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## The Naval Employment of the Coast Guard 270-Medium Endurance Cutter

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*Increased responsibilities and operations along with aging assets required the Coast Guard to build a new 270-foot medium endurance cutter, designed to carry out Coast Guard law enforcement missions. Because of possible military missions, a sophisticated weapons and sensors package was suggested and to some degree is being provided for the 270-MEC. With this suite of equipment the ship will be able to perform numerous military missions but there is some question about placing such equipment in a relatively slow (19 kt) platform when the Coast Guard already has a higher speed (29 kt) high endurance platform with considerably less weapons and sensor capability.*

## THE NAVAL EMPLOYMENT OF THE COAST GUARD 270-MEDIUM ENDURANCE CUTTER

by

Lieutenant Commander Edmund I. Kiley, U.S. Coast Guard

**Why A 270-MEC?** For the Coast Guard, the 1970s saw an increase in the breadth of responsibilities and tempo of operations. The major focus of this increase was in maritime law enforcement. The 1976 Fisheries Conservation and Management Act, the 1970 Federal Water Pollution Control Act, and an increased participation in drug-interdiction were all milestones in reinvigorating the Coast Guard's law enforcement mission. These new programs also placed a strain on existing resources. The Coast Guard had 15 medium-endurance cutters (MEC) that were built between 1964 and 1969 and 12 high-endurance cutters (HEC) that were built between 1967 and 1972. The remaining 14 high and medium-endurance cutters were all World War II vintage with the exception of 6 high-endurance cutters that were completed in 1936 and 1937. To replace these old, overworked ships, the Coast Guard designed a new 270-foot medium-

especially for the Coast Guard's increased law enforcement mission.

The 270-MEC vital statistics are:

Displacement	1,722 tons
Length	270 ft
Beam	38 ft
Draft	14 ft
Speed	19 kts
Range	2,500 nm @ 19 kts; 5,000 nm @ 10 kts
Propulsion	2 diesel generating 3,500 SHP powering 2-9 ft variable pitch propellers

Some of the important considerations in the basic design of the Coast Guard's new ship were that it have good economy and endurance on station in addition to the speed to overtake 95 percent of the world's fishing vessels.<sup>1</sup> The Coast Guard estimated a 400-mile transit to and from station, with a 14-day patrol.<sup>2</sup> Most law enforcement patrols are carried out at moderate speeds (10 knots) with few high-speed chases. These design criteria established a 19-knot speed requirement and moved

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the Coast Guard away from the gas turbine to more economical diesel engines. The law enforcement duties involving high-speed chase will be carried out by the vessel's embarked helicopter.

The 270-MEC will have a flight deck designed to accommodate a 22,000-pound helicopter to include the Coast Guard's HH-52A, HH-3F, and the new Short-Range Recovery (SRR) helicopter. This deck will also accommodate the Navy's SH-2D ASW helicopter and plans call for employing the Navy's new LAMPS III ASW helicopter with the 270-MEC. The flight deck will have a retractable hangar, helo-inflight refueling, and the 270 will be fin-stabilized to provide a helo capability in a wide range of weather conditions. If law enforcement "muscle" is required, the 270 will be equipped with the standard Coast Guard package of six machinegun mounts that can accommodate any combination of the two .50 caliber machineguns and the two 40mm machineguns on board. In addition to these surface weapons, the 270-MEC will be equipped with the 76mm MK75 rapid fire gun (85 rounds per minute) controlled by the MK92 fire control system. This gun can be used against surface targets but is primarily an AAW weapon.

Probably the most innovative part of the new 270-MEC in the Coast Guard's view will be the Command Display and Control system (COMDAC). This system will automate as many bridge, CIC, communications, and sensor functions as possible. This is being done to reduce the manning level of the ship. The COMDAC will consist of six to ten computers that will integrate the inputs of the ship's sensors (ESM, radar, sonar, gyro, fire control radar, LORAN, OMEGA, stabilized electro-optical periscope and pit log, just to mention a few). These computers will also have memory discs that can record charts with tracklines drawn, the contents of

HO-103 or ATP-1, and the ship's running log according to both sensor and human inputs. Display consoles planned for the COMDAC system will be on the bridge, in the Combat Support Center (CSC vice CIC) and Damage Control Central. The typical console will have two TV displays, a keyboard, and switches. An interesting part of the system is the stabilized electro-optical periscope. This will provide a magnified low-light TV camera and direct sight capable of recording bearings and azimuths. It can also be used to control the 76mm gun. With the COMDAC system the navigator will be capable of taking, plotting, and recording visual fixes using only the periscope in conjunction with TV displays.<sup>3</sup> One man will be able to do what it took as many as five or six to do previously. This system will also be data-line capable.

