Comments on the collision between a tanker and a U.S. Navy ship in the Strait of Singapore

August 2017 (chronologically from bottom to top)

Wed, Aug 23, 2017 at 3:05 PM

Turning all deck lights on should not affect the visibility of the two vertical red lights, which need to be installed "*where they can best be seen*", and in all the cases I know of at a height similar to the top of the aft mast light.

I would think that for most merchant ships the visibility of the side and stern lights largely exceeds 3 miles, although navy ships apparently stick to the rule, understandably, since they endeavor as much as possible to not be easily detected. If the Navy ship was immobilized and was hit by the tanker's bow, the Navy ship was at all times dead ahead of the tanker, and possibly below the line of visibility under the bow, which needs to intersect sea level at most 500 m ahead of the bridge. The tanker is 183 m long and the 327 m between the bow and the point of intersection would be covered by a ship going 11 knots in one minute. We know there are lapses of time exceeding that period during which the officer on watch does not check his radar screen, especially in a separated channel where no opposite traffic or fishing boats are to be expected. On a merchant ship there is no officer dedicated to monitoring the radar screen continuously. Also, the regulation does not say anything about the narrow blind sector just ahead of the fore mast. If the officer on watch was standing or seated along the midship line, for example just in front or behind the center wheelhouse window, he may have missed the tiny light just behind the fore mast. One of the first lesson I learned when I was a young officer was to always move, so as to be able to detect objects behind any blind spot (I was standing by the side of a bridge window, in the middle of the desert Southern Pacific, when the skipper entered the bridge and asked me what was the ship on the horizon. I had missed it. It had just kept steady behind the blind spot between two front windows, thus on a collision course! The ship was still far enough to be so tiny it was occulted by a narrow piece of bulkhead, but it was still on a collision course all the same).

One likely scenario: the Navy ship, bound for the Changi Naval Base, located 27 miles from the collision location, was scheduled to arrive at day break, which was 7:03 AM. The time of the collision seems to have been 5:24 AM, so the Navy ship was probably going at least 20 knots before the event. The Navy ship had just overtaken the tanker, which was going 10 to 11 knots, on the tanker's starboard side, with a relative speed of about 10 knots, so the tanker was not worrying about the Navy ship, once overtaken, and could see her low and dim stern light fading away. The Navy ship may even not have been recognized as such in the dark, and may have been mistaken for a speedboat. If the Navy ship experienced a rudder malfunction within a couple of minutes after passing the tanker, she may have veered to port and stopped immediately, so as not to exit the SW bound lane of the Middle Channel and enter the NE bound lane with its traffic going the opposite direction. Thus doing, the Navy ship ended up being about half a mile dead ahead of the tanker and, given the lack of visibility, the collision was all but unavoidable.

