

MPE PEOPLE

Review of the year 2020 by David Seabury

Despite the immense challenges faced by world health and the UK and global economy, MPE has continued to grow, with 2020 even being MPE's most successful year to date . . . [Read More >](#)



Spotlight on Angela Murphy

From January 2020 Angela Murphy has been the Management Accountant at MPE. She heads up the accounts and credit control functions and reports to the Managing Director . . . [Read More >](#)



MPE ACTIVITY & TECHNOLOGY

MPE further strengthens its Green credentials

As part of its policy of reducing environmental impact, MPE has completed the migration of all its company vehicles to electric models with charging points . . . [Read More >](#)



MPE widens its standard power line ranges

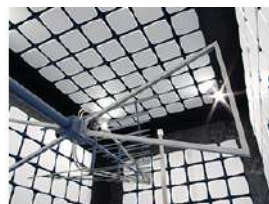
Having been increasingly supplying customised filters to meet escalating demand, MPE has extended the array of these filters available as standard catalogue products . . . [Read More >](#)



MPE DISTRIBUTORS

Advanced test chamber in Poland for vehicles

Radiotechnika's EMC test facility at Wroclaw has been important in validating performance and ensuring that MPE products have been used on many high-profile projects . . . [Read More >](#)



Annual awards to honour distributor status

Now in its fifth successful year, MPE's Partner Program with its four distinct levels is firmly established as a yardstick for measuring distributor performance . . . [Read More >](#)



MPE APPLICATIONS

NTD Shielding install RF chamber for the BBC

NTD Shielding have installed a high-performance RFI-shielded chamber for the BBC incorporating MPE's power line filters as part of the integrated system solution . . . [Read More >](#)



MPE filters to protect French Navy supersub

MPE has provided a suite of EMC protection filters for the Q284 Suffren, a Barracuda class, nuclear-powered attack submarine, the first of six multi-mission SSNs . . . [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.



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

If you have a friend or colleague who you think might find the MPE Company Bulletin informative, then why not forward it to them?



David Seabury – Managing Director, MPE Ltd



Measures implemented throughout MPE to mitigate the risk posed by the global Covid-19 pandemic have included social distancing, workspace and workstation distancing, and the regular use of hand sanitiser on site



John Hickey – Engineering Lead, MPE Ltd



MPE bucks the trend in its 95th Anniversary year

In Issue 21 of the Company Bulletin I rounded off my review of 2019 with a look ahead to the promise of the new decade, on course to be even better than the previous one. At that time none of us could have foreseen the unprecedented worldwide events of 2020 and the challenges we have all been facing continuously since February of last year. However, despite these immense challenges and the extremely negative impact which Covid-19 has had on the UK as on the global economy, I am pleased to report that MPE has continued to grow, with 2020 even being MPE's most successful year to date.

Being designated as a key supplier to the homeland security and defence sectors, both here in the UK and overseas, MPE was expected to remain operational throughout the various lockdown periods. MPE implemented the most stringent Covid-19 protection measures and introduced new methods of working, to ensure the continued safety of MPE's entire team.

These measures, subsequently reviewed and confirmed as compliant with the UK Government and Public Health England (PHE) guidelines by the Environment Agency and the Health and Safety Executive (HSE), enabled MPE to remain fully operational. Whilst MPE at times had several members of staff isolating away from work for various reasons, MPE has not lost a single day of manufacturing because of the pandemic.

MPE entered 2020 with a very healthy open order book, and this order book continued to grow steadily during the year. In contrast to workforce furloughs and redundancies reported continually in the national news, during 2020 we at MPE continued to recruit additional members to our team, with the most notable introduction being that of John Hickey in September, as Engineering Lead.

Meanwhile MPE's enthusiastic and committed group of apprentices all progressed to their next year of studies and, whilst their academic studies were in the main conducted via remote learning, every one proudly achieved outstanding results.

Whilst MPE remained operational, the customs and practices so familiar to business life changed appreciably, with almost no travel nor face-to-face visits to customers permitted. In line with most companies, our use of video conferencing increased substantially, with MS Teams and Zoom fatigue becoming a very real possibility!