If all this sounds too good to be true, it is—at least for a while. The software for the COMDAC is behind development schedule. The software should be delivered in 1985 and the first 270-MEC will be delivered in late 1981.

It would seem from the foregoing descriptions of the new 270-MEC that it has been built to suit the Coast Guard law enforcement mission very nicely. It is economical, has adequate speed, and is helicopter-capable, well-armed and sophisticated. But there is one item missing from the 270 that is required for a very traditional Coast Guard mission. The mission is search and rescue, and the missing item is a towing bitt with its attendant taffrail. The reason the towing bitt is absent is that the 270-MEC is to be outfitted with the SQR-19, a Tactical Towed Array Sonar system (TACTAS). TACTAS is a long-range, passive sonar used for antisubmarine warfare (ASW). (It might be interesting to note here how the pendulum has swung since the days of the Revenue Cutter Service. The Cutter Service started out enforcing the law,

but because of its presence in treacherous coastal waters a secondary job of rescue was identified with the service. When the Revenue Marine, the Light House Service, and the Life Saving Service were joined to form the Coast Guard, the mission of search and rescue became ascendant. With the replacement of the towing bitt by a TACTAS, it would seem that the search and rescue role is being relegated again to a lower priority.) It has been contended that TACTAS is supportive of Coast Guard surveillance and law enforcement. But even if law enforcement surveillance proves to be an effective use of TACTAS, the trade-off between TACTAS and the towing bitt is symbolic of the apparent schizophrenic nature of this ship. Looking at its size, configuration, propulsion, speed, endurance, electronics, and helicopter capabilities, it appears to be a vessel well-suited to the Coast Guard. An examination of the types of sensors and potential weapons systems to be employed on board 270 to support Navy requirements reveals a ship more like the Navy's FFG-7 than a Coast Guard cutter. Some of the weapons and sensors mentioned in conjunction with the 270-MEC are TACTAS, 76mm MK75 gun, MK92 GFCS and LAMPS III helicopter with Recovery, Assist, Secure, and Traverse (RAST) system. In addition, the *Phalanx* Close-In Weapons System (CIWS), *Harpoon* missile, and SLQ-32 ESM system with Super Rapid Blooming Offboard Chaff (RBOC) are either planned for the first ships or space and weight reservations are being made for their future installation. With plans being made for such capable armament, military readiness will be important in the future of the 270-foot MEC.

**The Navy's Interest and Investment in the 270-MEC.** With the continuing decline in the number of ships in the Navy, the high cost of building and the

long leadtime necessary to get new ships, it is understandable that the Navy would be interested in anything the Coast Guard might be building. The 1980s will bring a serious shortage of the capable Navy platforms required to perform Navy missions and this makes the Navy's interest in the 270-MEC especially acute.

Before examining the role that the 270-MEC will play in military missions, a look at the capabilities of the new military hardware that will either be on board the 270 or will have space and weight reservations for future installation is interesting:

#### 76mm MK75 OTO MELARA

**Gun.** This is an Italian-made weapon and is designed for anti-air and antisurface warfare and will fire 85 rounds per minute. It is designed for use against high-speed aircraft and surface craft under severe ship maneuvering conditions. It will fire between 44 and 115 rounds without reloading depending upon the size of the ammunition tray. In remote control it has a 2.8 second reaction time. It also has emergency local control, weighs about 14,000 pounds and is served by a four-man crew. The turret is fiberglass and is watertight and fallout tight. It has a maximum range of 21,000 yards at 45° elevation and 39,000 feet at 85°.<sup>4</sup>

In contrast, the current Coast Guard 5-inch, 38-caliber MK30 gun weighs 45,000 pounds, fires 20 rounds per minute to ranges of 17,306 yards at 45° and 32,250 feet at 85° and is served by an 11-man crew.<sup>5</sup>

**MK92 GFCS.** This system is designed to be used in both search and track modes simultaneously. It can track one surface and one air target simultaneously. The system

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is designed to control two light or medium caliber guns and a surface-to-surface missile. The primary mission of the system is medium-range to close-range anti-air defense and close-range surface defense. The tracking range of the radar is limited when compared to a standard air search radar. Both the search and track antennae are housed on a common stabilized platform covered by a waterproof radome.<sup>6</sup>

