoping it will be one of a long line of local businesses to achieve this recognition.

"We have already committed almost £500,000 to more than 75 projects since we launched the support in January 2009 and this is already having a major effect on helping our businesses."

Funded by Advantage West Midlands and the European Regional Development Fund, MAS-WM's SC21 programme is open to all suppliers operating in the aerospace and defence sectors.

G&O, a specialist provider of springs to AEC and Meggitt among others, was one of the first firms to take part in the West Midlands programme.

Thanks to SC21, said Boyd, "we are now continually improving every aspect of the business.

"The process has motivated all of our staff and these features have contributed to making us a better performing operation and one that is in a good position to win new contracts."

▲ [www.g-o-springs.com](http://www.g-o-springs.com)

### Midlands firms urged to use SC21 funding

**ADS** **SC21** FURTHER funding is available under the SC21 programme to help Midlands aerospace supply chains improve competitiveness.

Support is available to Midlands companies of any size, or UK customers that have suppliers located in the Midlands. Already a new MAA-led initiative has had positive responses from some of the region's key players.

The MAA, in partnership with the Manufacturing Advisory Services (MAS) in the East and West Midlands, is looking to help organisations working with, or considering supporting, their own supply chains or carrying out internal improvements within the bounds of SC21. In each case, there is potential funding available specifically targeted on SC21.

Tim Holmes, the MAA's SC21 manager, says: "In practice this could mean grant funding to assist your organisation to carry out supply chain projects in the Midlands, it may mean organising a funding package to help your supply chain companies, or it may be assistance with launch events leading to cluster activity with shared improvements for all the companies involved.

"The MAA and our partners at MAS know that resource limitations make it difficult for a company to support the efforts of all its suppliers. We would all welcome performance improvements from the whole supply chain, but efforts must be cost effective and give a return on investment, and this is where the MAA can assist you."

For further information, please contact [tim.holmes@midlandsaerospace.org.uk](mailto:tim.holmes@midlandsaerospace.org.uk)

## Everyone's different. Fortunately so are we.

At Grant Thornton, we've always gone about our business in a very different way. Delivering a bespoke service to all our clients is our primary concern and we won't offer you or your clients an 'off the shelf' financial and tax solution. Far from it. We believe it's important to provide flexibility to meet our clients' needs, to tailor our solutions accordingly and to dedicate the right people to the job in hand.

If you want to know more, call:

**Dave Munton**, Office Managing Partner, Birmingham T 0121 212 4000 E [david.munton@gtuk.com](mailto:david.munton@gtuk.com)

[www.grant-thornton.co.uk](http://www.grant-thornton.co.uk)

 **Grant Thornton**

Audit • Tax • Advisory

© 2009 Grant Thornton UK LLP. All rights reserved. Grant Thornton refers to Grant Thornton UK LLP, a limited liability partnership. Grant Thornton UK LLP is a member firm within Grant Thornton International Ltd (Grant Thornton International). Grant Thornton International and the member firms are not a worldwide partnership. Services are delivered by the member firms, where applicable.

# aerospace in the midlands

## SC21 IN ACTION: GRAVES AIRCRAFT COMPONENTS & TECHNOSET

### SC21 boosts efficiency at Graves



GRAVES Aircraft Components, a Birmingham-based specialist in machining 'strangers and aliens' for the aircraft spares market, has been manufacturing low volume, complex machined components for more than 50 years.

The company began life in the automotive industry, but switched to aerospace as demand grew for complicated critical components. It is now a strategic partner to Goodrich Engine Control Systems for fuel line spares.

Seeking to improve its competitiveness and performance, Graves joined the SC21 programme through the Manufacturing Advisor Service – West Midlands (MAS-WM), and undertook an appraisal of its business using the SC21 diagnostics package.

As a result, Graves has integrated SC21 into its existing improvement activities. The SC21 excellence methodology has resulted

in several improvement projects being deployed to great effect.

Value stream mapping of the business helped identify several opportunities for time savings in set-up. With the support of supplier improvement engineers from Goodrich Engine Control Systems a new tooling storage area was created which has successfully achieved the target of single minute location of tools. A second stage is planned.

Graves managing director Steve Platt says: "Since engagement in SC21, the EFQM model has become our key driver for strategic business development and our approach to customer relationships."