The established nature of MPE's Partner Program for our family of distributors worldwide has been critical in maintaining relationships through this period of enforced distancing. With clear objectives and structure, our Partner Program has been an invaluable tool for all parties and has provided the springboard for our export sales to show commendable growth in the face of the international economic downturn. At the close of the year, a record number of our distribution partners were honoured with Gold Partner status for 2021.

Within the UK, MPE appointed SACA UK as its authorised UK distributor. This is the first time that MPE has appointed an authorised distributor for the UK and is a direct result of the increased demand for our products which we have been



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MPE's new Strippit P-1525 turret punch press with CNC control panel



MPE Ltd Director Paul Currie was appointed by the Department for International Trade as an Export Champion for the UK Government's Northern Powerhouse economic growth project for the North of England



A suite of MPE high-performance HEMP protection filters of different amperages were installed at the power plant of the Clear USAF base in Alaska



The largest ever single order for telephone line filters in MPE's history – a 240-line unit, 10 modules of 24 lines each, with varistor PCBs fitted

experiencing in the UK market. With the addition of SACA UK, MPE's network of distribution partners now encompasses 27 different territories.

Significant capital investment was again made during the year, with the largest single spend devoted to a new, state-of-the-art, CNC turret punch press, expanding the company's in-house capabilities for fabricating steel enclosures. This new asset has already allowed increased efficiencies within fabrication and is currently being put through its paces in manufacturing a significant volume of MPE's high-current HEMP filters for export in early 2021.

Of equal importance, MPE was able to further improve its green credentials with the migration of its company vehicles to greener models. All of MPE's vehicles are now either full electric or hybrid models, with convenient electric charging points having been installed at our facility.

Whilst the outbreak of the Covid-19 pandemic could not be foreseen, what could be foreseen were the effects of Brexit and the UK's departure from the EU. Having made all the preparations that MPE deemed appropriate ahead of this departure, encouragingly so far MPE has seen little impact on its trade with EU territories, with any disruption kept to an absolute minimum.

At the start of the year, MPE Director Paul Currie was appointed as an Export Champion by the Department for International Trade. This appointment has enabled Paul to use his experience in assisting and advising other companies with their Brexit preparations, whilst also offering advice to others on best practice, and the pitfalls to avoid, when starting off on the export path.

On the applications front, MPE notably provided electronics engineering solutions for the BBC and O2 in the UK – as well as high-performance HEMP protection filters for the power plants of the US Navy on east coast USA and the Clear USAF Base in Alaska. What is more, MPE fulfilled its largest ever telephone line filter order, delivered to a Scandinavian client, and helped to meet a substantial ceramic filter requirement for Taiwan.

So, whilst the year did not permit our planned 95th Anniversary celebrations, put on ice for the time being, MPE well and truly bucked the trend in 2020, with all jobs retained, additional staff recruited, significant capital investments made, and total annual sales increasing by over 30%.





Angela Murphy

Spotlight on Angela Murphy

Angela Murphy was appointed by MPE in early January 2020 as the company's Management Accountant, reporting direct to Managing Director David Seabury. She heads up the accounts and credit control functions and prepares month-end and annual management accounts which provide a solid foundation for management decision-making.

Angela ensures financial compliance with the regulatory bodies such as HMRC and the Pensions Regulator. She also reconciles stock level counts and assists Quality Assurance Engineer Paul Argent with regular internal audits, to ensure compliance with for example ISO9001:2015. Furthermore Angela oversees the payroll administration and accounts receivable functions handled in her department by Accounts Administrator Karen Tighe.

For over five years between 2014 and 2019 Angela Murphy was Accounts Supervisor with extensive managerial responsibilities at Swagelok Manchester, a distributor of fluid systems tubing, measuring devices and accessories based at Birchwood Park, Warrington. From 2012 to 2014 she was Finance Assistant and then Financial Analyst at the Warrington procurement governance company Q9 Partners.

The previous two years had seen her working as a Purchasing executive at the Widnes headquarters of tank container logistics specialists Suttons Transport. Her first position for three years starting in 2007 was in Birchwood as Finance Apprentice at Fujitsu Services, a world-class provider of IT solutions.

