

for EMC, EMP, HEMP & TEMPEST Protection

Issue 22

#### MPE PEOPLE

#### MPE - Covid-19 update

During the Covid-19 pandemic MPE strictly followed all UK Government and Public Heath England (PHE) advice and guidelines and remained open, with all functions operational . . . . Read More >



# Northern Powerhouse Export Champion

Paul Currie, Director of MPE, has accepted an invitation from the Department for International Trade (DIT) to become an Export Champion for the Northern Powerhouse . . . Read More ≥



#### **MPE ACTIVITY & TECHNOLOGY**

# Pre-compliance EMC testing on-site or in-house

Before any major compliance costs are incurred, MPE provides a sophisticated pre-compliance EMC testing service, onsite or in-house in MPE's dual-chamber screened room . . . Read More >



## Punching up to the next level in fabrication

MPE has invested in a state-of-the-art Strippit CNC turret punch press to expand capacity for fabricating enclosures for its world-leading EMC, EMP and HEMP filters ... Read More >



#### **MPE DISTRIBUTORS**

### Proud Euromip now an MPE Gold Distributor

Euromip have become an elite MPE Gold Distributor. They are also expanding their team at their new headquarters and warehouse in Vélizy, 13km from the centre of Paris . . . . Read More >



# Annual awards to MPE's distribution partners

The annual rankings just announced for MPE's distribution partners worldwide are based upon levels of activity and performance against achievable individual goals . . . . Read More >



#### **MPE APPLICATIONS**

# MPE protects US Navy power plant

MPE HEMP filters are providing protection levels for a US Navy power plant on East coast USA compliant with Mil-Std-188-125 and minimum attenuation levels of 100dB .... Read More >



# Filtering RFI for major telecomms provider

Five sets of MPE filters for different applications have been installed in a suite of five NTD Shielding Services' RFI shielded chambers for a major telecomms provider. . . . 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 is certified to the ISO 9001:2015 quality standard, and its products meet all applicable defence, safety and regulatory standards.





# Company Bulletin for EMC, EMP, HEMP & TEMPEST Protection Issue 22









#### MPE – Covid-19 update

During the Covid-19 pandemic, MPE strictly followed all UK Government and Public Heath England (PHE) advice and guidelines and remained open, with all functions, including manufacturing, operational.

In late March, MPE received correspondence including letters from the Under Secretary of Defence at the Pentagon in the USA and Sir Stephen Lovegrove, KCB, Permanent Secretary to the UK MoD, the latter identifying MPE as a critical supplier to the national defence supply chain. MPE's staff were therefore considered as key workers, under the Public Safety and National Security section of the UK Government's Key Workers list.

In adhering to the guidelines published by the UK Government, MPE first conducted a thorough and robust risk assessment of all its operations and its entire facility. Following this, MPE implemented a thorough risk mitigation exercise and additional Covid-19 related actions. These actions included:

- Ceasing all travel to any sites other than MPE, both in the UK and overseas.
- Ceasing to allow any visitors to its facility except for those essential to ongoing operations.
- Ensuring that individuals worked from home where possible.
- Cancelling all but essential internal meetings and limiting any essential meetings to four people.
- All employees briefed regard the social distancing advised by UK Government and PHE.
- All employees' workstations assessed to ensure they were two metres apart from one another.
- Additional break and lunch times instigated to reduce employee numbers within MPE's canteen.
- Distancing indicators marked on floors to ensure two-metre social distancing was maintained.
- Staggered clock-on / clock-off times introduced to prevent overcrowding in this area.
- Additional soap and hand sanitiser placed in all washrooms, and sanitiser placed in all meeting-rooms.
- Doors (other than essential fire doors) permanently opened.
- Daily factory cleaning regime amended to include cleaning of door handles and handrails, at least twice per day.



for EMC, EMP, HEMP & TEMPEST Protection



MPE also strictly adhered to the UK Government guidelines regarding self-isolation for any employee developing symptoms; having a member of their household develop symptoms; or receiving advice from their GP or other medical expert to self-isolate. Absences due to such isolations naturally had an impact upon MPE's operations and, at one point during April, MPE had almost 20% of its total workforce isolating for various reasons. However, thus far, no MPE employee has developed anything worse than mild symptoms, and no MPE employee has tested positive for the Covid-19 virus.

