Bridge Mate Thruster Control System

As with their popular dynamic positioning systems, Marine Technologies (MT) places a heavy emphasis on redundancy in the Bridge Mate Thruster Control System. The system uses three control computers and a redundant communication network for the main and backup control functions. The Thruster Control System can be interfaced with most types of thrusters, main engines and rudders. The system offers less wiring when delivered together with other MT products as the thruster interface is then shared via the redundant network. The Thruster Control System is also available as a single, stand-alone system.

Bridge Mate Thruster Control Advantages:

- Can be fully integrated with other Bridge Mate systems, including autopilot, joystick or dynamic positioning
- Follow-up steering is located on the same lever for main and backup control
- Independently manufactured for compatibility, allowing thrusters from different manufacturers to be controlled by a common, user-friendly interface
- User friendly HMI (human-machine interface) via touchscreen or trackball
- High-level network communication alerting the user to any wire failures
- Shares common hardware with other MT products, resulting in the need for fewer parts
- Common “take” for all thrusters independent of manufacturer
- Common override from all modes (dynamic positioning, joystick or autopilot) back to manual
Figure 1

THRUSTER 1

--- DP --- 28 Conductors
--- TCS --- 28 Conductors
--- Backup TCS --- 18 Conductors
--- VDR --- 2 Conductors
--- AP --- 8 Conductors
--- Conning --- 10 Conductors
--- IND JS --- 18 Conductors
--- Automation --- 8 Conductors

Classic thruster interface utilizing a separate systems architecture with an estimated 120 conductors in use.

Figure 2

THRUSTER 1

--- Backup TCS/IND JS --- 8 Conductors
--- TCS/DP/IBS --- 8 Conductors

The second generation Integrated Bridge System (IBS) incorporates the Thruster Control System (TCS) and Dynamic Positioning (DP) System using ethernet interfaces.