In June 2010 Angela attained her Professional Diploma in Accounting – the equivalent of an NVQ – from the Association of Accounting Technicians (AAT), and in February 2017 she qualified as a full Associate Member of the Chartered Institute of Management Accountants (CIMA), also designated as a Chartered Global Management Accountant or CGMA. From 2000 to 2007 Angela had studied at St Peter & Paul Catholic College in Widnes.

As well as her career connections with the Cheshire districts of Warrington, Widnes and Halton, Angela has always had strong and enduring family roots in the area. For a decade up to six years ago, she played various leading roles on stage at the not-for-profit Halton Entertainment & Arts Regional Theatre School. The parts she played there included Snow White, Cinderella and Nancy from Oliver! the musical.

Angela has always been a keen supporter of Widnes Vikings, who play in the Halton Stadium and are proud to have been one of the world's founding rugby league teams from the late 1800s. Her current varied interests include enjoying city breaks in Europe, theatregoing, dining out and improving her golf handicap.



Electric vehicles on charge

MPE further strengthens its Green credentials

Being ever conscious of the environmental impact of its operations, MPE has worked continuously over the past five years to reduce waste in every area of its operations across manufacturing, design and development, engineering planning and administration. Accordingly, during 2020 MPE completed the migration of all its company vehicles to greener, electric models.

As explained in Issue 21 of the Company Bulletin, MPE's philosophy and policy of reducing its environmental impact and eliminating waste date back over ten years. The steady progress achieved in its program of continuous improvement is demonstrated by this timeline:

- 2010 MPE eliminates the use of all materials classed as 'hazardous'.
- 2013 MPE becomes 'lead-free'.
- 2013 MPE publishes its first Environmental Policy.
- 2015 MPE introduces the segregation of recyclable waste across all departments.
- 2017 MPE initiates the use of 100% recyclable and bio-degradable non-toxic packing materials.
- 2018 MPE migrates its first company vehicle to a zero-emission electric model and installs a dedicated charging point.
- 2019 MPE eliminates single-use plastics from all areas of its facility.
- 2020 MPE migrates all remaining company vehicles to electric models and installs a further dedicated charging point.

MPE purchased its first electric vehicle, a Tesla Model S, back in 2018. The charging point for it was installed at that time. With the successful introduction of this vehicle, and following more assessment of its environmental impact, in October 2020 MPE replaced one of its remaining diesel vehicles with the fully electric Jaguar I-Pace.

Then in December 2020 the company replaced the last of its diesel vehicles with a hybrid BMW 330E. A further electric vehicle charging point was put in place to coincide with the arrival of these vehicles at MPE.

The above activities are in line with MPE's current Environmental Policy as published and are further evidence of MPE's commitment to reducing waste and recognising its environmental impact. As a company MPE remains committed to preventing pollution, minimising any negative effects and maximising the positive effects from its operations.

Accordingly you are invited to download the official statement of MPE's Environmental Policy from [here](#)





Installed high-current MPE filters provide essential EMC protection for incoming power lines



An MPE ultra-low-leakage power line filter



Manufacturer of UL
Certified Components

MPE widens its standard power line ranges

Over the last five years MPE has seen a growing trend in many applications for electromagnetic interference (EMI) filters with increasingly high current capability and frequency performances. Having been manufacturing and supplying more and more high-performance EMI filters on a customised basis to meet these escalating demands, the company has now taken the logical step of extending the array of these filters available as standard catalogue products.

Accordingly, whilst already offering the largest range of EMI filters of any manufacturer in the world, MPE has now segmented its immense choice of EMI power line filters into two different catalogues:

- High-Performance EMI Power Line Filters up to 2400A Rating
- Specialist High-Performance EMI Power Line Filters

All filters are UKCA and CE marked, RoHS compliant and meet the safety requirements of Underwriters' Laboratories UL1283 and the EU Low Voltage Directive LVD 2014/35/EU.

The first of these new catalogues, HIGH-PERFORMANCE EMI POWER LINE FILTERS UP TO 2400A RATING, details those filters most commonly requested by MPE's markets across six continents. This range has been expanded to cater for currents ranging from 6A to 2400A as used with standard mains voltages and frequencies and offering insertion loss performances through to 40GHz.

