

MPE PEOPLE

Expanding the design engineering team

The MPE team of six highly qualified design engineers have a unique blend of world-class experience and bright new talent spanning electrical and mechanical design [Read More >](#)



Spotlight on John Hughes

A year after joining MPE as Engineering Manager and having already delivered some key projects, John Hughes has been appointed to the Board as Engineering Director [Read More >](#)



MPE ACTIVITY & TECHNOLOGY

Increasing overall capacity to meet rising demand

The current expansion of capacity at MPE covers most areas of manufacturing, including assembly, capacitor winding, fabrication, inductor winding, painting and testing [Read More >](#)



MPE stars in the UK's national & regional awards

Shortlisted for national and regional Awards, MPE has achieved four category nominations for Make UK, three for The Manufacturer MX and two for Knowsley Business [Read More >](#)



MPE DISTRIBUTORS

Radiotechnika leads at MSPO defence show in Poland

Radiotechnika, an MPE distribution partner for over 15 years, displayed a wide range of MPE HEMP and TEMPEST filters at MSPO, Europe's third largest defence show [Read More >](#)



MPE products pull in the crowds in Tokyo

Techno Science Systems exhibited for the fifth time at the annual SEECAT anti-terrorism show, with MPE's EMP, HEMP and TEMPEST filters attracting massive interest [Read More >](#)



MPE APPLICATIONS

MPE protects the power line for 5G testing

A high-performance MPE EMC power line filter was a vital part of an RFI-shielded 5G test cube produced by NTD Shielding Services for New York University Abu Dhabi [Read More >](#)



Custom high-power solutions from MPE

As the world's number one supplier of high-current EMC and HEMP power line filters, MPE manufactures a range from 800A to 6000A, custom-made in many configurations [Read More >](#)



FAST FACTS ON MPE LTD

- Trading for over 98 years, MPE employs more than 60 people.
- MPE has designed and manufactured in excess of 10,000,000 high-performance protection filters and feedthrough capacitors across the last 30 years.

- Many products in continuous service for more than 25 years.
- MPE's portfolio spans over 20,000 custom designs.
- MPE is certified to the ISO 9001:2015 quality standard, and its products meet all applicable defence, safety and regulatory standards.



For comprehensive information about MPE's products and services, contact the Sales and Marketing Department, MPE Ltd, Hammond Road, Knowsley Industrial Park, Liverpool, L33 7UL, U.K.
Tel +44 (0)151 632 9100. Email sales@mpe.co.uk. Website www.mpe.co.uk
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Company Bulletin

for EMC, EMP, HEMP & TEMPEST Protection

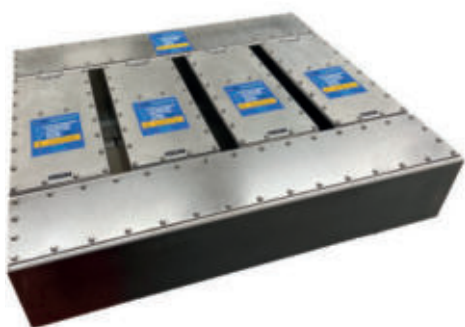
Issue 32



A meeting of the Engineering team at MPE led by John Hughes – Engineering Director



Members of the Engineering team during laboratory testing at MPE



The ground-breaking Mil-Std-188-125-1A HEMP filter which is independently certified and has now been supplied to multiple projects

Expanding the design engineering team

In support of the company's strong and sustained growth and the soaring world demand for its customised filter solutions, over the past 12 months MPE has been expanding its Engineering team. Now comprising a team of six highly qualified engineers representing 10% of MPE's total head count, MPE's capability in design and development has been significantly strengthened.

In line with wider company strategy and following the appointment of John Hughes as Engineering Manager and now Director, three new recruits have come on board. This gives the team a unique blend of world-class experience and bright new talent spanning both electrical and mechanical design.

Focussing primarily on electrical design, Tobias Okech has joined the team as a Senior Design Engineer. Having graduated from the University of Liverpool in 2008 with a BSc in Physics, Tobias previously spent several years working in the analytical instrumentation industry on projects for clients including government agencies such as NASA and the United States Geological Survey.

