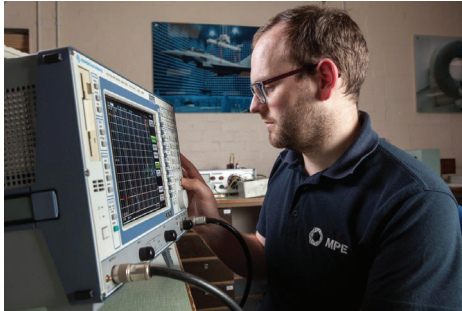
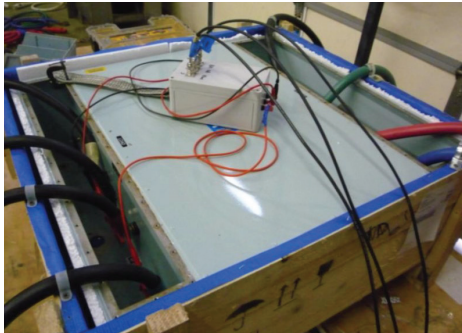


Terminal pull test set-up at Intertek, Michigan



Insertion loss testing at MPE, Liverpool



MPE filter during harmonic distortion testing at DeTech, Virginia

US Army Corps of Engineers (USACE) compliance

As one of the primary HEMP filter suppliers for US defence applications, MPE is often requested to provide evidence of compliance with the United States Army Corps of Engineers (USACE) filter test specification, section 13 27 54.01 10, filter section 2.5, paragraph 2.5.5, as well as the United States Department of Defense (DoD) Unified Facilities Guide Specification (UFGS) 13.49.20.00 10, filter section 2.7, paragraph 2.7.5.

Previously MPE has demonstrated such compliance via individual test reports, in combination with historical supply information. Whilst this has been wholly acceptable for the vast majority of applications, it is often not the most efficient or succinct method of communicating compliance.

TSS USA, MPE's Gold Certified Partner for the USA, spearheaded the testing of MPE's HEMP filter solutions in accordance with these USACE and UFGS requirements. This has resulted in a single report providing all required USACE and UFGS compliance information.

Both MPE's standard performance and extended performance HEMP filters were tested, with the tests being conducted by Directed Energy Technologies (DeTech) in Virginia, Intertek Testing Laboratories in Michigan and MPE in Liverpool.

The USACE and UFGS specifications stipulate that tests be conducted on specific terminal strength; insertion loss; voltage drop; current overload; reactive shunt current; dielectric withstand voltage; insulation resistance; harmonic distortion; and filter life. These tests were completed in their entirety for the MPE filters.

As the majority of the required tests have well defined test methodologies and are often requested of MPE, unsurprisingly the test results proved that the MPE filters exceeded all electrical performance requirements and showed no signs of damage or degradation following the mechanical tests.

A less common test requirement is total harmonic distortion (THD), although the test method and maximum permitted THD levels are again well defined within IEEE 519-0-2014; IEC 61000-4-7; UFGS 26-35.46.00 20; and UFGS 13.27.54.00 10. The most stringent of these standards allows a maximum THD threshold of 2.5%. Test results showed that the THD of the MPE filters fell well within this threshold, at a maximum of 0.5% THD.