



MPE
Quality, Reliability, Performance

Company Bulletin

for EMC, EMP, HEMP & TEMPEST Protection

Issue 19



Air traffic control tower at Thule Air Base



Radar array at Thule Air Base



HEMP filter from MPE

HEMP filters north of the Arctic Circle

In 2016 Serco, Inc, a world-class provider of technology for essential services such as defence and aerospace, was awarded a \$38 million contract to upgrade the High-Altitude Electromagnetic Pulse (HEMP) Protection of the Ballistic Missile Early Warning System supporting the US Air Force (USAF) at Thule Air Base on the north-west coast of Greenland.

Thule Air Base with Pituffik airport is the northernmost base of the US Air Force, located some 1,207km (750m) north of the Arctic Circle and 1,524km (947m) from the North Pole.

This five-year contract, awarded under the Resilient Power and Mechanical Systems Basic Ordering Agreement of the US Army Corps of Engineers (USACE) Engineering and Support Center, Huntsville, Alabama, is to enhance and modernise the radar's HEMP protection via a design-build-install-test approach supporting the USAF Space Command and US Strategic Command.

As part of this contract award, following design works MPE was engaged to supply a suite of HEMP filters compliant with Mil-Std-188-125 and all of the specified site requirements. This suite of HEMP filters was manufactured by MPE in early 2018 and supplied via its Gold distribution partner TSS for onward delivery to Thule Air Base by the end of June of 2018. After all the installation work, the filters were successfully tested by specialist test house Jaxon, Inc of Colorado Springs, USA, in late 2018.

Thule Air Base is home to the USAF 21st Space Wing's global network of sensors providing missile warning, space surveillance and space control to North American Aerospace Defense Command (NORAD) and Air Force Space Command (AFSPC).

The base is also home to the 821st Air Base Group and is responsible for air base support within the Thule Defense Area for the multinational population of "Team Thule". The base hosts the 12th Space Warning Squadron (12 SWS) which operates a Ballistic Missile Early Warning System (BMEWS) designed to detect and track ICBMs launched against North America.

Furthermore Thule is host to Detachment 1 of the 23rd Space Operations Squadron, part of the 50th Space Wing's global satellite control network. The airfield's 10,000ft (3,000m) runway handles more than 3,000 US and international flights a year.

MPE has collaborated with Serco previously in the delivery of HEMP filters, on that occasion for the UK's RAF facility at Fylingdales, North Yorkshire, an application featured in Issue 10 of the MPE Company Bulletin and a similarly integral part of the Ballistic Missile Early Warning System for UK and US defence.

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