**AN/SLQ-32 ESM System with Super RBOC.** This is an electronic warfare system that is designed to detect and identify aircraft, ships, and antiship missiles by their radar emissions. The system is also designed to deceive incoming missiles by the use of active and passive countermeasures. All surface aircraft in the area are automatically tracked on a continuous basis. The system separates friend from foe and establishes the threat level according to the type of electromagnetic energy being emitted. The SLQ-32 can provide accurate bearing and elevation of incoming antiship missiles to permit defensive reaction. The Super RBOC is a mortar-like launching system for dispensing decoy material into the air to lure antiship missile homing sensors off target. The use of RBOC would be part of the defensive reaction triggered by the SLQ-32's detection of terminal homing guidance of an incoming missile.<sup>7</sup>

**Pbalanx Close In Weapons System (CIWS).** This weapon is a short-range defense against incoming missiles and high-speed, low-level aircraft attack. The CIWS is a 20mm 6-barrel Gatling gun with a 3,000 rd/min rate of fire. It is a fully automatic closed loop

system that searches for, tracks and engages the threat, laying down a barrage of high penetration, depleted uranium rounds in front of the target. The CIWS uses a digital fire control system that tracks both the target and the stream of projectiles and brings them into coincidence. This system has been successfully employed against fully functional missiles and maneuvering supersonic drones.<sup>8</sup> System weight is about 12,000 pounds and it has a maximum range of 1,625 yards.<sup>9</sup>

**Harpoon Missile.** This missile is a high subsonic, surface-to-surface, all-weather missile with a range of 60nm and carries a 510-pound warhead. It is 15 feet long and weighs about 1,530 pounds as configured for a 270-MEC.<sup>10</sup> This missile can be rapidly deployed on board platforms using a self-contained 4-cannister launching system that weighs 8,500 pounds. Self-contained in the missile are launching booster, cruise phase propulsion and guidance, homing and terminal maneuvering systems, along with ECCM facilities. Before launch, guidance inputs are provided by shipboard sensors or third-party linked sensors for over-the-horizon targets. After launch, *Harpoon* guides itself using a digital computer. No further data is required from the ship. Terminal guidance is provided by a jam resistant active radar that locks on until impact.<sup>11</sup>

**AN/SQR-19 TACTAS Sonar.** This sonar is presently being suggested for employment on the 270-MEC. It is a towed, passive, long-range detection sonar.<sup>12</sup>

**LAMPS III Helicopter.** This helicopter is still being developed

and is scheduled for delivery in 1983. It is designed as a 21,000-pound twin turbine, multipurpose helicopter with an overall length of 65 feet. It will have a 150nm radius with 1 hour on station time and is expected to have an EW capability to detect and possibly jam antiship missiles. It can serve as an over-the-horizon targeting vehicle for missile firing and will be the 270's only method of attacking submarines as no torpedo tubes are planned for the 270. The LAMPS III will provide localization and destruction for submarines detected by shipboard sensors. It is to be fitted with surface search radar, ESM sensors, sonobuoys, MAD gear and possibly other sensors. It will have a four-man crew and be armed with two MK46 ASW torpedoes.<sup>13</sup> Before it is deployed on the 270, a RAST system (positive haul down and deck maneuvering system), TACAN, and landing light system will have to be installed. The 270-MEC will also be capable of employing the Navy's current LAMPS helicopter, the SH-2D, and the SH-3D ASW helicopter. These both have localizing sonar and can deliver ASW torpedos.

**Satellite Communications (SATCOM).** In addition to the weapons and sensors that are proposed for the 270-MEC, Satellite Communications are expected to be installed on the new cutter.

Navy investment in 1978 dollars for the proposed weapons and sensors including the LAMPS III support equipment but not including the helicopter was \$25.5 million. At present the only Navy items certain to be delivered with the first 270-MEC are the 76mm gun, the SLQ-32 ESM suite, the MK92 FCS, and SATCOM. This

represents an investment of about 10.4 million 1978 dollars. The current plan is to backfit the SQR-19 and LAMPS equipment as it becomes available. This could represent an additional \$11.7 million.<sup>14</sup> The CIWS and *Harpoon* will probably be deployed on the 270 only during a war or in an emergency.