The power line filters described in this catalogue are used to remove electromagnetic interference and unintentional transmissions as well as providing protection for TEMPEST zoning installations. The designs offer extensive low-pass suppression of common mode and differential mode EMI, using passive multi-stage components.

The second catalogue, SPECIALIST HIGH-PERFORMANCE EMI POWER LINE FILTERS, itemises those power line filters which, although still regularly requested, are used to address applications of a more specialist nature.

The catalogue covers ranges where applications may demand dedicated single-line or two-line AC or DC voltage filters, tubular filters or 400Hz filters. MPE's unique CleanPower filter ranges are also included, being dedicated to those applications that may have a less stringent performance requirement and accordingly call for the most economical filter solutions.

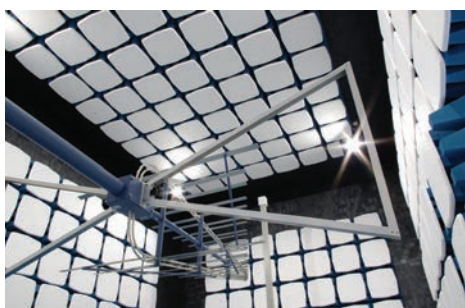
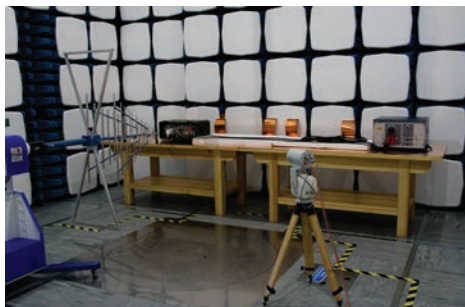
Both catalogues can be viewed by clicking on the following links:

www.mpe.co.uk/wp-content/uploads/2021/02/Power-Line-Filters-Upto-2400A-Issue-11.pdf

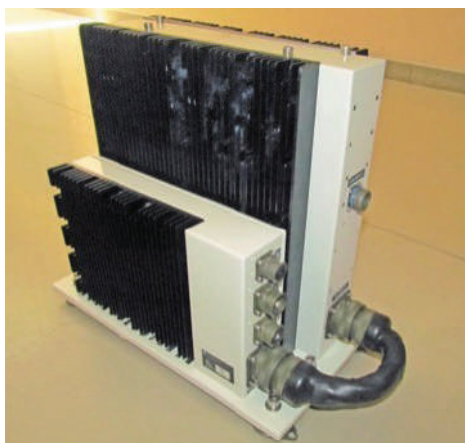
www.mpe.co.uk/wp-content/uploads/2021/02/Specialist-EMI-Power-Line-Filters-Issue-1.pdf

In addition to its catalogue filter ranges, MPE continues to design and manufacture wide-ranging filter solutions which need to be mechanically or electrically customised. Such products supplied over the last 12 months have included filters up to and including a massive 4000A.

To discuss your specific requirements in this area, please call MPE on +44 (0)151 632 9100 or email sales@mpe.co.uk



The anechoic EMC test chamber at Radiotechnika, Wrocław, Poland



Radiotechnika's high-reliability, stabilised power supply unit

Gold Partner

Advanced EMC test chamber in Poland for vehicles

Operating in the city of Wrocław since 1947, MPE's Gold Partner for Poland, Radiotechnika Marketing, is one of Poland's oldest and most famous electronics manufacturers and distributors. Specialising in power supply and distribution systems for military vehicles, Radiotechnika is also Poland's no.1 military-grade cable harness and fibre optics supplier.

With a working relationship first established well over 15 years ago, Radiotechnika has grown into one of MPE's most established and knowledgeable territory distribution partners. This has resulted in many years of successful sales of MPE's extensive product portfolio, with sales volumes continuing to increase.

Alongside its niche defence products and distribution of MPE's EMC, EMP, HEMP and TEMPEST filters, Radiotechnika also offers a cutting-edge EMC testing capability to the Polish market. As on-vehicle systems become ever more sophisticated and complex in operation, demand has never been greater for totally dependable electromagnetic compatibility to ensure the immunity of equipment to electromagnetic interference and random spikes.