Having already fulfilled his apprenticeship with MPE, Ben Meadley has come onto the Engineering team as a Junior Design Engineer. Then another of MPE's apprentices, Gillam Prescott, was recruited earlier this year to fill the newly created position of Engineering Coordinator.

Gillam's role involves him working closely with MPE's Manufacturing Department to ensure that designs are validated, electrically based production requirements are met, and all technical documentation is updated and correct. Together, Ben and Gillam contribute ten years of first-hand practical manufacturing knowledge of MPE's solutions.

The expanded Engineering team has already completed several significant new projects. They include the design, test and certification of MPE's radical Mil-Std-188-125-1A HEMP filter designs as well as updates to MPE's European TEMPEST pluggable filters.

The new appointments further strengthen MPE's Design Department, in which a wealth of experience is provided by Dave Glazebrook, Tom Chau and John Hughes. This expanded team is now the strongest and best resourced that it has ever been, ensuring that MPE is ideally placed to continue the delivery of its innovative, world-leading filter solutions for many years into the future.



John Hughes



John Hughes snowboarding at Morzine in the French Alps

Spotlight on John Hughes

A year after joining MPE as Engineering Manager, John Hughes has now been appointed to the Board of Directors as Engineering Director, having successfully completed in May Liverpool University's Growth Catalyst seven-month leadership development programme.

Setting goals for and managing a team of five engineering designers using Autodesk Inventor 3D CAD, PSpice simulation software and various other predictive modelling tools, he has been reporting as a Manager direct to MPE Managing Director David Seabury.

Going forward, given the necessary mechanical or electrical customisation of many standard products at MPE to comply with the demands of particular applications, the principles of Design For Manufacture and Assembly (DFMA) will be at front and centre of John Hughes's philosophy as a Director. Taking responsibility for decision-making in his area of expertise, he will also focus on the latest internal project developments such as for UL certified filter ranges and improvement technologies, for example laser welding.

Since joining MPE, John has expanded and reorganised MPE's Engineering team, with the addition of a number of new members in freshly created roles, to meet the ever increasing demand the team is experiencing. John has also already successfully delivered several key projects including MPE's new range of Mil-Std-188-125-1A compliant HEMP filters.

John moved to MPE from the Darcy Group factory at Birkenhead, specialist manufacturers of environmental protection products such as aerial and marine oil dispersant spray systems, ATEX environmental alarms, sewer and drain closure devices, and oil spill absorbents. As Group Technical Director he was responsible for four departments – design, spillcare production, technical production and installation operations.

Previously he had been Engineering Design Manager at Ayles Fernie International of Sevenoaks, Kent, system integrators of oil dispersant spray systems who subsequently became part of the Darcy Group.

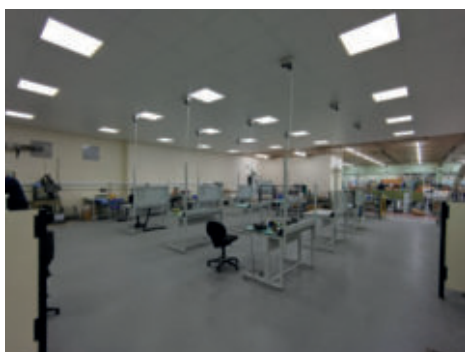
John Hughes has also worked in design and development in the county of Kent at Kent Modular Electronics of Rochester, Blighline of Canterbury and Hansa GWS of Gravesend.

His B.Eng Honours degree in Manufacturing Engineering and Operations Management was achieved from his course at the University of Nottingham between September 2001 and June 2004.

John's hobbies have included snowboarding in the French Alps, mountain biking, other adventure sports, world travel and listening to many genres of modern music. He has previously participated in open water swimming races and triathlons. Born at Wrexham and a dedicated Wales rugby supporter, he now lives in Chester with Jessica, his partner for 20 years, and their two young children.



