

for EMC, EMP, HEMP & TEMPEST Protection

Issue 26

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MPE recruits best young talent for apprenticeships

Six years into its apprenticeship scheme, MPE is offering positions to more and more of its talented young apprentices, who now comprise over 10% of the workforce Read More >



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Gold distributor for Poland Radiotechnika demonstrated MPE solutions across the four days of MSPO Read More >



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Much of September's BBC TV drama "Vigil" played out in a Vanguard Class submarine's control room, packed with electronic equipment protected by MPE from interference . . . Read More >



FAST FACTS ON MPE LTD

- Trading for over 95 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's is certified to the ISO 9001:2015 quality standard, and it's 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
f you have a friend or colleague who you think might find the MPE Company Bulletin informative, then we



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Benjamin Gornall, MPE's newest apprentice



Apprentices on the shopfloor at MPE: from left to right, Gillam Prescott, Jacob Grosscurth, Jack Gorman, Bradley Reed, Liam Reed, Ben Meadley



Apprentice Jacob Grosscurth (right) under instruction in the capacitor winding room at MPE



The North West Training Council (NWTC) Engineering Training Centre

MPE recruits best young talent for apprenticeships

As MPE begins the sixth year of its apprenticeship scheme, the number of apprentices offered positions within MPE has continued to grow, so that they now comprise over 10% of the workforce.

This increase coincides with the expansion in production and turnover being experienced year-on-year by MPE. Accordingly MPE recruited another apprentice in September 2021, taking the total number of apprenticeships provided by the company since the start of the scheme to eight.

Having joined in September, Benjamin Gornall is the newest apprentice to come on board and is eagerly looking forward to his on- and off-the-job skills training incorporated in his three-year fabrication apprenticeship at MPE. This will be running in conjunction with advanced manufacturing training provider the North West Training Council (NWTC), based at Wellington Business Park, Kirkdale, Liverpool.

To date, and despite pressures such as from the Covid-19 pandemic, MPE has been able to offer manufacturing positions to all the apprentices following the completion of their apprenticeship, in line with its dedication to the advancement of young talent. Indeed, one of MPE's first apprentices, Ben Meadley, progressed to higher studies and has completed his HNC in Electronic and Electrical Engineering, where he achieved a distinction and was nominated as an Apprentice of The Year finalist.

The company's commitment to a vigorous, continuing apprenticeship programme has been acknowledged by Make UK (formerly the Engineering Employers' Federation), where in 2018 MPE finished runner-up in the Developing Future Talent category at the National Manufacturing Awards in London.

Further recognition followed in 2019 at The Manufacturer MX Awards in partnership with the Institution of Mechanical Engineers – in which MPE was a finalist in their People and Skills category – and from the North West Training Council, where MPE apprentices came first and third in the Three-Year Overall Apprentice award.





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Kieron Campbell



Capacitor manufacture at MPE



Kieron Campbell inspects capacitor winding with metallised plastic film

Spotlight on Kieron Campbell

Kieron Campbell is the Team Leader for Capacitor Manufacturing at MPE. After planning and scheduling all capacitor winding to meet MPE's production requirements, Kieron supervises skilled manufacturing operatives completing the series of capacitor winding processes.

The capacitor manufacturing cell includes ten varied winding machines (automatic, semi-automatic and manual) and four heat treatment ovens. Sizes of capacitors produced range from very small to very large, dependent upon current rating and performance requirements. Finished capacitors are then either used as standalone products or incorporated into MPE's world-leading EMC and EMP filters.

Kieron has been a member of the MPE shopfloor team in Liverpool since January 2017, joining first as a Machine Operator. Next he progressed to become a trainee then full Manufacturing Technician (setting up and maintaining machines and working on special projects at MPE) and was promoted to his current role in March 2021.

Initially, at 16 years of age, from school at the De La Salle Academy in Liverpool, he had embarked in September 2012 on an Electrical Engineering course at the North West Training Council in the city. Then, at 17, he had secured an apprenticeship in nearby St Helens as a Manufacturing Technician at Linpac Packaging, an international market leader in fresh food packaging and foodservice solutions. He worked there for three years from September 2013.

Through the training providers North West Training Council and then the St Helens College / Waterside Training College in St Helens, he amassed a steady stream of vocational qualifications from NVQ Level 2 in both Electrical Engineering and Mechanical Engineering through to BTec Level 3 and NVQ Level 3 diplomas, both in Process Manufacturing, and the first year of a Higher National Certificate (HNC) in Process Manufacturing, all achieved within three years. Following a career move, Kieron self-funded the second year of his HNC studies at St Helens College and Waterside College.