It is interesting to note the investment being made in the 270-MEC with its relatively limited speed and endurance as compared to the lack of investment being made in the *Hamilton*-class 378-foot HEC (Table I). This HEC is equipped with gas turbine and diesel engines that give it a top speed of 29 knots with a range of 2,400 miles at 29 knots and a range of 9,600 miles at 19 knots. It also has a hull-mounted sonar, torpedo delivery system and helicopter deck. According to one study an additional 14.9 million 1978 dollars could upgrade this much more capable platform to the level of an ocean escort vessel able to protect 20 knot convoys. This \$14.9 million would add a CIWS, SLQ-32, *Harpoon* system, SPS 40B radar, SQR-19, LAMPS III helo support and SATCOM. The major weakness of the HEC would be AAW. The 378-HEC is currently equipped with a 5"/30 caliber gun and a MK56 GFCS, and this system is not capable of handling supersonic threats, but it is capable of gunfire support.<sup>15</sup> The Coast Guard has 12 ships of this class and with upgraded weapons and sensors could provide a relatively quick and inexpensive (inasmuch as the platform is already built) addition to the Navy's escort inventory. This capability would be at about FFG-7 level of effectiveness for ASW and ASUW. It does not appear that the weapon and sensor additions would hamper the 378-HEC's ability to perform Coast Guard duties, any more than their additions would hamper a 270-MEC. Although a question might arise concerning the percentage of time the vessel was employed in Coast Guard duties considering the Navy invest-

**TABLE I—COMPARISON OF FFG-7, 378-HEC, and 270-MEC**

	<b>FFG-7</b>	<b>378-HEC</b>	<b>270-MEC</b>
Displacement	3,605 tons	3,050 tons	1,772 tons
LOA	445 ft	378 ft	270 ft
Beam	45 ft	42.8 ft	38 ft
Draft	42.5 ft	20 ft	14 ft
A/C	2-SH-2 LAMPS	1-HH52A or 1-HH3	1-HH52 or 1-HH3
Missiles	1-MK 13-launcher for Harpoon or Standard	none	space reserved for <i>Harpoon</i>
Guns	76mm MK75 MK 15 CIWS	1-5" 38 (MK 30) 2-20mm 2-40mm 2-.50 cal MG	1-76mm MK75 2-40mm 2-.50 cal MG space reserved for CIWS
A/S Weapons	2x3 MK32 Torp tubes	2x3 MK32 Torp tubes	LAMPS
Engines	2-41,000 SHP gas turbines 1 shaft	2-7,000 BHP diesels 2-28,000 HP gas turbines 2 (CP) propellers	2-7,000 BHP diesels 2 (CP) propellers
Speed	30 kts	29 kts	19 kts
Range	4,500 @ 20 kts	14,000 @ 11 kts 9,600 @ 19 kts 2,400 @ 29 kts	5,000 @ 10 kts 2,500 @ 19 kts
Complement	176 (14/162)	164 (15/149)	103 (14/89)/(95) less LAMPS
RADAR	SPS 49; SPG 60; SPS 55; MK92 GFCS	SPS 29; MK56 GFCS; SPS 64;	SPS 64; MK92 GFCS
Sonar	MK56 (Hull); TACTAS	SQS-38	TACTAS

Source: Norman Polmar, ed., *The Ships and Aircraft of the U.S. Fleet* (Annapolis: Naval Institute Press, 1978), pp. 106, 321, 324.  
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ment, this could be a problem regardless of what platform received the investment. Despite the 378 platform capabilities, the 270 seems to be the current interest of the Navy as far as Coast Guard ships are concerned.

**Potential Navy Employment of the 270-MEC.** A recent study concerning Coast Guard wartime capabilities stated: "Our conclusion here is that the Coast Guard does not have much capability to carry out the escort assignment or the offensive military assignments. The Coast Guard can help protect the coasts, the ports and the offshore assets though."<sup>16</sup>

The 270-MEC is not suited for use in a high threat area! It will not be capable of operating with a carrier battle group, it will not be able to escort underway replenishment groups, amphibious task groups, or high priority convoys. Lacking these vital capabilities what duties can the 270 perform? The major roles that are being planned for the 270 are cargo convoy escort in conditions of low AAW threat, search and interdiction, mine countermeasures and surveillance assignments.