Exterior and interior of the new and greatly expanded paint spray and drying facility, which will double current capacity



The new painting and feedthrough assembly areas

Increasing overall capacity to meet rising demand

Global demand for MPE's filter and capacitor products has almost doubled over the past four years, with almost 70% of production now being exported to 28 overseas territories. To accommodate this and future anticipated growth, MPE is currently expanding its manufacturing facilities.

In late 2022 MPE began to implement the expansion. Completion is planned for December 2023 for the work to cover almost all areas of manufacturing, including assembly, capacitor winding, fabrication, inductor winding, painting and testing.

Three particular projects are in progress for the capacitor winding, feedthrough assembly, and paint spray and drying areas.

MPE manufactures its own proprietary feedthroughs, and demand within this area has greatly increased. Accordingly MPE is itself constructing a new and additional automated power line capacitor winding machine, scheduled to be operational by the end of August 2023 to double throughput in power line capacitor winding.

MPE is also fitting out a previously unused factory space, increasing the manufacturing footprint by almost 200m². This will allow all feedthrough assembly and test activities to be performed at a single location, not only increasing feedthrough production capacity but also improving workflow, to facilitate further manufacturing efficiencies.

The expansion includes installation of electrics and extraction equipment, installation of new assembly workbenches – sourced following consultation with MPE's feedthrough team – and investment in new assembly and test equipment. Production in the area is planned to start in August 2023.

The third project underway at present is the installation of a new paint spray and drying facility. Another previously unused area of MPE's plant is being renovated and adds a further 200m² of manufacturing footprint. Two modular spray booths have been installed, doubling MPE's capability there. A new drying room facility is also being built, which will equally double capacity. This is all set to come on stream in August 2023.

These wide-ranging manufacturing expansion operations will not incur a single day of lost production anywhere in the plant. This has been made possible by the detailed forward planning of MPE's manufacturing and production engineering teams and ensures that the company's present 97% on-time delivery rate is maintained.

Once completed, the work in expanding production capacity will ensure that MPE is scaled to accommodate a monthly output of up to £1.5 million.



Company Bulletin

for EMC, EMP, HEMP & TEMPEST Protection

Issue 32



Make UK Regional Manufacturing Awards



The Manufacturer MX Judging Panel (three to the left), during the assessment visit for their 2023 Product Innovation & Design Award, in discussion with John Hughes – Engineering Director and Marcus Wright – Manufacturing Director of MPE Ltd



The Manufacturer MX Awards at the Exhibition Centre Liverpool

MPE stars in the UK's national & regional awards

MPE's successes have again been recognised in the November 2023 Awards season, both regionally and nationally. The company achieved four category nominations for Make UK, three nominations for The Manufacturer MX and two nominations for the Knowsley Business Awards.

The regional results of the 2023 Make UK Manufacturing Awards will be announced at the Make UK North-West Regional Dinner, on the evening of Tuesday 7th November at the prestigious location of the Lowry Hotel in Salford, Greater Manchester.

Make UK, formerly the Engineering Employers' Federation (EEF), represents all manufacturers in the United Kingdom. Make UK provides businesses with advice, guidance and support in employment law, employee relations, health, safety, climate and environment, information and research, and occupational health.

Remarkably MPE have been recognised and nominated in no less than four of their categories - Business Growth & Strategy; Developing Future Talent; Innovation; and Small Medium Enterprise (SME) of the Year.

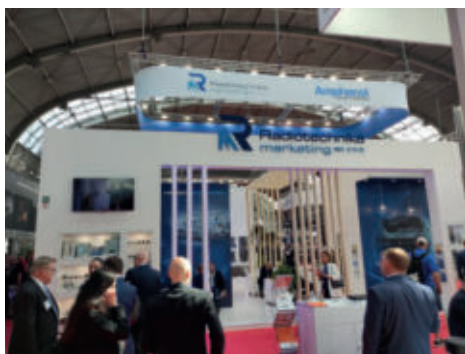
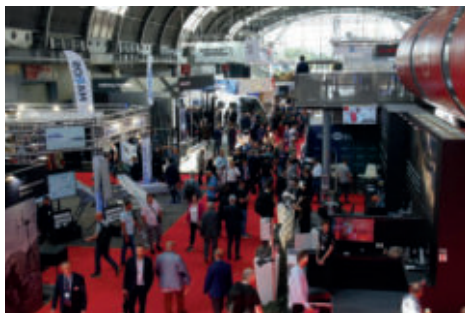
Then The Manufacturer MX Awards is a black tie gala event held at the Exhibition Centre Liverpool at the Albert Dock on Wednesday 15th November in partnership with the Institution of Mechanical Engineers (IMechE). Nominations for MPE are for the International Trade Award; People & Skills Award; and Product Innovation & Design Award.