▲ [www.gravesac.co.uk](http://www.gravesac.co.uk)

▲ [www.mas-wm.org](http://www.mas-wm.org)

### Technoset resolves conformance issue

IMPLEMENTATION of SC21 has helped Rugby-based Technoset, a manufacturer of precision components and assemblies, achieve a record of 12 months of on-time

deliveries to a key customer with zero rejects.

Technoset embarked on the SC21 programme as part of a Coventry and Warwickshire aerospace cluster supported by MAS-WM. The programme's diagnostic reviews established Technoset's successes in lean implementation as well as a number of areas for improvement.

A value stream mapping (VSM) exercise on the processes of a particularly problematic component led to a breakthrough. By reducing the batch quantity from 3,000 pieces to a more manageable 1,000 pieces, Technoset immediately halved its lead time for surface treatment to one week.

Root cause analysis of non-conforming parts led to appropriate operator training and helped to embed the principles of SC21 into the whole organisation.

Technoset is now in the process of developing its Continuous Sustainable Improvement Programme (CSIP) to maintain these standards, and plans to seek SC21 Bronze Award status in future.

▲ [www.technoset.com](http://www.technoset.com)



Lathes • Turning Centres • Machining Centres • Mill-Turn Centres

Some aerospace technologies are designed to go undetected...



...others aren't.

Doosan machine tools, supplied by Mills CNC, have a high visibility in the UK aerospace and defence sectors.

That's because every year more and more precision component manufacturers are choosing to invest in our high-performance, competitively-priced lathes, machining centres and mill-turn machines.

In fact over 40% of all the machine tools we currently sell are destined for these sectors - and with new Doosan machines,

like the VC630/5AX (our new 5-axis machining centre) being launched - we expect that number to really take-off in the future.

If you manufacture complex, high-precision parts for the aerospace sector - call Mills CNC on **01926 736736** or visit our website [www.millscnc.co.uk](http://www.millscnc.co.uk) for more information on the products and services we provide.

**Mills CNC: We're on everybody's radar.**

[www.millscnc.co.uk](http://www.millscnc.co.uk) • Tel: 01926 736736



# One century old and rolling well

***MAA member Dunlop Aircraft Tyres this year celebrates its centenary. AIM salutes Dunlop's achievement with this look at the company's past, present and future.***



## **Operations at Fort Dunlop, Birmingham**

From top: Removing the tread from a worn aircraft tyre; winding new tread rubber onto the rasped aircraft tyre; moulding the tyre – the final manufacturing process.

Right: Inspection of an aircraft tyre recently removed from its mould.

DUNLOP Aircraft Tyres, based at the historic Fort Dunlop site in Birmingham, traces its roots back to 1910 and, 100 years later, is the only company in the world specialising in aircraft tyre manufacturing and retreading.

The Dunlop name is attributed to John Boyd Dunlop (1840 – 1921), inventor of the pneumatic tyre. Tyres did not make John Boyd Dunlop the fortune that might be expected but the commercialisation of the pneumatic tyre, handled so adeptly by the Dunlop Tyre and Rubber Company, changed the world.

In the early days of flight, aircraft tyres were nothing like they appear today. Early tyres in the company's archive bear a closer resemblance to motorcycle tyres of the era.

A year after launching its pneumatic tyre in 1910, Dunlop offered wired tyres on well-based rims that provided a greater measure of safety, especially during crosswind landings.

The UK's position as a leading manufacturer of aircraft had a significant role to play in the growth of Dunlop: local component production was a benefit to the early pioneers of flight and the company increased its fleet coverage effectively.

During the Second World War, most aircraft of the Royal Air Force were fitted with Dunlop tyres and a close relationship was formed that

endures today, with the company's products found across fleets flown by the UK forces.

In 1950, the company pressed ahead with plans to open a technical and scientific research centre in Birmingham and the age of passenger flight provided the greatest opportunity for Dunlop to increase in size. It was an opportunity that the company exploited effectively.

The first jet passenger aircraft, the de Havilland Comet, was fitted with Dunlop tyres. Since then, the company has supported many notable aircraft, including Concorde.

The 1980s saw the once mighty Dunlop Rubber Company broken up. But for Dunlop Aircraft Tyres, the demise of the larger company was a blessing in disguise.

Dunlop Aircraft Tyres began a period of rejuvenation. It invested in new product development and entered the regional aircraft market with characteristic enthusiasm, energy and commitment.