Opened in 2010 and validated by one of the leading laboratories in Europe – Seibersdorf Laboratories of Austria, Radiotechnika's facility boasts an impressive anechoic EMC test chamber measuring approximately 6m x 9m x 5.5m (20ft x 30ft x 18ft). The chamber's unique double screening system enables measurements of extremely high electromagnetic field energy levels across a frequency range from 10kHz to 40GHz, enabling radiated emission and susceptibility tests for civilian devices with a 3m test range and military devices with a 1m test range.

Incorporating a movable entry ramp, turntable and pneumatic antenna, the laboratory serves as a perfect facility for testing vehicles up to a maximum size of 2m (6.5ft) in height and diameter and 500kg (1100lb) in weight. Testing is completed to a wide range of military standards including MIL STD-461F, NO-06-A200, NO-06-A500 and civilian standards such as EN 55013, EN 55014, EN 55022, EN 55024 and EN 61000-6.

With MPE's world-leading EMC filters and feedthrough capacitors being integral to many solutions provided by Radiotechnika, this testing resource has been hugely important in validating performance levels and ensuring that MPE products have been built into numerous high-profile projects.

For example, the EMC test facility at Wrocław has been key to the selection of MPE feedthrough capacitors for use on Radiotechnika's high-reliability, stabilised power supply unit pictured on the left. This PSU was used for the thermal balancing of equipment on in-vehicle systems such as heating, ventilating and air conditioning (HVAC). In this case MPE's specialised filters needed to be tested and validated for their compliance with the emissions criteria laid down in MIL-STD-461F.

You can find comprehensive information about Radiotechnika Marketing and EMC at <http://radiotechnika.com.pl/en/emc-and-filters> and download a leaflet describing the company's EMC and environmental testing laboratory from [here](#).



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The four Distribution Partners who achieved Gold status in the annual MPE Partner Program Awards:

Gold Partner



Gold Partner



Gold Partner



Gold Partner



Annual awards to honour distributor status

During 2020 MPE's distributor network expanded again and, with the appointment of SACA UK in November, it now extends over 27 different territories. As reported in Issue 22 of the Company Bulletin, from the start of the Covid-19 pandemic MPE's family of distribution partners has remained fully operational. Via a combination of remote working, office working and in some cases isolated teams, MPE's authorised distributors have continued to ensure that world-class MPE filter and capacitor products are available in all the territories which they represent.

Now in its fifth successful year, MPE's Partner Program is firmly established as a yardstick for measuring distributor performance against set criteria. The Program provides a clear view of the expectations MPE has of its Partners and, in return, the significant benefits and support forthcoming from Partner status. The MPE Partner Program is a tiered structure with four distinct levels – Bronze, Silver, Gold and Platinum. The scheme sets achievable individual goals for each Partner, whilst allowing MPE to apply a uniform approach to the assessment of new and existing partners across all territories.

Liaison with, and effectively the management of, this growing family of Partners has been especially challenging during 2020. The last physical visits to Partners, and accompanied visits to their customers, were conducted back in late February and early March. Since then, methods of remote communication such as MS Teams, Skype and Zoom videoconferencing have necessarily become the norm.

Indeed the strong foundations of MPE's Partner Program have enabled MPE to step up advancement and development with its distribution partners worldwide. Therefore, despite our unprecedented international trading conditions, the number of distributors achieving a Tier status has grown yet again and, following a rigorous annual review, MPE has appointed four Gold Partners for 2021.

Accordingly Euromip (France), IMCA (Turkey), Radiotechnika Marketing (Poland) and TSS (USA) are all delighted to have picked up the prized Gold Partner accolade for 2021, with another three Partners achieving Silver Partner status and yet three more attaining Bronze Partner level.

The parameters for measuring company performance are based not purely on the yardstick of physical orders, but more broadly on proactive sales and marketing activities linked in with the dynamic development of new customers and as yet untapped market sectors, showing future promise of progression to the next Tier.