To achieve this, two rigorously conducted site visits to MPE by separate Judging Panels included the questioning of key members of staff. In addition, MPE also attended a further Judging Panel convened at St Pancras Square in central London.

Finally, the Knowsley, Liverpool, Business Awards take place, as is traditional in the Grand Marquee of Knowsley Safari Park, on Thursday 23rd November.

Knowsley is home to as many as 3,700 businesses including major players such as Jaguar Land Rover, Ford, Magna, Unilever, Pilkington, Ineos, AstraZeneca and Cammell Laird. So the two categories in which MPE has proudly been shortlisted in these Awards are for International Trade and Medium Business of the Year.





MSPO 2023 and the Radiotechnika stand at the Targi Kielce exhibition and congress centre



One of the MPE product displays on the Radiotechnika stand

Radiotechnika leads the field at MSPO in Poland

For three decades September's international defence industry exhibition MSPO in Poland has been a pre-eminent venue for companies from the global defence industry to showcase their products. The annual four-day event, hosted in the massive Targi Kielce exhibition and congress centre in southern Poland, is Europe's third largest defence trade show after Paris and London. Opened by the Polish Defence Minister Mariusz Błaszczak, the 2023 MSPO brought together over 700 exhibitors from 35 countries and some 26,000 visitors including more than 60 foreign delegations.

MPE's bronze level distributors for Poland, Radiotechnika Marketing, celebrating their 30th anniversary, exhibited again at this 31st MSPO, staged from 5th to 8th September. Trusted distribution partners of MPE for more than 15 years, Radiotechnika's stand was impressive and well-positioned, with a wide range of MPE's HEMP and TEMPEST filters on display.

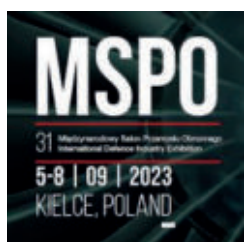
There Radiotechnika demonstrated their versatility and customisation for many and varied applications, such as military vehicles, tactical shelters and radar stations through to C4ISTAR battlefield management technologies, the latest stealth vessels and anechoic EMC test chambers.

Krzysztof Krawczyk, Senior Product Manager – EMC at Radiotechnika, commented: "The current battlefield is characterised by the use of a large number of advanced electronic systems, which are required to have a low level of emissions, but, above all, a high level of immunity to electromagnetic disturbances generated by electronic warfare or electromagnetic weapons.

"At this year's fair we presented the elements of our own systems for eliminating electromagnetic disturbances from vehicles and power distribution systems with red/black zonal separation. A very important aspect is the filtration of electromagnetic disturbances such as HEMP and TEMPEST, and there we have solutions from our partner, the leading manufacturer MPE Ltd."

Building upon its rapid and sustained growth in the Polish defence marketplace, MPE is already looking forward eagerly to attending the 32nd MSPO exhibition in support of Radiotechnika in September 2024. For further information on Radiotechnika and MPE products in Poland, either email