In a major war the 270, if equipped with the weapons and sensors that have been proposed, could escort cargo convoys of 15 knots or less along the U.S. coastal routes, between CONUS and Hawaii and CONUS and Alaska. These convoys would have to be within an area of U.S. air superiority. The primary threat to these convoys would probably be Soviet torpedo firing submarines. The TACTAS/LAMPS III combination would be an effective weapon against this threat. The 270 could respond to a limited missile threat in this circumstance with the SLQ-32, 76mm/MK92 GFCS, and CIWS. Under similar threat circumstances, 270 could be used to sanitize convoy marshalling areas of submarine activity or act as escorts for convoys in lower threat areas and later hand off the convoy to more

capable escorts as it approached a high threat area. This would reduce the distances the high capability escorts had to travel. The 270 could also be used as an escort for slower speed, lower priority cargo convoys to Europe, the Mideast or Asia in a long war of attrition.

Another wartime mission that is being suggested for the 270 is search and interdiction. Although it is open to question how important this assignment would be in a major war, search and interdiction missions could be performed in protection of the U.S. coast as they are today in the case of drugs. The LAMPS III, TACTAS, and the ESM suite would be particularly effective detection devices in this mission and the LAMPS III, *Harpoon* missile and 76mm gun would be effective weapons. Again, the threat conditions are critical. The 270 on independent search and interdiction operations would be pressed to deal with a simultaneous attack from more than two of the three dimensions of air, surface, or subsurface. In a limited war or crisis, the 270 would be well-equipped to perform search and interdiction missions as the Coast Guard did in Vietnam.

Another wartime mission area for which the 270 is being considered is mine countermeasures (MCM). There is a tremendous shortage of assets in this warfare specialty despite the enemy's great mine warfare capability. Presently there are only three mine warfare ships in the active fleet and 22 in the reserve fleet. Although the Coast Guard is mentioned in conjunction with mine countermeasures, there are many difficult problems with the 270 performing this mission. The magnetic signature of the hull is too great for effective mine hunting, the mine hunting sonars are too heavy to employ on the cutter and still retain sufficient weapons and sensors for other missions, and the minesweeping



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equipment is too heavy and cumbersome to employ on the 270 without degrading its Coast Guard missions. In short, if the 270 was to be MCM capable, it would become a specialized vessel for MCM first and a Coast Guard cutter second.<sup>17</sup>

Despite these problems the 270 could still become an effective part of the U.S. mine countermeasures force. The Navy is presently planning to build some new mine countermeasures ships. In the CNO report for 1980, the 5-year shipbuilding program calls for one MCM ship to be funded for 1981 and two to be funded in both FY 83 and FY 84. The same figures are found in the DOD Annual Report for FY 80. The current design for a MCM ship calls for a ship with the following characteristics:

Displacement	1,640 tons (approx.)
LOA	265 ft
Beam	40 ft
Draft	11.5 ft
Speed	18 kts (sustained)
Propulsion	gas turbine (2 shafts)
Complement	unknown
Guns	unknown
Radar	SPS-55 surface search
Sonars	SSQ-14

The mine countermeasures ship will not have helo support facilities but it will have an improved deep-moored sweep capability using a two-ship towed sweep system. The plans also call for an SSN-2 precise navigation system and when fully developed, the ship mine hunting sonar will be installed.<sup>18</sup>

In examining the MCM ship and the 270-MEC it appears that a beneficial relationship could be derived by operating these two ships in tandem. With similar lengths, displacements, hull designs, and propulsion capabilities, these ships seem compatible for towing the two-ship deep-moored sweep device. This would necessitate the solution of any hull signature problems of the 270, and an appropriate fitting for towing the device would have to be installed.

The helicopter capability of 270-MEC could also contribute to a tandem operation. The 270 is capable of carrying the HH-3F, the Coast Guard's medium-range rescue helicopter. This helicopter has been identified by Navy studies as being compatible with Navy minesweeping equipment.<sup>19</sup> Because the proposed MCM ship has no helicopter facilities, 270/MCM ship tandem could increase the variety of mine countermeasures operations and decrease the time in which they could be carried out. The weapons systems on the 270 could provide an adequate amount of security for both units under normal threat conditions encountered in sweeping operations. This could ease the cost of weapons and sensors for the MCM ship.

Although cargo convoy escort, search and interdiction and mine countermeasures are the missions that the 270 are given in studies, there are some other missions for which the 270-MEC is suited, such as cover and deception, surveillance, and chokepoint warfare.

Employing radar reflection enhancers, electronic warfare vans and acoustic noisemakers, the 270 could be made to appear to be a high value target (aircraft carrier, replenishment ship, amphibious attack ships) in radar picture, electronic emissions, and underwater acoustic signature. The

### BIOGRAPHIC SUMMARY



Lieutenant Commander Kiley, a 1980 graduate of the Naval War College, is a graduate of the Coast Guard Academy and holds the MALS degree from Wesleyan University. His service includes a tour in USCGC *Hamil-*

*ton* (WHEC-715), command of the patrol boat *Pt. Martin*, instructor duty at the Coast Guard Academy, and Executive Officer of USCGC *Storis*, an icebreaker/fisheries patrol ship. He is now on the staff of the Naval War College.