Each Partner honoured in the annual Awards is able to display the Awards plaque at their company headquarters. The proud recipients are prominent too on the Distribution Partner pages of the MPE website www.mpe.co.uk/distributors



External views of the RF chamber designed, manufactured and installed by NTD Shielding Services for BBC Research & Development's South Laboratory in West London



A range of MPE filters up to 32A were required to provide essential EMC protection for the incoming power lines as well as EMC compliance for the electrical system as a whole

NTD Shielding install RF chamber for the BBC

During 2019 NTD Shielding Services installed and commissioned a high-performance RF chamber for the BBC. This was at BBC Research & Development's South Laboratory, The Lighthouse, at Wood Lane, Shepherd's Bush, West London. Fundamental to this project were a variety of MPE's high-performance power line EMC filters, incorporated into NTD's RFI-shielded chamber as part of the overall integrated system solution.

With headquarters at St Helens, Merseyside, UK, NTD Shielding Services 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 EMEA region.

The company is proud to have grown to become a world-leading designer, manufacturer and supplier 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.

NTD engineering teams out in the field are focused on installing bespoke integrated turnkey solutions, complemented by an internationally renowned range of EMC/RF test and measurement systems and many other EMC/RF-related products. NTD design in-house, manufacture and install their advanced, high-performance test chambers and integrated testing solutions with particular emphasis on the user-friendliness and day-to-day practicality of their systems.

The high-performance chamber which they installed for the BBC measures 2.4m high x 2.4m long x 3.6m wide and incorporates a full electrical package with fibre-to-data conversion. Within this, MPE filters are vital to provide protection and electrical immunity for the incoming power lines, a Vesda fire detection system and a "Test-in-Progress" status warning light.

MPE's EMC filters were specified to ensure the high efficiency 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 extending to over 20GHz. A variety of MPE filters for up to 32A current were required to meet the demands of the application.

For detailed information on NTD Shielding Services and what the company offers, check out www.ntdshielding.co.uk, call their hotline at St Helens +44 (0)1744 757 277 or email their Technical team at sales@ntdshielding.co.uk





The Q284, the first of the Suffren class, French nuclear-powered attack submarines based at Toulon



The Suffren submarine undergoing sea trials in 2020



MPE equipment filters of different amperages



MPE filters to protect French Navy supersub

On 6th November 2020, a major French defence contractor, the Naval Group in Toulon, delivered the Q284 Suffren, a Barracuda class, nuclear-powered attack submarine (SSN), to the French Armament Procurement Agency (Direction Générale de l'Armement). The Suffren is the first in a series of six multi-mission SSNs which will gradually replace Rubis class nuclear attack submarines in the French Navy, the Marine Nationale, over the next few years.

The Suffren is stated to be ten times quieter than the previous generation Rubis class. The new supersub has a displacement of 4765 tons when surfaced and 5300 tons when submerged. Its length is 99.5m, beam is 8.8m and draft is 7.3m. Unlike previous French submarines, the Suffren is not equipped with a periscope, but rather an optronic mast, which allows for a far longer range and outside visible spectrum detection of targets.

A first for the French Navy is the Suffren's ability to deploy a small underwater vehicle for special forces' use thanks to a dry deck shelter. Previously special forces utilised torpedo tubes and handheld propulsion systems.

The French Minister of the Armed Forces, Mrs Florence Parly, has announced that the historical French naval base of Toulon on the Mediterranean, where all of the new class of submarines will be based, is also designated for their principal overhauls and refits.

As part of this major project, following an intensive selection process, in the autumn of 2017 MPE was contracted to provide a suite of EMC protection filters in support of the build and trials for the Suffren.

MPE was selected because of its track record of excellence and its long history of being the first choice worldwide for high-performance EMC filtering on a host of surface and sub-surface naval platforms. Applications have ranged from Astute class submarines and the Queen Elizabeth class aircraft carriers to Royal Navy Type 26 frigates and Type 45 destroyers and Visby class stealth corvettes for the Swedish Navy.

Accordingly MPE provided two standard feedthrough variants, a 10A 130V DC and a 10A 250V AC in various quantities and also designed and supplied a custom three-phase AC equipment filter. The filter design element of this project was completed in conjunction with a UK marine defence company, and the manufactured filters were subsequently delivered to a naval equipment integrator in Singapore before onward supply to the naval base at Toulon.

The Suffren class will serve as the backbone of the French submarine force into the 2060s, making it one of the major maritime platforms of this century.