office@radiotechnika.com.pl or visit www.radiotechnika.com.pl/en

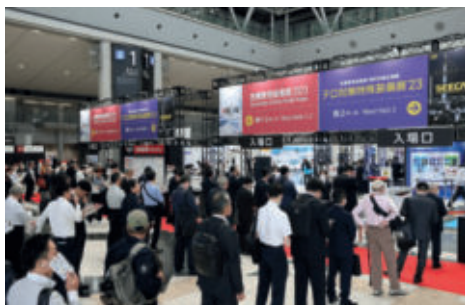


Bronze Partner





The Tokyo Big Sight international exhibition centre in Tokyo Bay



Long queues form at the entrance to SEECAT and RISCONE 2023 in the West Hall



A view of the Techno Science Systems (TSS) exhibition stand 2Y17 at SEECAT 2023



Some of the MPE filters on display

MPE products pull in the crowds in Tokyo

From October 11th to 13th, Techno Science Systems (TSS), MPE's well respected distribution partner for Japan, exhibited for the fifth time at the annual SEECAT (Special Equipment Exhibition and Conference for Anti-Terrorism).

The event was again held in the West Hall of Tokyo Big Sight, Japan's largest convention and exhibition centre at 230,000 m² and was co-located as usual with the annual RISCONE (Risk Control) Security and Safety trade expo.

Each year SEECAT draws the attention of the world as a major platform for sharing the latest equipment and information in the field of terrorism prevention and countermeasures.

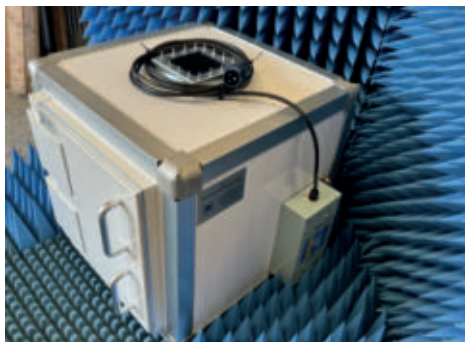
It is the only business trade show in Japan devoted to counter-terrorism which brings together experts involved day-to-day in anti-terrorism efforts across a wide front. The quality and rank of visitors is guaranteed to be high because all admissions are carefully screened in advance.

On their stand TSS displayed a selection of products and typical applications from MPE, including EMP, HEMP, TEMPEST and TEMPEST pluggable filters. A Mil-Std-188-125 compliant, two-line HEMP power line filter and data line filter mounted onto an EMP server rack attracted keen interest from visitors focussed on defence and homeland security applications. These filters were recognised for their immense versatility and for how integral they are to the performance of the rack.

In fact well-informed visitors to a packed TSS stand over the three days of the show encompassed an ever increasing number of defence equipment suppliers, consultancies and manufacturers (over 40%), together with a host of specifiers from other supply chains. Those ranged from critical national and financial infrastructure, energy networks, public utilities and transportation hubs, to police, fire and rescue services, IT departments and datacentres.

For EMC and EMP product enquiries in the Japanese market, email susumu.matsuoka@tsscorp.co.jp or visit the helpful and informative TSS company web pages www.tsscorp.co.jp





RFI-shielded test cell manufactured and supplied by NTD Shielding Services for New York University (NYU) Abu Dhabi, surrounded here by pyramidal honeycomb RF absorbers



The MPE 16A high-performance power line filter, an integral part of the NTD shielded test cell



The campus of NYU Abu Dhabi

MPE protects the power line for 5G testing

With headquarters at St Helens, Merseyside, UK, NTD Shielding Services has grown over 25 years to become a world-leading designer, manufacturer and installer of high-performance EMC, EMI, antenna and RF test chambers, Faraday cages, 5G solutions and integrated EMC test and measurement systems.

With an outstanding and proven track record of success, MPE has recently worked on projects with NTD such as RFI-shielded EMC test chambers for both a satellite communications developer and a major UK telecoms network provider, not to mention the BBC's Research and Development Laboratory at Shepherd's Bush, West London.

Another fascinating new project has been the provision of an RFI-shielded test cell to a research group at New York University (NYU) Abu Dhabi, principally for the testing of 5G networks. An essential component to protect the unit – and its sensitive internal electrics with data-to-fibre conversion – is MPE's 16A high-performance power line filter, as pictured on the left.

MPE's EMC filter was specified here to ensure the high efficiency of the RFI shield and also the EMC compliance of the electrical system and its incoming power line. The filter manufactured by MPE for this application provides 100dB of insertion loss performance across a full frequency range extending to 18GHz.