The list of manufacturers and types for which the





# aerospace in the midlands



A BAE Systems Hawk trainer drops in to land on Dunlop tyres.

company supplies tyres is extensive – and growing; it has just been named an alternative source of tyres for Bombardier's new CRJ1000 Next Gen.

Increased investment came to Dunlop Aircraft Tyres in 2007 with the acquisition of 74.6 per cent of the company by AAC Capital Partners and the appointment of Ian Edmondson as chairman and managing director.

"Our vision is to expand and that means expanding our product range, supporting our customers with regionally located distribution and retread facilities and expanding the output of new tyres," said Ian.

The vision is being realised by the company with its new joint venture aircraft tyre distribution and retreading facility in China and new product development, which continues at speed.

For the military market, the company has been selected to supply tyres for the STOVL version of the new F-35 Lightning II Joint Strike Fighter that is undergoing flight tests and the new Airbus A400M military transport aircraft.

For the civil market, the company is making excellent progress with its new radial tyres for the Embraer 190/195 regional jet and Airbus A320, and has a number of other exciting projects in the advanced stages of development.

Today, Dunlop Aircraft Tyres, with more than 300 employees in Birmingham, has strong links



Ian Edmondson

with other aerospace companies in the Midlands with which it cooperates to find ever more inventive ways to increase tyre performance and enhance customer satisfaction.

Some of these links originate from the company's history. Meggitt Aircraft Braking Systems in Coventry, for example, which specialises in providing wheels and brakes, itself started life as part of Dunlop.

Other relationships, such as that with Newbow Aerospace in Redditch and Goodrich, have been developed more recently based on the synergy with Dunlop Aircraft Tyres' business and airline customers include carriers such as BMI and Flybe.

Dunlop also works with local engineering companies and recently announced a research project that is partly funded through the MAA to research new ways to embrace modelling technology to reduce the time and cost of aircraft tyre development (see page 3).

The project is being run in conjunction with the University of Birmingham's School of Mechanical Engineering and with support from Airbus' facility at Filton.

Dunlop Aircraft Tyres is proud that it continues to manufacture at the original Fort Dunlop site in the Midlands; under its new management and with new investment, its growth is set to continue.

▲ [www.dunlopaircrafttyres.com](http://www.dunlopaircrafttyres.com)

## Key dates in Dunlop history

**1910** – First aircraft tyres advertised

**1911** – Wired tyres produced on well-based rims

**1939-45** – Dunlop fits tyres to most RAF aircraft during Second World War

**1950** – Company establishes technical and scientific research centre

**1952** – Dunlop enters passenger jet market with Comet

**1969** – Dunlop tyres on Concorde

**1985** – Dunlop Aircraft Tyres owned by BTR following break-up of Dunlop

**1996** – Dunlop bought from BTR by Rene Charvillat

**2007** – AAC Capital Partners acquires 74.6% of business

**2009** – Tyre retreading and distribution facility opens in China.



Retreaded Dunlop tyres, tested and ready for dispatch.

*"Our vision is to expand and that means expanding our product range, supporting our customers with regionally located distribution and retread facilities and expanding the output of new tyres."*

## Aerospace firms scoop awards

TWO Midlands aerospace manufacturers – JJ Churchill and Paul Fabrications – have been recognised in the first EEF Future Manufacturing Awards.

They were among six Midlands region winners announced at Leicester's National Space Centre in November and go through to the national finals in February 2010.

Launched this year by EEF, the manufacturers' organisation, the awards celebrate enterprise, innovation, environmental performance and skills development among UK manufacturers.

JJ Churchill won the Innovative People Practices category. Involving employees in the development of its values allowed this family-owned aerospace business to undertake radical change with the full support of its Nuneaton-based workforce, said the citation.

Paul Fabrications received the Environmental Achievement award for a three-year programme which has halved electricity consumption in the company's chemical etching facility in Derby.

▲ [www.jjchurchill.com](http://www.jjchurchill.com)

▲ [www.paulfabrications.co.uk](http://www.paulfabrications.co.uk)

## Manufacturing centre gets £40m injection

THE Manufacturing Technology Centre (MTC) at the Ansty Park research and development site near Coventry has received £40 million public funding boost.

The contribution from Advantage West Midlands (AWM) and East Midlands

## Regional support gives boost to voice for composites sector

THE MAA is encouraging Midlands aerospace companies involved in composites to participate in the new Composites Gateway which has been established in the wake of the UK government's national strategy for this important sector.