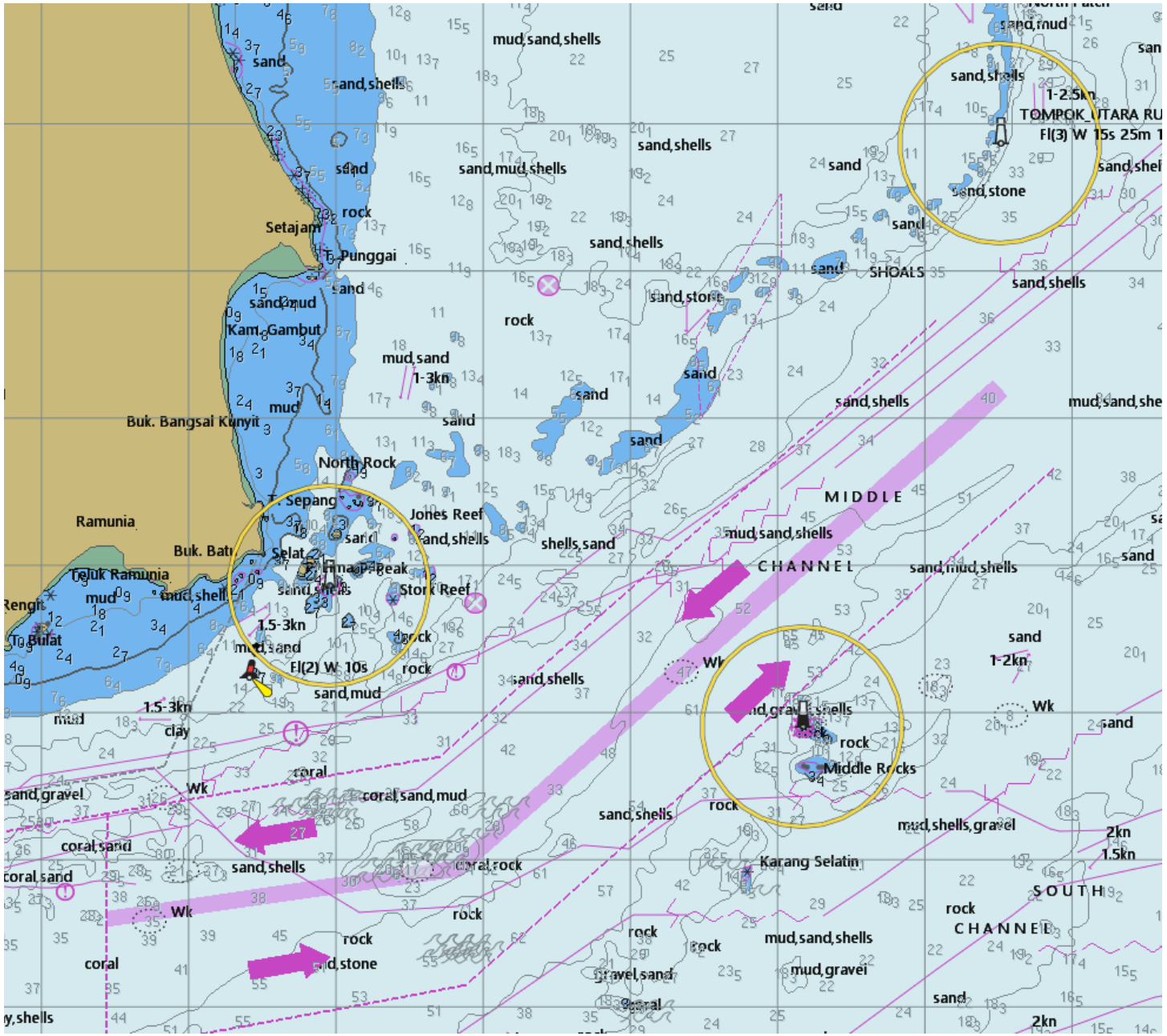
Regulation 22 of SOLAS states that:

1. *Ships of not less than 55 m in length, as defined in regulation 2.4, constructed on or after 1 July 1998, shall meet the following requirements:*

1.1 *The view of the sea surface from the conning position shall not be obscured by more than two ship lengths, or 500 m, whichever is the less, forward of the bow to 10° on either side under all conditions of draught, trim and deck cargo;*

Tanker's fore mast

The collision seems to have happened just south of the Tompok Utara light



Tue, Aug 22, 2017 at 2:50 PM

From what is seen on the hull of the Navy ship, she was probably disabled and almost stopped, and was rammed by the bow of the tanker, who therefore was overtaking her from her portside and should have given her way. That is if the officer on the tanker bridge saw her at all. Rule 27 only prescribes that, if disabled, the Navy ship should have exhibited two all-round red lights and two balls or similar shapes in a vertical line where they can best be seen, but I remember one of the first, if not the first, lesson from my first skipper: when at anchor or disabled, in addition to the legal light requirements, immediately turn all the deck lights on and flood the ship with as much light as possible. If the Navy ship was disabled only moments before the collision it is likely that the Rule 27 lights were not yet turned on, let alone any other light. Also, there was no moon and it seems from my data that the sky was overcast.