Coast Guard cutter could be slipped into a battle group departing port at night and using its deception devices and a few escorts draw away or at least confuse trailing enemy submarines or other surveillance assets. The use of these deception devices could prove to be hazardous, but drawing fire in deceptive operations is a longstanding wartime tactic. Indeed the deception might work in such a way that the trailing enemy submarine would reveal itself to investigate when the false emissions cease and be vulnerable to the 270's weapons. The use of a Coast Guard cutter could be particularly effective in cover and deception operations. A cutter could move into a position to carry out a deception operation and attract relatively little notice inasmuch as the Coast Guard has many reasons to be almost anywhere on the water.

Surveillance is another mission the Coast Guard and the 270 are well-suited to perform. Again the Coast Guard's multimission nature lends itself well to the creation of "cover stories" to place the 270 in an advantageous surveillance position. The TACTAS and LAMPS III system lend themselves to surface and subsurface surveillance. The weak surveillance link in the 270 is in the air. There is no long-range air search radar planned for the 270. The ESM suites on the LAMPS III and the SLQ-32 would be the only potential air surveillance sensors. The Coast Guard 270 cutter could also be used in "tattletale" and shadowing operations. The Coast Guard has some experience with this type of independent operations from fisheries and drug patrols. The Coast Guard missions provide an excuse to be most anywhere off the coast of the United States or indeed in the world if the cover were carefully developed and the sensors provided the 270 are effective for passive trailing operations.

Chokepoint warfare is another mission that the 270 could perform. This is one of the tactics used on drug

patrols. The TACTAS and LAMPS combination would be effective against submarines in geographic chokepoint areas and the Caribbean and the Gulf of Mexico seem to offer particularly good opportunities for the use of the 270. *Harpoon* and 76mm gun provide a moderate capability for antisurface warfare in chokepoints.

Cover and deception, surveillance and chokepoint warfare are some of the missions the Navy has few assets to perform and the Coast Guard 270 could provide the appropriate platform.

### Conclusions—Recommendations.

Despite the impressive, at least for Coast Guard missions, proposed weapons and sensors of the 270-MEC, it is not a major combatant or escort vessel. It can be used for cargo convoy escort along the U.S. coastal routes or in other low to moderate threat areas. It will also be a good platform for search and interdiction should that role be important. The 270 could make significant contributions to mine countermeasures, especially as a team with the proposed MCM ship. Although the Coast Guard has been mentioned frequently in conjunction with mine warfare during the last 4 or 5 years, no concrete actions have been taken to implement this as a Coast Guard task. Considering the shortage of assets, especially in mine countermeasures, and the magnitude of the threat, it is time either to make the Coast Guard capable in this area or, if the Coast Guard cannot do the job, to stop suggesting it can and make the Navy realize the Coast Guard is an illusory mine warfare asset.

The Coast Guard 270-MEC could also be used in the areas of cover and deception, surveillance, and chokepoint warfare. The Coast Guard's experience and multimission nature makes providing a cover for these tasks relatively easier than using a naval asset.

Upon concluding this examination of the possible wartime uses of the new

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270-MEC, it is worth noting again that the only weapons and sensors the 270 is assured of having upon delivery are the SLQ-32, MK92 GFCS, and the 76mm gun. The TACTAS, LAMPS III, *Harpoon* and CIWS are only proposed and there is a pressing need for these weapons to be deployed on board Navy ships. It may be 6 or 7 years before the Coast Guard can expect to get these weapons. During the delay, thought should be given to upgrading the weapons and sensors of the 378-HEC as opposed to providing these sophisticated weapons to the less-capable MEC platform. With upgraded weapons and

sensors, the Navy could be provided with 12 FFG-7 type escorts relatively quickly and inexpensively. The studies indicate that the escort duty is one of the most critical the Coast Guard could perform in a major war.<sup>20</sup> The 378-HEC as a platform is far more suited to escort duty than the 270-MEC platform.

The 270 looks as if it will be a solid cutter for law enforcement and other Coast Guard missions. Put the towing bitt back on the 270, and put the weapons and sensors on the Coast Guard's combat-proven warship, the 378.

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