The Composites Gateway is a key to ensuring a strong industry say in training to support and build the UK's burgeoning composites industry.

The initiative is working with industry, higher education and further education to develop and deliver value-added products and services, provide a single point of access, and enable technology services for innovation.

Work to date on the Composite Gateway has been carried out predominantly in the South West, where funding has been received. The project is now keen to expand its activities into the Midlands where it also has the support of the East Midlands Transport iNet, Leap Ahead, University of Nottingham, University of Derby and Derby College.

For details, contact the MAA office or Steve Shepherd at [sscomposite@yahoo.com](mailto:sscomposite@yahoo.com)

Development Agency (*emda*) was confirmed by the Department for Business, Innovation and Skills.

The MTC, backed by some of the UK's major aerospace manufacturers including Rolls-Royce, Aero Engine Controls and Airbus UK, as well as Jaguar Land Rover, is designed to help UK manufacturing and its supply chain become more competitive in the global market.

A new model of partnership between industry, universities and research and technology organisations, the MTC reflects the need for manufacturers to move away from competing on cost to competing on knowledge.

The centre will provide resources and a high quality environment for the development and demonstration of new technologies on an industrial scale.

The £40 million public investment will drive forward the construction of the centre, which

will start in early 2010. Scheduled to open in summer 2011, the MTC has now attracted £130 million of public and private sector investment for the next 10 years.

Bryan Jackson, chairman of *emda* which is one of the public sector investors, said: "This world-class centre of excellence will help to ensure that the UK and the Midlands stays at the forefront of manufacturing technology and innovation."

## Group for aerospace communities formed

A NEW alliance of local authorities whose communities depend on aerospace supply chains and employment has been launched to champion the UK aerospace industry which employs 113,000 across the country.

The Aerospace Communities Alliance (ACA) is chaired by Councillor Hilary Jones,



**Precision Engineers to the aerospace industry**

Manufacturers of complex parts using the latest advances in multi-axis CNC machinery.

3D Solid modelling CAD/CAM with file transfer facility.

Services include non-destructive testing, thread testing laboratory and pressure testing.

**ARROWSMITH**  
Precision Engineering

[www.arrowsmitheng.co.uk](http://www.arrowsmitheng.co.uk)  
Tel: +44 (0)2476 361773 Fax: +44 (0)2476 361126

ISO 9001 ISO 14001  
Nadcap  
EC 21  
member



# aerospace in the midlands

leader of Derby City Council, and has support from local authorities and industry bodies including the MAA, Rolls-Royce and Airbus.

The ACA's overarching aim is to provide a coordinated voice for communities that rely on the aerospace sector and its supply chains, to retain and grow the industry within local areas. It aims to add value to existing industry lobbying and support structures by directly representing its communities.

The House of Commons launch was designed to raise the profile of the ACA within government, the industry and the national media. Ian Lucas, the Minister for Business and Regulatory Reform, and Derby North MP Bob Laxton were among those attending. The MAA was represented by board member Darren Johnson.

## Intelligent Energy APU for Airbus test

MIDLANDS-based clean power systems company Intelligent Energy has taken an important step forward by supplying Airbus with a multi-functional fuel cell auxiliary power unit (APU) intended for use on future commercial airliners.

The announcement followed the opening by Airbus of the Aerotec Fuel Cell Test Centre, set up to test commercial applications of fuel cell systems.

Airbus has previously tested a hydrogen and oxygen-based fuel cell system on board its A320 test aircraft to power the aircraft's back-up hydraulic and electric power systems, as well as operating the ailerons.

Intelligent Energy chief executive Henri Winand said fuel cell technology answers many of the challenges of the 'more electric

aircraft'. It cuts emissions and fuel consumption and allows airlines to diversify their fuel supply base.

In February 2008, using the same type of power system, Intelligent Energy demonstrated its aviation credentials when it provided the system to Boeing which powered the world's first manned fuel cell aircraft.

▲ [www.intelligent-energy.com](http://www.intelligent-energy.com)

## UKTI globalisation project progresses

UKTI in the East Midlands has formally launched its Supply Chain Globalisation

Project, together with consultant and MAA member Clive Lewis of Achieving the Difference.

Five prominent aerospace companies have committed to the project with others showing interest to commence in early 2010.