Joining MPE in January 2017, he was supported through his HNC in Process Manufacturing, with paid time each week to attend college. By Summer 2017 he had completed these studies and was again well supported by MPE to undertake the next step up that September, a Higher National Diploma (HND) in mechanically based Process Manufacturing, a vital career goal that he reached the following Summer.

Kieron is a resident of the Liverpool suburb of Croxteth. Having been a proficient competitive boxer in his youth, Kieron maintains a high level of fitness nowadays with circuit training and powerlifting at his local gym. He has travelled widely across Europe and Central America on vacation and is a lifelong supporter of Liverpool Football Club.









MPE joins LinkedIn & Twitter

In recognition of the wider variety of platforms which engineering professionals are now using to communicate and obtain up-to-the-minute business information and news, MPE has extended its accessibility with LinkedIn and Twitter accounts.

In April 2021 MPE launched its first social media channels with the creation of both a LinkedIn and a Twitter account. Based upon research into social media platforms over time, on conclusion of those studies the firm decision was made to launch the two accounts, in order to align MPE with the latest, fast-growing information-sharing practices providing unmatched international reach.

Globally Twitter has more than 500 million users, whilst the world's largest professional network, LinkedIn, claims some 750 million members in 200 countries.

Accordingly, both accounts are now in continual use to convey important industry, company and product information to the stakeholders of MPE and the wider engineering community.

In the short space of time since joining, MPE has energetically posted regular updates, with content extending from company news, such as MPE shipping one of its largest ever HEMP protection orders, through to a video documenting the installation process for MPE high-current filter solutions.

However, not all of MPE briefings have related to products. Topics in other posts have ranged from the company's proactive recruitment strategy, describing how apprentices now comprise over 10% of MPE's workforce, through to MPE's green credentials.

The social media platforms have also enabled MPE to link directly to many interested end-users of its EMC, EMP and TEMPEST protection solutions, with posts and reposts carrying descriptions and images of prominent applications. Such examples have included the French Navy's Barracuda Class submarine and the British Army's Challenger tank.

Although MPE's use of social media is still relatively new, both accounts are being followed by an ever growing community across the industry. To keep fully up-to-date with developments, you are warmly invited to join this network of professionals, following MPE's progress via the login details below:

LinkedIn: https://www.linkedin.com/company/mpe-limited

Twitter: @MPE_LTD







In a defence aviation project, MPE supplied custom ceramic capacitors to Italy for the control of the chaff and flare countermeasures within the Eurofighter Typhoon platform



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MPE appoints exclusive new distributor for Italy

In July 2021 MPE appointed SACA Europe BV as its exclusive new distributor for Italy.

Whilst MPE has secured contracts in Italy for many years, this business has been almost entirely project-based. Hence, given the intermittent nature of such trading, MPE has managed the enquiries and orders arising in Italy direct from Liverpool.

However, in recent times MPE has seen requests from the territory become more regular and call for a wider range of MPE's filter and capacitor products. Furthermore, with the liquidation of an indigenous EMC filter provider during 2020, MPE has seen demand for its solutions in Italy markedly increase. Therefore the company took the decision to appoint a dedicated representative for the Italian region.

With SACA Europe already successfully representing MPE within the Balkan and Eastern European territories, and given their well-recognised representation of other electronics manufacturers' components in the Italian marketplace, the logical step was for MPE to appoint SACA Europe as exclusive distributor for Italy too.

SACA Europe was incorporated in Eindhoven in the Netherlands in November 2018. The founders boast more than 30 years' experience in electronics component distribution. They already have an established and highly successful partner relationship with MPE as the owners of IMCA Elektronik, MPE's Gold level distributor for Turkey with bases in Ankara and Istanbul.

MPE's portfolio of filters and capacitors is a good fit with SACA Europe's current broad-based offering of products from European and US manufacturers spanning defence, aerospace, space, transportation, telecommunications and industrial applications.

Director of MPE Ltd Paul Currie remarked on the appointment: "With locally manufactured filter solutions now less readily available, requests from Italy for MPE's products are becoming far more regular. Therefore, in line with MPE's successful global sales strategy, the search for an experienced and well-connected distributor for Italy became necessary and, given their proven track record with MPE, SACA Europe was the obvious choice."