It is my experience that military vessels, when under way, exhibit no light at all beside their regulatory side, stern and bow lights, which are usually dimmer than they are on merchant ships, and are therefore quite hard to see, especially in busy channels with so many other ships displaying much brighter lights of all sorts on a background of hundreds of lights on the very close shoreline. If the tanker was coming from an angle greater than 22.5 degrees abaft the Navy ship's port beam, as is likely, only her dim and relatively low stern light would have been visible from the tanker's bridge, and could even have been below the line of visibility above the bow of the tanker, if the possible disablement of the Navy ship occurred just moments before the collision. An inexperienced Navy officer on duty would not have reacted properly or fast enough to the emergency, especially if the practice to flood the vessel with lights is not recommended, or is even forbidden, by military procedure, which is likely.

At any rate, contrary to the news reports, the accident seems to be not a repeat of the Korea collision two months ago, but a rather very different case, involving Navy regulation.

Mon, Aug 21, 2017 at 3:25 PM

The Navy ship collision with a tanker last night is a sad event, and again results in illiterate reports in the press. Quotes below are from the New York Times. At least, this time the journalists are not putting the blame too blatantly on the tanker before the inquest, although there are some innuendoes.

"The guided-missile destroyer, the John S. McCain, was passing through the Strait of Malacca on its way to a port visit in Singapore at 5:24 a.m. local time when it collided with the Alnic MC"

There are four references to the Strait of Malacca in the article, although it seems the collision happened in the eastern entrance to the Straits of Singapore, not the Strait of Malacca.

"Bonji Ohara, a research fellow at the Sasakawa Peace Foundation in Tokyo, said that one recurring problem was that while naval ships tended to have live crews on watch, most commercial ships work on autopilot mode to reduce costs, which can lead to problems in busy sea lanes."

As anybody who's ever been on a boat knows, autopilot has nothing to do with keeping watch. Autopilot is usually safer and more reliable than a helmsman. Does the research fellow really believe there was no officer on watch on a tanker sailing in such a congested area?

"Nighttime duty on Navy ships like the John S. McCain is often in the hands of relatively young officers, between 22 and 24, according to a senior Navy officer."

That is some admission!

"Commercial tankers can be reluctant to shift their course because maneuvering requires turning off the autopilot and costs time and money, the officer added."

That is quite an uneducated statement. Where did the senior Navy officer take the crazy notion that altering course requires turning off the autopilot?

"The Alnic MC has a gross tonnage roughly three times that of the John S. McCain."