UKTI's Peter Stevenson said all those who attended the workshops "have been impressed both by the need to globalise their companies and the significant benefits to be derived by joining the project."

Places are still available for other companies to come on board. For further information or to register, please contact Peter Stevenson at

[peter.stevenson@uktiem.co.uk](mailto:peter.stevenson@uktiem.co.uk)

▲ [www.emids.uktradeinvest.gov.uk](http://www.emids.uktradeinvest.gov.uk)

## Fibreflight tests innovative VAROS platform

DERBYSHIRE-based UAV builder Fibreflight has successfully flight-tested its latest design (pictured right). Dubbed the VAROS, it is described as an easily transportable, robust, multi-role sensor platform.

Fibreflight managing director Richard Hardwick says innovative design makes the VAROS capable of safe, reliable operation in a range of environments.

"Its ability to take off and land vertically and its safe, ducted propulsion mean the VAROS can be used for operations previously not possible with conventional fixed and rotary wing UAVs," he said.

The all-composite airframe measuring 850x570mm relies on electric propulsion to remain on station for up to 20 minutes with a payload of up to 0.5kg. Its maximum takeoff weight is 5kg.

Hardwick says applications include urban scouting and site survey, counter-IED examination, remote sensing, 'perch and stare' observation, crowd control and media work.

▲ [www.fibreflight.co.uk](http://www.fibreflight.co.uk)



UAV technology is highlighted at an MAA workshop on 28 January at Pride Park, Derby. For more details, see the MAA website [www.midlandsaerospace.org.uk](http://www.midlandsaerospace.org.uk)

• Nationwide collection/delivery service • UK and Europe • Hazardous Freight A.D.R. • Air freight - Level 4 •

## The logistical specialists... serving the aerospace and defence industries

24-hours  
07787  
525053

Call 01384 221642  
email [info@jxxlogistics.co.uk](mailto:info@jxxlogistics.co.uk)  
web [www.jxxlogistics.co.uk](http://www.jxxlogistics.co.uk)

JJX Logistics is a member of the Midlands Aerospace Alliance



## Business takes off with the Midlands Aerospace Alliance

### Profile: Fire Protection Coatings Ltd

Fire Protection Coatings Ltd (FPCL) is a 'supply and apply' specialist dealing in fire protective coatings. Active in a number of high-specification sectors including aerospace and defence, the Coventry-based company handles a wide range of coatings and paints to protect steel, aluminium, composites, timber and fabrics.

FPCL was formed in 2002 in a management buy-out of the coatings services division of Nullifire Ltd. Since then, it has expanded its business in line with ISO standards and the demands of its customers, many of which are Tier 2 and 3 suppliers in the aerospace supply chain. Its products, which include thin film intumescent paints, epoxy insulation, fire retardant coatings and mastics, are used in major civil and defence programmes.

Typical FPCL projects include fire protection to transport container units rated for IM; fuel system actuators; smoke damper motors; heavy duty oil and gas valves; protective casings for potentially explosive and inflammable materials; fabrics and seating; composite structures and materials and electronic components housings.

#### More potential

Despite FPCL having a number of clients in that sector, management felt that aerospace held more potential than the company was at that time able to tap into. They recognised that a revised marketing strategy was needed.

As a member of the Midlands

It became clear that own-labelling the products would benefit us



A composite fire barrier for the Boeing 777, coated by FPCL with an epoxy intumescent fire coating.



Aerospace Alliance (MAA), FPCL was able to take advantage of the Aerospace Business Strategy (ABS) programme which was run by the MAA to help Midlands companies improve their competitiveness. Thanks partly to ABS funding support, FPCL worked with an independent business consultant to develop a more effective strategy.

Director Clive Atkins describes the consultant's work as "opening minds". A series of meetings with the management team and with the shop floor workers helped crystallise a view of the company's present position and where it wanted to be in terms of the markets it serves. The consultant's subsequent report provided the focus for a half-day strategy meeting at which key objectives were agreed.

#### Good experience

An important outcome from the consultant was the reassurance to FPCL that it was broadly on the right track. He

#### FACT FILE

- > **Company:** Fire Protection Coatings Ltd
- > **Address:** Unit 8  
229 Torrington Avenue  
Coventry CV4 9HN
- > **Activities:** supply and application of fire protective coatings for international industrial and defence customers
- > **Accreditation:** ISO9001/2000, ISO14001
- > **Contact:** Clive Atkins, Director  
fpcltd@btconnect.com
- > **Tel:** +44 (0)24 7642 2200  
**Fax:** +44 (0)24 7646 5568  
[www.fireprotectioncoatings.com](http://www.fireprotectioncoatings.com)

also helped identify key strategic positioning to take it forward. One aspect of this was branding. Says Clive: "It became clear that own-labelling the products we use would benefit us in terms of credibility, pricing and our brand. We're now doing this as new products are added to our range.