You can email SACA Europe at info@sacaeurope.com and, for further information about the company, check out the website www.sacaeurope.com



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TÜYAP Fair Convention and Congress Centre in Istanbul





At the International Defence Industry Fair (IDEF)

IMCA showcases MPE filters at IDEF in Istanbul

IMCA Elektronik exhibited at the first international defence event since the beginning of the coronavirus pandemic. Opened by President Erdoğan himself, the 15th International Defence Industry Fair (IDEF) ran from 17th to 20th August at the TÜYAP Fair Convention and Congress Centre in Istanbul. This biennial event, hosted by the Turkish Ministry of National Defence (Millî Savunma Bakanlığı), is one of the top five defence exhibitions in the world.

MPE's gold distributor for Turkey, IMCA Elektronik, returned to IDEF to build upon previous success at the show. This was one of the first opportunities IMCA has had to meet with a large number of clients since 2019, and the company proudly presented a broad range of MPE filter and capacitor products to further familiarise the Turkish market with MPE's established portfolio.

Despite the recent economic pressures in Turkey brought about by the Covid pandemic, IMCA has consistently championed MPE's products in the defence arena. This has led to an increased supply of both MPE custom and catalogue products and, as such, MPE's sales within the region have continued to develop year-on-year and are set to grow yet again in 2021.

In recent years particular focus has been on the continuing provision of MPE's high-performance feedthrough and installation filter products for fixed and mobile military shelter applications.

Furthermore, expanding upon their message at the International Data Corporation (IDC) Security Summit held in Ankara, IMCA has been highlighting the importance of TEMPEST protection in Turkey and the features and benefits of MPE's pluggable and hard-wired TEMPEST filter products.

Director of MPE Paul Currie remarked: "Whilst it was certainly disappointing that current UK travel restrictions did not allow MPE to attend the IDEF event, it was excellent to see the rescheduled IDEF going ahead as planned. IMCA's commitment to this major defence exhibition was again reassuring, and it's a great asset to have such an experienced and technically competent distribution partner representing MPE in our absence."







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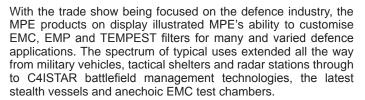


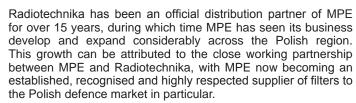
Radiotechnika stars at MSPO defence show in Poland

For almost three decades the September international defence industry exhibition in Poland has been a pre-eminent venue for companies from the global defence industry to showcase their products. Despite a challenging year because of the COVID-19 pandemic, the 2021 MSPO expo went ahead as planned, bringing together 185 companies from 15 countries. Although more streamlined, with reduced numbers this time, MSPO remained a world-class event.

Accordingly MPE's gold distributor for Poland, Radiotechnika Marketing, exhibited at this 29th MSPO, staged from 7th to 10th September. The annual four-day event, hosted in the massive Targi Kielce exhibition and congress centre, is Europe's third largest defence trade show after Paris and London.

Following a number of highly successful appearances at MSPO, Radiotechnika once again had an impressive stand showcasing a wide range of MPE filter and capacitor solutions.

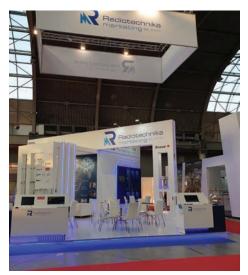




MPE is already looking forward to returning to Poland for the 30th MSPO exhibition in support of Radiotechnika in September 2022.

For further information on Radiotechnika and MPE products in Poland, either email office@radiotechnika.com.pl or visit www.radiotechnika.com.pl/en





MSPO at Targi Kielce exhibition and congress centre







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High-performance solutions for satcoms innovator

NTD Shielding Services have installed three bespoke chamber solutions for Isotropic Systems at Reading, each incorporating MPE's high-performance EMC filters. With offices in the UK and USA, Isotropic Systems is a world-leading developer of transformational broadband terminal technologies named in the Lazard T100 Index.

A pioneer in the satellite communications market, Isotropic Systems has a host of ambitious new satellite constellations from SES, Inmarsat, SpaceX, OneWeb, Telesat and Amazon currently being developed and deployed in conjunction with GEO HTS assets. Central to these development programs, Isotropic required a high-performance in-house EMC testing capability as a critical resource.

NTD Shielding Services installed the three bespoke chambers between January and March 2020, with commissioning completed shortly afterwards. In support of these works MPE supplied a range of its high-performance filter solutions, including extended performance variants which provided high levels of attenuation through to 40GHz.

