Compare and Contrast: HMVEEs and FARRAGUT Class DDs

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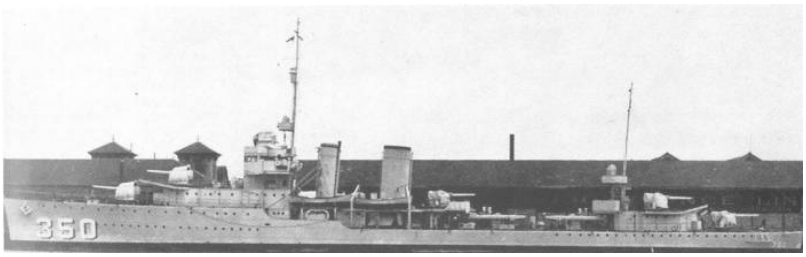
Dadmanly has a post on the recent discussions on the roll over problems with the Up Armored HMVEEs. It is one of many, which I will use for a jumping off point for the discussion of â€œweâ€™ve been here before.â€•

Asa recap, it wasnâ€™t all that long ago the MSM was lambasting the Military for not having â€œenoughâ€• armor on HMVEEs, which, were never intended to be patrol vehicles by design. They were cargo carriers to get supplies to the front, butâ€¦thatâ€™s another entire story in how equipment is developed and fielded by the US Armed Forces, as a function of Defense Analysis, brought to the Pentagon in the early 60s, by a gentleman you may recall named Robert McNamera.

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Be that as it may, after the sceeching from the front pages of major papers, and in other forms of media communications, the Pentagon lept into action and got armor on the HMMVVs, sometimes, and at first, by troops scrounging for steel plates and getting out the trusty welding torches. Troops with skills are not always a bad thing, but there are times that well intentioned â€œlocalâ€• efforts cause some consequences that canâ€™t be forseen. Conversely, sometimes the â€œshore basedâ€• or stateside development organizations are too stuck in traditional thought to see a good idea, or, they are more often constrained by budget allocations from doing more. That also leads to another discussion, where too much money spet, when it is working to save lives (which is hard to quantify) ends up an issue in the media, where the demands are made to call people on the carpet to explain their â€œexcessive and unnecessaryâ€• expeditures. So, once more good, hard working, thoughtful and intelligent people, in uniform, as civil servants, and as contractors, get caught trying to tip toe through a minefield.

On December 10th, 1941, the British battleship HMS PRINCE OF WALES and battlecruiser HMS REPULSE were sunk in the South China Sea by a Japanese air attack. Within a few short days, the Japanese Navy forever changed the face of war at sea. Proving the capability of aircraft launching and attacking from long range as the effective method of projecting power. The sun set on the era of the large captial gunship that day.



The message was not missed by the United States. Of the many reactions, one is illustritive of the same issue of the present day top heavy armored HMVEE. The FARRAGUT (DD-348) Class Destroyers, as many others, were soon fitted with many more topside anti-aircraft guns, in the form of 20 and 40mm, single, dual and quad mounts to provide better protection from high altitude bombing and low altitude torpedo attacks from carrier and land based aircraft.

Desiging a ship is a calculated effort, carefully balancing not only the raw weight of the vessel against the bouyancy of the water, but also the specific placement of items of significant weight within the hull. Naval architects make exacting computations when constructing a vessel, such as the MAHAN destroyers. The plans are filed and retained for susbequent modifications tot he ship. During construction, particularly with the first vessel of a class, there is extra testing to test the accuracy of the calculations of the engineering at the drawing boards. One such important test is the â€œinclining experiment.â€• The ship is set pierside and then weights are carefully placed by a plan and then the heel and pitch of the vessel are observed as a result. Hopefully, the ship changes postition as planned. If notâ€¦something is amiss.

My point here is there is a concerted effort to make sure the ship put to sea can handle the sea conditions and right itself in storms.

Dec 18, 1944 was the day that 2 US FARRAGUT Class destroyers, part of ADM Halseyâ€™s THIRD FLeet, sunk while transiting through a typhoon, while one (USS DEWEY (DD-349)) was survived. Certainly being at sea in a typhoon is an extreme condition, but the interesting part is the ships lost were all of the same class.

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From Patriot Defenders Network:

> â€œIn December 1944 as Admiral William Halseyâ€™s Third Fleet was operating in support of General MacArthurâ€™s invasion of the Philippines, the Third Fleet encountered a tropical cyclone more powerful than any western Pacific encounter with the Japanese. The result was three destroyers (the USS HULL, USS MONAGHAN and SPENCE) sunk with 800 men lost, 26 other vessels seriously damaged, and 146 aircraft destroyed (16). The Commander in Chief, U.S. Pacific Fleet Admiral Nimitz said, â€œIt was the greatest loss that we have taken in the Pacific without compensatory return since the First Battle of Savo.â€• Halsey himself described it best. â€œNo one who has not been through a typhoon can conceive its fury,â€• he wrote in his autobiography. â€œThe 70 foot seas smash you. The rain blinds you. The battleship NEW JERSEY once was hit by a 5-inch shell and I did not even feel the impact. The MISSOURI had kamikaze crash on her main deck and repaired the only damage with a paint brush. But the typhoon tossed our enormous ship the MISSOURI as if she were only a canoe.â€•

The cause of the sinkings? Too much topside weight, and captains/engineers who didnâ€™t want to make themselves more stable by pumping sea water into the empty and partially empty bunker fuel tanks. The topside weight came from the extra AA guns placed with not a lot of consideration of the ship stability issues being addressed. Details from a confidential lessons learned letter from Adm Nimitzâ€™s staff discusses some of these issues.
A far more thorough account of the entire incident, to include some excellent reporting of the change in ship handling characteristics (the indicator of changes in stability) are laid out in Typhoon: The Other Enemy by C. Raymond Calhoun. What does this man know about the incident? He was Captain of the USS DEWEY (DD-349) in the storm. A reserve officer, given command of the ship before her AA gun upgrade, he chronicles the fights he had with BUSHIPS after undergoing sea trails and noticing the ship was â€œtenderâ€• and did not right itself as quickly as before the modifications.

Like the HMVEE modifications, the intent of the people who did it was good. The consequences were not looked at closely, that while saving lives from enemey attack, the modifications also have proven to be deadly to a significant number of those who occupied the vehicles. The rush to meet a need overrode more detailed analysis, and therefore today, the press will highlight the service members who suffered and died as a result.

I last worked in a software maintenance activity, where we were involved in some design and production of programs/systems as well. I know this: Program managers in DC (and elsewhere) do not want to pay for testing. The statement â€œyour guys write good software!â€• was pretty common. The same thing applies for both the ill-fated FARRAGUT (and one FLETCHER) class destroyers, and the uparmored HMVEEs of today.

The answer? Act to respond to threats, and get some quick thinkers in the room to judge the implications. Iâ€™d say like the NASA people when Apollo 13 suffered her casualty. The testing effort to make sure the electricity would last to power up the systems for reentry was a process to emulate.

Andâ€¦if youâ€™re read this far, then Iâ€™d highly recommend â€œTyphoon: The Other Enemy.â€• It is a wonderful read about being in a massive storm at sea, how to get your voice heard up the line, how large staffs work (or donâ€™t) sometimes, and the disection of the court of inquiry held about the sinkings. Many engineering, seamanship, and leadership issues are covered along the way. For professional mariners, and engineers, itâ€™s a great read from the US Naval Institute Press.

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