Subsequently, the actions taken and the measures put in place by MPE have been reviewed by the Environmental Health & Consumer Protection Service and the HM Inspector of Health and Safety (HSE), with both confirming MPE has fully complied with UK Government guidelines and has satisfied all UK Government Covid-19 requirements.

Following the "Working Safely During Covid-19 In Factories, Plants and Warehouses" guidance document published on 11th May 2020 by HM Government, MPE again reviewed its risk assessment. This review showed that MPE had already implemented almost all of the guidance, but, following this review, MPE completed additional remedial actions including the communication and publishing of its risk assessment results and further staff briefings.

Coinciding with this period, as previously reported in issue 21 of the Company Bulletin, MPE was experiencing an unprecedented manufacturing demand, having its largest ever open order book. In order to meet this demand and minimise the manufacturing impact of the self-isolation absences, MPE continued to recruit new manufacturing personnel throughout this period, with total staff numbers now exceeding 60.

For any further information relating to MPE's Covid-19 actions and measures, please contact Paul Currie, Director at pcurrie@mpe.co.uk.





Pictured above in this Covid-19 update are some of the measures implemented throughout MPE Ltd to mitigate the risk posed by the global pandemic. These included social distancing, workspace and workstation distancing, and the regular use of hand sanitiser on



# Company Bulletin for EMC, EMP, HEMP & TEMPEST Protection

Issue 22



Paul Currie



The geographical spread of the Northern Powerhouse







#### **Northern Powerhouse Export Champion**

Paul Currie, Director and co-owner of MPE Ltd, has accepted an invitation from the Department for International Trade (DIT) to become an Export Champion for the Northern Powerhouse. The invitation follows, and is a result of, MPE's significant export growth over the last five years, the Export Awards that MPE has won and the individual Leadership Awards given to Paul.

The Northern Powerhouse (<a href="https://northernpowerhouse.gov.uk">https://northernpowerhouse.gov.uk</a>), a fundamental part of the UK Government's industrial strategy, is its vision for a super-connected, globally competitive, Northern economy with a flourishing private sector, a highly skilled population, and world-renowned civic and business leadership.

The nomination of Export Champions commenced in the North-West of England in 2013 and was extended across the Northern Powerhouse in 2018 and the UK regions in 2019.

Accordingly, as one of the 2020 Northern Powerhouse Export Champions, Paul will assist, coach, mentor, support and train other organisations who are considering exporting, new to exporting, expanding exports or having problems in exporting.

The role includes speaking at export seminars and workshops, telling the story of how MPE has been successful, joining roundtables, contributing to the development of DIT strategies, and providing informal advice and encouragement to companies who have never previously sold abroad.

The official Export Champion brochure describes how Paul Currie is eager to share his export knowledge and experience to assist other businesses on their export journey. The guiding principle which he sets out is: "if you seek good advice and research target markets, exporting offers a fantastic growth opportunity for any organisation".

This positive and optimistic clarion call to the industrial community in the North of England is even more relevant as we face an economic downturn brought about by the Covid-19 health emergency.



for EMC, EMP, HEMP & TEMPEST Protection

Issue 22





Pre-compliance filter testing and analysis in-house at MPF



A typical configuration often tested – an MPE EMC filter with shielded cables in close proximity to each other, shown here in the power compartment of a defence aerospace application. Mechanically, pre-compliance testing work can also highlight the very tight space constraints that may apply to housing a filter product.

#### Pre-compliance EMC testing on-site or in-house

MPE provides a sophisticated pre-compliance EMC testing service, which can be either on-site or in-house in MPE's dual-chamber screened room to suit customers' needs where practical. Typical scenarios for applying this capability include military vehicles, test chambers, data centres, radar and communications facilities and control rooms.

Before major compliance costs are incurred, the diagnostic, precompliance EMC test service defines the most cost-effective choice of EMI suppression to meet stringent EMC standards such as DEF-STAN 59-411 Land Class A or Class B and MIL-STD 461.

As a longstanding supplier to the UK MOD, NATO and defence forces around the world, MPE holds all relevant defence and international standards approvals and has the experience, expertise and products to protect all types of military equipment and systems from EMI and EMP hazards.

Military specifications for mission-critical applications in defence and aerospace are more stringent and require greater dynamic range and different measurement bandwidths than less exacting commercial standards.