With headquarters at St Helens, Merseyside, UK, NTD are independent specialist providers of RF/EMC shielding solutions and technical consultancy, with over 25 years of accumulated rich expertise and experience in electronic test and measurement applications across the UK, USA and EMEIA region.

The company is proud to have grown to become internationally recognised designers, manufacturers and suppliers of high-performance EMC, EMI, antenna and RF test chambers, Faraday cages, 5G solutions and EMC test and measurement systems. Test chamber upgrades, modifications and relocations are part and parcel of their services, as are overall project management and facility service and maintenance.

So the first chamber at Isotropic Systems measured 9.5m (L) x 4.5m (W) x 4.5m (H), featuring double access doors, access ramps and fire detection systems, with integral 16A and 32A extended performance filters from MPE. Measuring an equally impressive 10.5m (L) x 3.5m (W) x 3.5m (H), the second chamber was equipped with semi-automatic pneumatic doors, USB ports, a media conversion pack and fire detection systems. Again MPE's 32A filter solutions were utilised.

Completing the installation was a 40GHz ultra-performance, millimetre wave, mobile chamber, measuring 2.8m (L) x 1.3m (W) x 1.3m (H) incorporating MPE's DC filter solutions.

MPE's EMC filters were specified on all three applications to ensure the high performance of each EMC chamber and also the EMC compliance of each electrical system and its incoming lines. The power line filters manufactured by MPE for this application provide 100dB of insertion loss performance across a full frequency range to more than 40GHz.

For MPE's high-performance EMC solutions, see the product pages of the company website www.mpe.co.uk/products or email sales@mpe.co.uk to seek advice from MPE's team of technical experts. For a wealth of information on NTD Shielding Services, go to www.ntdshielding.co.uk or email sales@ntdshielding.co.uk





The three bespoke EMC test chambers installed at Isotropic Systems in Reading





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A scene from the BBC drama, set in HMS Vigil's control





Vanguard Class submarine at sea, as in the new BBC TV drama 'Vigil'



A typical high-performance, ultra-low-leakage power line filter designed and manufactured by MPE

MPE protects submarine in BBC TV drama

BBC TV's flagship drama 'Vigil' caught the imagination of the public and so became essential viewing for many in September. Set aboard one of the Royal Navy's Vanguard Class submarines, the six-part BBC series starring Suranne Jones and Martin Compston was a gripping crime drama, with a thrilling final episode aired on September 26th. Whilst the murder mystery was unusually staged aboard the fictional vessel HMS Vigil, painstaking research had given the series impressively realistic sets, with many features acknowledged as being true to life.

Each episode provided a fascinating insight into life aboard a working submarine at sea. And much of the drama played out inside the Vanguard Class submarine's actual control room, packed with sensitive electronic equipment that required protection by MPE from interference.

The Royal Navy's Vanguard submarines entered active service between 1993 and 1999, the four ships forming the UK's strategic nuclear deterrent force. An onboard reactor drives two GEC steam turbines linked to a single shaft pump jet propulsor. It gives these submarines a maximum submerged speed of over 25 knots (46 km/h or 29 mph) and ensures that none of them need further refuelling for the rest of their service lives.

With increasing quantities of sophisticated electronic equipment being installed in close proximity to one another, the resulting issues of electromagnetic interference assume critical importance. As a world-class solutions provider in this field, MPE has a long history of supplying high-performance custom filters for applications in the Royal Navy's submarine fleet, including both Vanguard and Astute Class vessels.

Indeed, recent years have seen MPE develop numerous unique custom solutions for both surface and subsea marine platforms. They have included ultra-low-leakage power line filter models from 10A through to 230A. The units provide high levels of attenuation from 100kHz right up to 18GHz – and with extremely low line-to-earth leakage properties from 6mA to 8mA.

This characteristic of exceptionally low leakage allows up to five filters to be deployed in parallel, whilst still maintaining a total leakage current below 30mA. The filters also include high values of discharge resistance, to ensure compatibility with shipborne DC leakage detection systems.

Furthermore MPE has also recently provided EMC equipment filters for the French Navy's Q284 Suffren, a Barracuda Class nuclear-powered attack submarine (SSN) and is currently finalising filter protection solutions for the Royal Navy's next generation, Dreadnought Class nuclear submarines now under construction and due to enter service in the 2030's.

For more information on the features, performance and specifications of MPE's ultra-low-leakage power line filters, you are invited to download a six-page brochure from here

Alternatively, to discuss your own particular project or application, call the expert MPE Technical team on +44 [0]151 632 9100 or email sales@mpe.co.uk