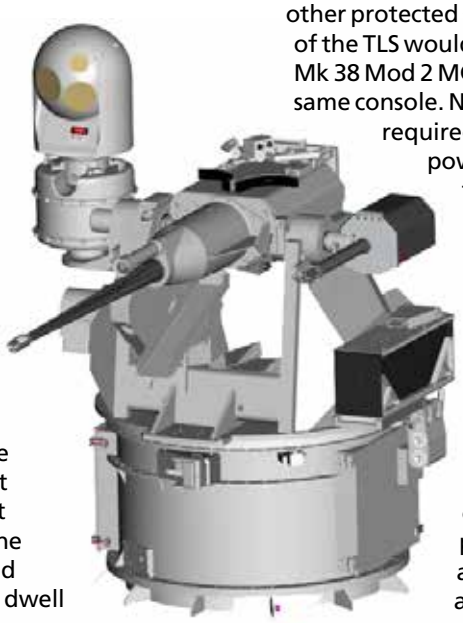
Mk 38 Mod 2 Tactical Laser System
Revolutionary Fleet Defense

Mk 38 Mod 2 TLS, as conceived, would be an advanced capability laser weapon module ordalt to the Mk 38 Mod 2 Machine Gun System (MGS) for adding scalable self defense.

The Mk 38 Mod 2 MGS from BAE Systems sets the standard for shipboard defense against small, fast and agile surface threats. With system variants deployed worldwide, the stabilized, remote control Mk 38 Mod 2 MGS has been proven capable in defending against multiple surface threats. The Mk 38 Mod 2 MGS incorporates the service proven TOPLITE Electro-Optical Sensor (EOS) integrated with a state-of-the-art fire control system to optimize effective engagement of enemy targets in all weather conditions, day or night. The system can be applied to a wide range of different ship classes and platform designs of 50 tons or greater displacement. The addition of a 10kW TLS would provide true selectable and scalable effects ranging from non-lethal to lethal. This would allow for new response options in both conventional and irregular conflicts.

Weapon and Effects – The Mk 38 Mod 2 TLS would provide an effective counter for swarm boats and, with further modifications to the Mk 38 MGS, UAVs at tactically significant ranges. Effects on the target are controlled through changes in dwell time, spot size (focus), and selection of aimpoint on the target.



Survivability – The Mk 38 Mod 2 TLS would provide for crew-safe conditions with a remote operation console located in the Combat Information Center or in other protected ship structures. Operation of the TLS would be conducted by the Mk 38 Mod 2 MGS operator, from the same console. No personnel action is required for reload since electrical power is the only consumable for the TLS.

Command and Control – The Mk 38 Mod 2 TLS would utilize the existing integrated fire control system for target queuing. TOPLITE EOS then executes target handoff to the TLS organic optical tracking system, providing high-precision aimpoint management on an operator-designated

aimpoint. In addition, the laser beam director optics would provide target identification at ranges substantially greater than what is available today.

Affordability/Technology Readiness – The Mk 38 Mod 2 TLS provides near term laser capability to surface ships at significantly lower costs than other options. Additionally, using electrical energy vice chemicals, the cost per engagement is significantly reduced. The TLS is composed of existing components ranging from Technology Readiness Level (TRL) 5 to TRL 9.

Ship Impacts – The Mk 38 Mod 2 TLS would provide expanded capability with manageable ship impacts.The required deck space and manning is unchanged, no external cooling is required and the ship's existing electrical system is used to power the laser.

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