The company's pre-compliance evaluation service includes baseline noise measurements, comparison to specifications, and identification of local areas and causes of non-compliance. Pre-compliance testing allows changes to be made during the design phase based upon real-world test results.

The earlier that product deficiencies are identified during the development process, the easier, less expensive and less time-consuming it is to rectify problems. Rework or even redesign at the point of production usually comes at a high cost.

Sources of radiated or conducted noise can be located, and individual pieces of equipment can be tackled, even down to bench level, to define the most appropriate screening or filtration solution.

For example, all types of military vehicle ultimately need to be tested for such emissions, and particular emphasis is placed on emissions in the HF, VHF and UHF frequency bands where many military radios operate. This electrical noise can be caused by sparking from motor or generator brushes, microprocessors and SMPS circuitry, or it can be produced by secondary radiation from cables and harnesses carrying noisy signals down cables connected to these devices.

On the basis of that pre-compliance testing, MPE's Engineering Department can then develop and supply full prototype filter units for final approval work.

To find out more, you are invited to download a brochure on MPE's pre-compliance EMC testing capability from <a href="here">here</a>.



# Company Bulletin for EMC, EMP, HEMP & TEMPEST Protection

#### Issue 22



Strippit P-1525 turret punch press with CNC control panel



Marcus Wright - Manufacturing Manager, MPE Ltd

#### Punching up to the next level in fabrication

MPE has invested in a new, state-of-the-art, turret punch press to expand the company's in-house capabilities for fabricating steel enclosures for its world-leading EMC, EMP and HEMP filters. This additional capital investment is a direct result of the exceptional increases in demand and manufacturing throughput that MPE has experienced over the past 18 months and the unprecedented volume of its current order book.

The new machine is a Strippit P-1525 CNC turret punch press from Belgian plantmaker the LVD Group. Procured in March, the machine is to be installed and commissioned in a week of June 2020. Exact forward planning for the downtime ensures no interruption to manufacturing flow whilst an older press is taken out of service and replaced by the new model.

The set-up and operating procedures of the new 200kN Strippit P-1525 are optimised to make small batch production runs as efficient as possible. For example, MPE's current punch press can hold up to 20 tool stations, whereas the new press is capable of holding 33 tool stations, thereby reducing the number of changeover operations and the amount of time taken for each one.

That makes the Strippit ideally suited to producing the multiplicity of enclosures that MPE is called upon to fabricate every month, more often than not on a customised basis.

MPE is currently limited to fabricating enclosures from 2.0mm gauge sheets of mild and stainless steel. In contrast the new Strippit machine will allow MPE to process stainless steel sheets up to 3.0mm and mild steel up to 6.35mm thick. In addition, the maximum steel sheet size that MPE can punch will increase from 2500 x 1250mm to 3000 x 1500mm.

Meanwhile the CNC control provides powerful diagnostics features and a large program storage capacity and networking capability with user-friendly MMI (man-machine-interface). The control panel incorporates powerful colour graphics, advanced real-time diagnostics and an increased program storage capacity and is network-ready for easy transfer of programs from MPE's Design Department.

The advanced hydraulic drive reduces noise and shock to increase machine longevity and reduce tool wear. What is more, in line with MPE's commitment to reduce negative environmental impact and further improving its green credentials, the Strippit boasts the latest energy reduction system (ERS), which offers an appreciable power saving as compared with the previous punch press.

Marcus Wright, Manufacturing Manager at MPE, enthuses: "As a further significant investment in MPE's production, the commissioning of this advanced, state-of-the-art, CNC punch press will enhance MPE's capacity and flexibility in fabrication as well as strengthening the company's total in-house manufacturing capability."



for EMC, EMP, HEMP & TEMPEST Protection

Issue 22



Members of the Euromip team extend a convivial welcome to MPE Account Manager John Jephcott at their new headquarters in Avenue Morane Saulnier, Vélizy. Left to right: Andreas Rudel – Sales Director, Rosanna Gallo – Senior Account Manager, Jean-Philippe Louis – President, John Jephcott – MPE Ltd, Dolorès Christiny – Sales Administration Manager, Yann Baillergeau – Technical Manager.



MPE products to the forefront in Euromip's new offices



The well-stocked warehouse at Euromip in Vélizy

#### **Proud Euromip now an MPE Gold Distributor**

Euromip have progressed from the status of Silver to become an elite Gold Distribution Partner of MPE. They are also expanding their team at the company's new offices and warehouse in Vélizy, 13km south-west of the centre of Paris, as described in Issue 20 of the Company Bulletin.