The external dimensions of NTD's high-performance RFI-shielded test cell for NYU Abu Dhabi were a cube of 660mm and internal dimensions 40mm smaller. The single, knife-edge, left-hand hinged door provides an opening 500mm high x 430mm wide.

For more information on NTD Shielding Services, its products and services, check out www.ntdshielding.co.uk, call the company hotline at St Helens +44 (0)1744 757 277 or email sales@ntdshielding.co.uk

Details of MPE's comprehensive range of high-performance EMC power line filters can be found at <https://www.mpe.co.uk/category/installation-filters>

Alternatively, to discuss the specifics of your application, MPE's expert technical team are waiting for your call on +44 (0)151-632 9100.

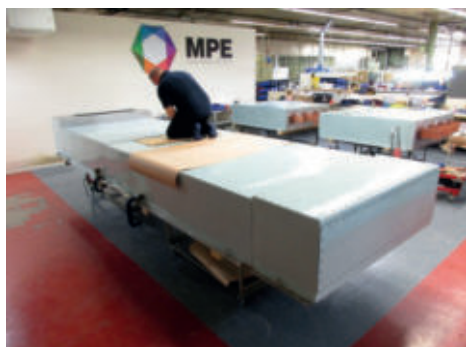




High-voltage MPE power line filter



A suite of very high current (VHC) power line filters of various current ratings, including custom 2500V DC 2000A units complete with end enclosures, have been integrated into a major UK test chamber installation. Those MPE DC filter units, pictured here in situ, measure 3m high by 2m wide and weigh two tonnes.



A custom MPE 3000A very high current (VHC) EMP power line filter with TEMPEST performance

Custom high-power solutions from MPE

Versatile custom solutions for the benefit of integrators, installers and end-users serve to underline MPE's position as the world's number one provider of high-current EMC and HEMP power line filters. Solutions provided range from 800A through to 6000A and include standard, low-leakage, three-phase and neutral configurations. What is more, in many cases MPE filters provide a far improved solution to replace existing filters from alternative sources where problems have arisen in operation.

MPE's PSpice modelling and rigorous laboratory testing give full assurance that the design of critical components such as capacitors and inductors will meet the most demanding electrical requirements prior to the commencement of any build.

High-voltage filters are a growing need for power-hungry test chambers, power plants, weapon sub-systems, ground communications, datacentres and control rooms. Homeland security has become an overarching consideration. Accordingly MPE filters for such applications are required to maintain electrical integrity and performance across a full frequency range all the way from 14 KHz to 18 GHz.

Indeed, the major challenges relating to high current and high voltage which MPE overcomes are both electrical and mechanical.

Electrically, EMC and EMP filters need to tolerate the elevated levels of ripple, harmonics and transients which may be encountered. Mechanically, challenges relate not only to physical size but also to heat dissipation and site-specific requirements such as mounting and busbar or cable entry configurations.

As important as meeting the exacting installation requirements is the absolute need to ensure that filters continue to operate, with no issues, over their expected lifetime. Many MPE high-current filter solutions have been operating faultlessly for over 20 years. In 2014 MPE had the opportunity to test a suite of its filters which had been in operational service for over two decades, and all filters were found to still perform within their original manufacturing tolerances.

MPE recently provided 80 such high-current EMP filters for a strategically important defence application in the UK. The filters were a direct replacement for previously installed filters, no longer fit-for-purpose nor compliant with current standards. Along with filter performance and track record considerations, MPE was selected as the filter provider, because of its ability to deliver all the required filters within an accelerated and remarkably short timescale of 14 weeks.

Regularly shipping such custom high-current filters and having resources to allow annual sales of up to £20 million, MPE is able to realise the best and shortest product lead times within its market worldwide. This is made possible by MPE's established supply chain, careful management of material availability and the company's agile and flexible design and manufacturing teams.

MPE understands that every application is special. So whatever questions you have about your own requirement, call MPE's team of technical experts for sound and helpful advice on +44 (0)151-632 9100 or simply email sales@mpe.co.uk