



Maritime Electrical Systems (MES) Capabilities

Overview

QinetiQ's Maritime Electrical Systems Team (MEST), part of the Maritime Systems Platform Design and Life Support (PDLS) operation based at Haslar in Gosport, assists the global marine industry in supporting vessel operations and maintenance projects with highly experienced and qualified maritime electrical Subject Matter Expert (SME) expertise.

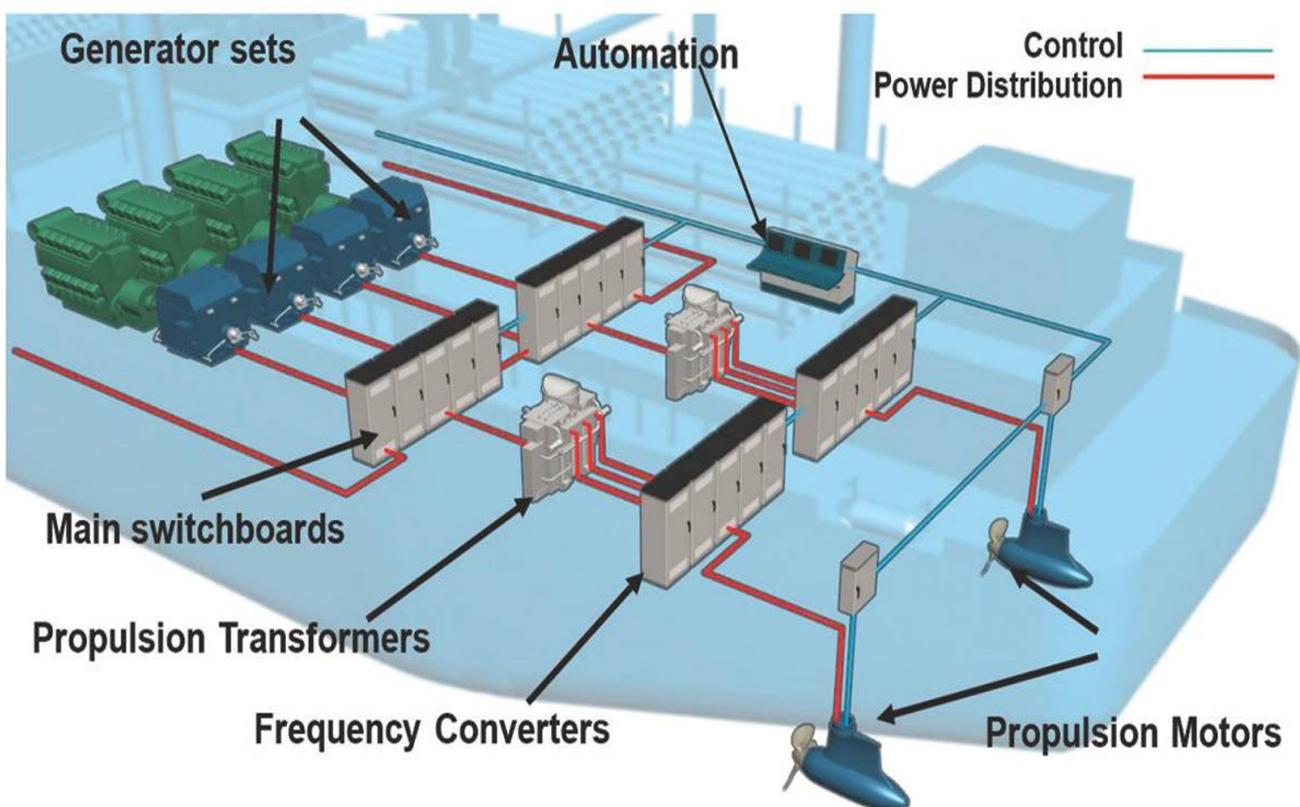
Capabilities

This expert support is offered to operational and new build military surface and sub-surface vessels, auxiliary and commercial vessels, as well as ports installations. Support can be via remote communications or attendance during regular operations, or as part of a refit or assisted maintenance period. Typical projects feature energy saving surveys to meet impending IMO 2030 and 2050 targets with work projects established through electrification and conventional refit and AMP support tasks.

Featuring a team of suitably qualified and experienced persons (SQEP) and SMEs, with significant experience of maritime electrification projects that can act as senior technical superintendents, QinetiQ are able to support end users with focussed expertise in various area of ships operations that can liaise with ships teams, design authorities and class surveyors alike.

Some of the expertise includes:

- Excellent knowledge of maritime platform systems and equipment's with an excellent relationship with MOD platform teams, particularly T23 and MCM COM.
- Strong relationships with Electrical Power and Propulsion OEM's with extensive operational experience of various plant configurations including full IEP and High Voltage vessels.
- Ability to provide technical oversight and engineering consultancy for a wide range of programmes, including cost of ownership, obsolescence upgrades and decarbonisation.
- Full understanding of platform systems and equipment dependencies required in order to understand cause and effect of failures in operation
- Excellent maritime domain expertise supporting IPMS and vessel automation systems.
- The ability to examine systems and identify vulnerabilities and deviations from class and flag requirements, including power quality and harmonics issues.



Specific support can also be provided during assisted maintenance periods (AMP's) and refits periods (RP) globally. This can also include managing Original Equipment Manufacturer project management of upgrades to power and propulsion, as well as automation systems.

QinetiQ's team of marine SQEP's are also able to provide advice and guidance on programmes to reduce energy consumption of the electrical services, whilst also considering class and flag rules needed to be observed. This includes safely ensuring that works meet class and technical authority rules on issues such as HV safety, as required under JSP375, along with power quality and harmonics, as required by Stanag 1008, LR and DNV.

Typical projects that the METS have been involved with include:

- Supporting naval platforms during assisted maintenance periods (AMP) with expert resources.
- Overseeing of Original Engineering Manufacturers (OEM) projects during sea acceptance trials (SAT)
- Obsolescence review and operational updates to vessels IPMS capabilities
- Containerised capabilities for maritime platform sea trials involving advanced radars and comms.
- Review of various Electrical Power and Propulsion architectures using battery energy storage systems (BESS) and fuel cell options for reduced emissions and reduced noise capabilities.



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