Euromip's new headquarters is 50% larger than their previous facility, to accommodate and support their future growth plans as well as offering excellent transport links to and from the capital. Meanwhile ongoing recruitment will further Euromip's mission and ambitious business plan entitled "The Sky's the Limit 2023".

The incoming staff members represent important additions of skills and experience to the Euromip team, resolutely led by the company's President and owner, Jean-Philippe Louis since he acquired the company two years ago.

The two latest recruits this year have been Rosanna Gallo as Senior Account Manager and Jason Alves as Junior Account Manager.

Rosanna, fluent in four languages, has worked in electronics component sales for multinationals in France for 25 years. Jason, employed for three years at a German electrical equipment OEM, has boosted the sales team at Euromip to five field sales engineers and two inside sales staff. He speaks three languages and holds an electrotechnical, power and IOT degree.

MPE is enjoying a sustained period of sales growth in the French market as Euromip go from strength to strength in the territory, having represented MPE in France for over 15 years. Euromip's promotion of MPE's wide portfolio of filter products has always been based on an exceptional technical capability and tireless support of their customer base, working alongside design and development engineers on projects for defence and aerospace.

These factors, coupled with their proactive sales and marketing strategy in a fiercely competitive home market, have earned Euromip the recognition they deserve with their proud elevation to MPE Gold Distributor status.

**Gold Partner** 





# Company Bulletin for EMC, EMP, HEMP & TEMPEST Protection Issue 22

# (주) 이레테크

Mr Jun Sun Park, President and CEO of Eretec, Inc, Republic of South Korea, proudly holding his Gold Partner award



Jean-Philippe Louis, President of Euromip, France, receiving his Gold Partner award from John Jephcott of MPE Ltd (right), prior to Covid-19 travel restrictions



Dieter Mühlberger, CEO of Electrade GmbH, Germany, with his Silver Partner award

#### Annual awards to MPE's distribution partners

MPE's family of distribution partners across the world has remained fully operational in the face of the unprecedented Covid-19 pandemic. Now covering some 26 different territories via a combination of remote working, office working and in some cases isolated teams, MPE's authorised distributors have continued to ensure that MPE products are available as required to each territory.

The present restrictions on travel have made support for these partners even more challenging for MPE. The contrasting requirements of individual distributors and their regions, industries and applications have necessitated the development of tailored support solutions by MPE in many cases. One result of the current block on travel has been the remote fulfilment of MPE's annual review of its distribution partners and the resulting presentation of their annual awards.

MPE's established Partner Program provides its partners with a clear view of the expectations MPE has of them and, in return, the significant benefits and support associated with partner status. The MPE Partner Program is a tiered structure with four distinct levels – Bronze, Silver, Gold and Platinum. It sets out achievable individual goals for each partner which enable MPE to evaluate all partners in all territories on a uniform basis, however new or well-established they may be.

The parameters for measuring performance extend beyond financial criteria to sales, marketing and business development activities, recognising how and to what extent partners are developing new customers and market sectors to achieve progression to the next tier.

Accordingly, following a comprehensive review of 2019 performance, four partners Accelonix (Netherlands), Eretec (South Korea), Euromip (France) and IMCA (Turkey) were honoured with Gold Partner status for 2020, with a further three partners achieving Silver Partner status. It was also pleasing to report that two of MPE's newest distribution partners attained Bronze Partner level.

These partner rankings were communicated to each party at the start of the year and are now prominent on the Distribution Partner pages of the MPE website <a href="https://www.mpe.co.uk/distributors">www.mpe.co.uk/distributors</a>. Partner plaques were also dispatched for proud display within each distributor's premises.

MPE will be working closely with all of its territory partners throughout the next 12 months, ensuring that maximum benefits are mutually realised from the company's innovative Partner Program.



for EMC, EMP, HEMP & TEMPEST Protection





MPE filter solutions suit the most complex power distribution systems



High-performance HEMP power line filter from MPE

#### **MPE protects US Navy power plant**

MPE has a long and successful history of supplying EMC and EMP filter solutions to the power industry in the USA and, having previously conducted presentations for the likes of the Engineering Council of the North-East (ECNE), the company's business in this sector continues to grow significantly. During 2019 one such application saw MPE manufacture and supply a number of its high-performance HEMP protection filters for installation within a US Navy power plant on the East coast of the USA.