Clive says working with the MAA was a "very good experience. I would recommend [the MAA] particularly for anyone looking to introduce quality regimes. The ABS programme helped us develop a strategy to expand our aerospace business.

"We probably already knew what we should be doing," he adds. "What the programme did was make us sit up and analyse what we were doing, to focus more on the things that could take us forward."

## Redundancy support takes off in East Midlands aerospace sector

HELP is at hand for aerospace companies and individuals facing restructuring and redundancy in the East Midlands – Career Chain, an initiative funded by the East Midlands Development Agency (emda) is supporting the retention and development of people and skills across the region.

The service is being delivered by NE Group and Winchester Consulting, working in partnership with Jobcentre Plus and other business support organisations. It offers individuals and companies within the engineering and construction sectors help with finding work and training and up-skilling opportunities.

The NE Group's Matt Bust, career chain project manager, said: "People were losing their jobs and leaving the engineering sector, causing a skills shortage. We want to help keep people within the sector through redeployment.

"Where a company has identified redundancies, we step in at any early stage to support staff and help either redeploy them within the same business or match them up

with companies that are looking to recruit."

The service was set up in May 2008, when it took over from the East Midlands Pan Business Redeployment Project, which was designed to support the engineering sector in the economic fallout after the World Trade Centre attacks in 2001.

Its corporate clients are enthusiastic. One said: "We had spent a lot of time developing the skills of our workforce, so when things became difficult we felt a personal obligation to do what we could to help. Career Chain became real partners in the process and I'd strongly recommend them to any business in similar circumstances."

A job search and job matching database helps businesses find new talent and provides a pool of vacancies for individuals, who can also benefit from career guidance and interview training.

"This has given me a kick and more confidence towards my new employment with a CV that stands out," added another Career Chain user.

▲ [www.careerchain.org.uk](http://www.careerchain.org.uk)

## Arrowsmith grows with Exhall acquisition

COVENTRY-based Arrowsmith Engineering has added a full range of grinding services to its portfolio with the acquisition of Exhall Grinding and Engineering, which will operate as a division of Arrowsmith Engineering.

Work is under way to bring its capabilities in line with Arrowsmith's existing ISO 9001:2001, AS EN 9100 and ISO 14001:2004 quality and environmental standards.

The acquisition and the creation of a new

group headquarters and technical centre are the latest steps on Arrowsmith's path to world-class manufacturing and business growth.

Government-funded initiatives such as SC21 are helping Arrowsmith turn a manufacturing downturn into opportunities for the future. Proof of the programme's benefits came in the form of the company's first 100 per cent OTIF (On Time In Full)

delivery rating, making it Pattonair's top supply chain partner for the month.

"SC21 is much more than just a badge," says Arrowsmith director Jason Aldridge. "It is a way of working.

"If implemented throughout the Midlands, it would help manufacturers not only to safeguard, but to create hundreds of extra jobs in the region."

▲ [www.arrowsmitheng.co.uk](http://www.arrowsmitheng.co.uk)



Arrowsmith directors Jason Aldridge (back, centre), Keith Aldridge and Sheila Aldridge with their recently expanded team of specialist grinders, following the acquisition of Exhall Grinding Ltd.

## NEW MEMBERS

*The MAA welcomes the following new members:*

### **Arco Ltd**

*West Bromwich*

Supplier of personal protective equipment and products

### **Eversheds LLP**

*Nottingham*

International law firm

### **Hydrapower Dynamics Staffs Ltd**

*Walsall*

Engineering solutions

### **Lean Education & Development Ltd**

*Hagley, West Midlands*

Provider of lean and continuous improvement training

### **Mills CNC**

*Leamington Spa*

Distributor of CNC machine tools

### **Surface Generations Ltd**

*Oakham, Leicestershire*

Reconfigurable pin tool technology

### **Wallwork Heat Treatment**

*Birmingham*

Provider of aerospace heat treatments

### **Wetherby Consultants**

*Coleshill, Birmingham*

Executive recruitment services

### **Wheelabrator Group Ltd**

*Birmingham*

Surface preparation technologies and services

### **WTI Fasteners**

*Moir, Derbyshire*

Provider of high performance internal threads



## IN BRIEF...

**Intelligent Energy (IE)** has received an £800,000 Grant for Business Investment (GBI) from East Midlands Development Agency (emda) to help it expand. The project, costing more than £8.5 million, is expected to create 130 new jobs, more than doubling IE's workforce. The business, which started as a spin-out from Loughborough University, includes Airbus and Boeing among its blue-chip clients.

