



**MPE**  
Quality, Reliability, Performance

# Company Bulletin

for EMC, EMP & TEMPEST Protection

## Issue 12



MPE 800A 1500V DC filters mounted onto the anechoic chamber at Horiba MIRA, Nuneaton



John Parsons of MPE undertakes a site survey at Horiba MIRA

### Turning up the power at Horiba MIRA

Horiba MIRA, the global provider of pioneering engineering, research and test services to the automotive, defence, aerospace and rail sectors, has been working with the World's leading manufacturers to deliver innovative vehicle engineering solutions since 1946.

MIRA EMC Engineering based at Nuneaton, Warwickshire, UK, is an accredited facility to ISO 17025 Standard via UKAS for international automotive and defence applications, along with being approved for all major vehicle manufacturers' test schedules and NPIA approved.

MPE has a working relationship dating back over 15 years with MIRA. More recently in 2015, MIRA engaged with MPE for adapting and upgrading of one of its existing anechoic vehicle test chambers, in order to meet the increased demand for testing electric vehicles and their components.

For MPE, the chamber upgrade presented both AC and DC filtering requirements, with the DC demand being high current and high voltage. Following visits to site by MPE and a rigorous 12-month design process, in late 2016 MPE delivered both AC and DC filters, with the DC filter providing a very high attenuation performance of 100dB from 10KHz through to 18GHz and being rated for 800A at up to 1500V DC.

However, perhaps the most significant challenges presented to MPE were mechanical. Whilst the chamber itself measured around 20m x 11m x 7.5m, the available space for any new filters was of primary concern, as was the overall increase in weight to the existing structure from the filters. MPE therefore adapted designs from its high-current DC filter catalogue range, thereby ensuring that envelope size and weight limits were met.

MPE also designed and delivered custom busbar configurations and custom enclosure hardware for both external and internal mounting to the existing structure. The result was a smooth and efficient filter installation, minimising the need for MIRA to make changes to its existing chamber.

The upgraded chamber at MIRA Nuneaton now provides the capability for RF immunity and EMC emissions testing for the rapidly expanding electric vehicle market sector.