MPE's market-leading filters, providing protection for critical elements of this complex power distribution system, were supplied through its US Silver partner Technical Sales Solutions (TSS) for installation in the facility.

The HEMP filters supplied by MPE provide protection levels for the US Navy power plant compliant with the pulse current injection (PCI) requirements of Mil-Std-188-125 and minimum attenuation levels of 100dB.

The filters manufactured included a new 1200A, three-phase, 480V AC filter design. Among the novel design elements were customised mechanical housings and a unique busbar configuration so as to meet requirements specific to the site.

Terry Murch, President of TSS, remarked: "The installation of MPE filters within this power plant for the US Navy is further evidence of our growing reputation in the power industry and, during the next twelve months, TSS expect to secure further significant projects in the same sector."

Full details of MPE's high-performance HEMP filter ranges can be found at <a href="https://www.mpe.co.uk/category/hemp">www.mpe.co.uk/category/hemp</a> whilst for further information on MPE's Silver distribution partner for the USA — Technical Sales Solutions (TSS), visit <a href="https://www.techsalesolutions.com">www.techsalesolutions.com</a> or email Terry Murch at TSS: <a href="mailto:terry@techsalesolutions.com">terry@techsalesolutions.com</a>



Technical Sales Solutions





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NTD Shielding Services application of custom-designed RFI shielded chambers. Each houses a comprehensive electrical wiring system with incoming power lines located behind a pneumatic door as pictured here.



16A MPE high-performance EMC power line filter



# Filtering RFI shielded chambers for major telecomms provider

During the summer of 2019 a suite of NTD Shielding Services highperformance RF chambers were installed in Slough, Berkshire, for a major UK telecommunications network provider. Supporting this project were a diverse range of MPE's high-performance EMC filters, which were installed into NTD's RFI shielded chambers as part of the overall integrated systems solution.

A detailed requirements review and extensive design phase were undertaken by NTD and MPE. Following this, five sets of MPE filters, each for a specific and different application, were provided by MPE for installation within the five high-performance RFI chambers.

NTD is a UK-based, world-leading manufacturer and supplier of high-performance EMC chambers, EMI chambers, antenna chambers, RF chambers, Faraday cages, 5G solutions and EMC test and measurement equipment. NTD specialises in providing bespoke integrated turnkey solutions for EMC chambers, antenna chambers, EMI chambers and Faraday cages, complemented by an internationally renowned range of EMC/RF test and measurement systems and many other EMC/RF related products.

Based in the north-west of England, NTD designs, manufactures and installs the highest quality and most advanced RFI, EMC and antenna test chambers and integrated testing solutions with practicality, user friendliness, high performance and cost-effectiveness in mind.

Each of the five custom-designed RFI chambers measures 2.4m (H) x 2.4m (L) x 2.4m (W) and features: a single knife-edge, high-performance, pneumatically operated door, additional security keypad entry for authorised users only, internal office-type linings and fixtures, a comprehensive electrical wiring system including power lines, emergency stops to all circuits, air conditioning and controls, RF connections, fibre-to-data media converters, digital telephone lines, and control lines for equipment such as warning lights to indicate "Test In Progress" status.

MPE's EMC filters were specified to ensure the high performance of the RFI shield and also the EMC compliance of the whole electrical system and each of 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 20GHz. A total of five MPE filters were installed identically in each chamber including power line filters up to 32A and MPE's advanced control line and digital telephone line filter products.

From the start of fabrication to the conclusion of installation, the project was completed in just over 12 weeks, with all five chambers being signed off and handed over in September 2019.

Details of all of MPE's EMC solutions are set out on the product pages of the company website <a href="www.mpe.co.uk/products">www.mpe.co.uk/products</a>. Alternatively, <a href="mail-sales@mpe.co.uk">email-sales@mpe.co.uk</a> to reach out to MPE's team of technical experts dedicated to EMC applications and seek their advice on the projects in which you are involved. Meanwhile you can view a wealth of information about NTD Shielding Services at <a href="www.ntdshielding.co.uk">www.ntdshielding.co.uk</a>, or email <a href="mail-sales@ntdshielding.co.uk">sales@ntdshielding.co.uk</a>.