Coventry-based **Plasticraft Process Plant Technology Group**, a leading supplier to the aerospace sector of surface treatment equipment, has achieved record capital plant sales in 2009, booking orders worth more than \$20 million. Among them are contracts for the supply of chemical processing lines to Turkey, Saudi Arabia and the Far East.

Leicester-based **Wide Range Elastomers** has been acquired by sealing technology business **Garlock (Great Britain)**. The company's fabric reinforced airframe seals and variety of canopy and cockpit seal extrusions complement Garlock's range of aerospace products.

Derbyshire-based **Paul Fabrications** is expanding on the back of a 30 per cent year-on-year rise in turnover for 2010. The precision component manufacturer, which supplies the aerospace and nuclear power generation sectors, has increased its manufacturing space by 50 per cent to 60,000

sq ft. "We're seeing substantial growth through the airframe and engine programmes we support," says managing director Ingard Sagstad.

**Air and Ground Aviation** of Stafford has seen a 10 per cent increase in business over the last year, boosting its turnover to about £4 million. The spares and consumables stockist for civil and military aircraft expects recently added helicopter charter and fuel services to add significantly to its business.

The Cryoconnect division of Staffordshire-based **Tekdata Interconnections** has delivered 175 bespoke flight harnesses for the alpha mass spectrometer (AMS), a space research instrument due for launch to the International Space Station in July. Cryoconnect developed and built connectors and miniature ribbon cables using materials such as resistance alloys for predictable performance and minimal heat burden at cryogenic temperatures.

**Rolls-Royce** has entered a five-way £50 million strategic partnership to support the development of structural metallic systems for advanced gas turbines. It is the first collaboration of its kind between Rolls-Royce, the Engineering and Physical Sciences Research Council, and the universities of Birmingham, Cambridge and Swansea, and will include research, fellowships and postgraduate training.

## TECHNOTES

Derbyshire-based machined plastics specialist **Fibracon Insoll** has introduced the new DuPont Vespel SCP family of engineering plastics to its portfolio. Fibracon says the products combine the properties of plastics, ceramics and metals for increased temperature handling, improved dimensional stability, broader chemical compatibility and greatly improved wear resistance. Applications include control linkage components, door mechanisms, bushings, bearings, wear pads and thrust washers.

A new high-grade ceramic tooling block material launched by **ACG**, part of the Composites division of **Umeco**, combines high temperature resistance with a low coefficient of thermal expansion (CTE). ACG says CB1100 can produce thermally stable composite tooling capable of withstanding the pressures and temperatures of autoclave cure cycles. It adds the product is particularly suited to the production of high accuracy, short run and prototype tooling.

Staffordshire-based materials analyst **CERAM** has published a white paper outlining how the characterisation of surfaces and interfaces can assist the aerospace industry to reduce its environmental impact. The paper, available as a download, says such analysis plays an important role in developing 'greener' materials, components and technologies.

## About the MAA...

**The Midlands Aerospace Alliance (MAA) is the voice of companies in the British Midlands supplying global aerospace. It was set up in 2003 to improve wealth creation and employment for companies and people involved in the aerospace industry across the Midlands. The MAA is supported by Advantage West Midlands (AWM) and the East Midlands Development Agency (emda).**



**For additional copies of AIM, or to add your clients to the distribution database, please contact the MAA Secretariat: [info@midlandsaerospace.org.uk](mailto:info@midlandsaerospace.org.uk).**

## Contact the MAA

*If you have a query or suggestion that you wish to make, please contact the MAA by any of the means below:*

T: +44 (0) 2476 430250  
F: +44 (0) 2476 430001  
E: [info@midlandsaerospace.org.uk](mailto:info@midlandsaerospace.org.uk)



midlands aerospace alliance