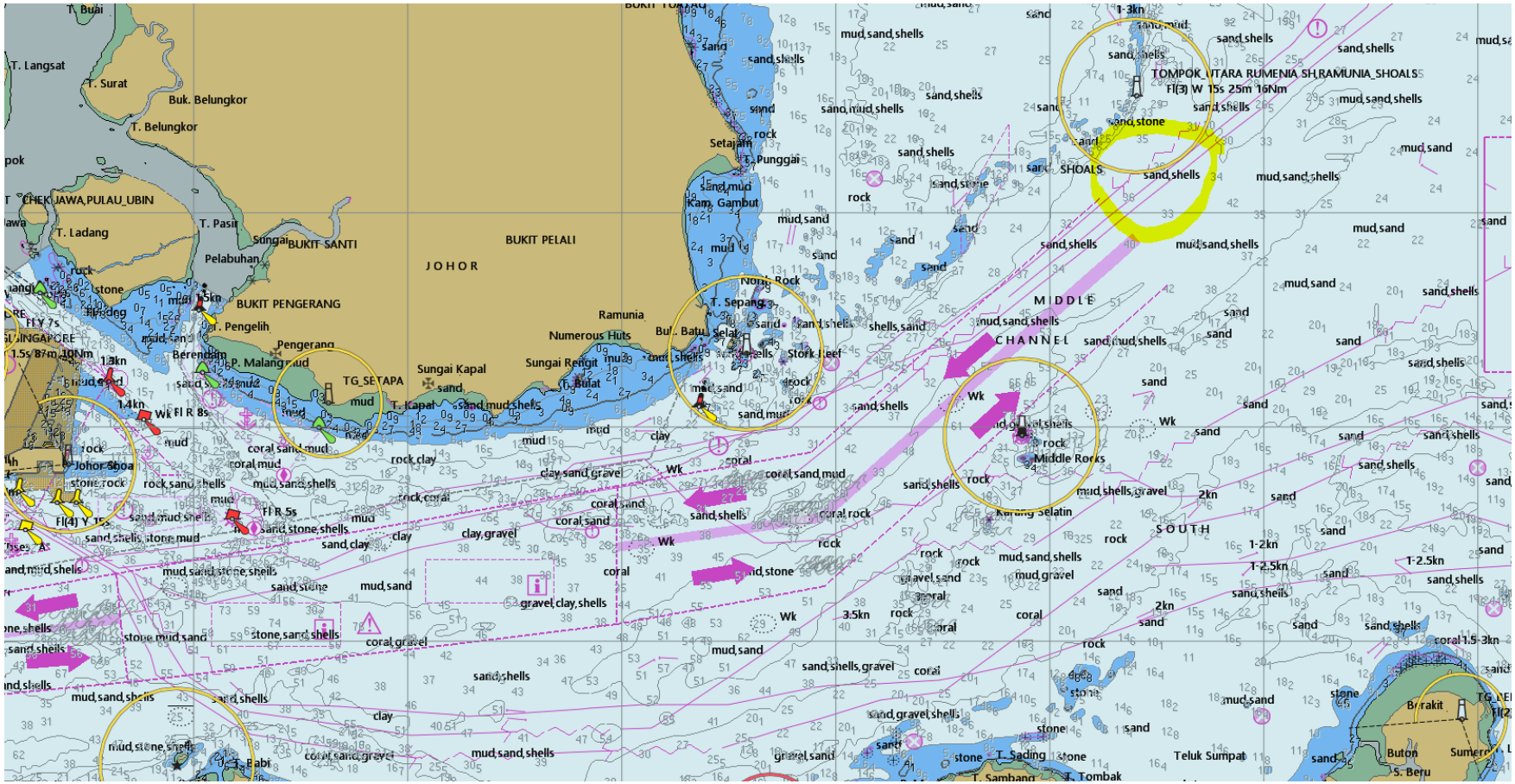
The Alnic MC has a gross tonnage of 30,040 tons, while the Navy ship has a displacement of 9,800 tons. Apples and oranges. The Alnic MC's displacement is probably about 60,000 tons, 6 times that of the Navy

ship, but its power is probably only one eighth and its maximum speed a third. Per ton of displacement, the Navy ship has about 50 times more power and is therefore much more agile and responsive.

"In May, the Lake Champlain, a Navy cruiser, collided with a South Korean fishing vessel, but no injuries resulted from that crash. In February, another guided-missile cruiser, the Antietam, ran aground in Tokyo Bay, gushing more than 1,000 gallons of hydraulic fluid near the American naval base at Yokosuka, Japan."

No comment.

Chart of the collision area (highlighted in yellow). If the Navy ship was heading towards Singapore, it must have been entering the SW bound channel. The tanker appears to have also been sailing to Singapore, coming from Taiwan



It is reported that the tanker was carrying 12,000 tons of fuel, about a quarter of her capacity, and was therefore probably quite high on the water, with her bulbous bow well above the waterline. The breach on the aft portside of the Navy ship appears to be very possibly the result of having been rammed by the tanker's bulbous bow at an angle of seemingly 30 degrees aft the port beam. See below what seems to be the imprint of the tanker's stem above the breach. Despite some press reports, the situation is quite different from the Korea collision. From the damage, it seems the Navy ship was going at very limited speed and was overtaken by the tanker, and certainly was on the tanker's starboard side. Short of a last minute steering gear malfunction, or a Navy ship helmsman's error, and contrary to the Korea incident, it seems this time the tanker would be at fault.

56
JOHN S McCAIN

Alnic MC at light displacement, older name. See bulbous bow and stem: