

Paper for Consideration by HSSC 11**Comments on HSSC11-05.5A regarding the development of S-67**

| | |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Submitted by: | INTERTANKO |
| Executive Summary: | This paper comment on the development of the S-67 and ask IHO for a pragmatic and workable approach when developing this new standard. |
| Related Documents: | S-67 draft v0.7(0.8?), HSSC11-05.5A |
| Related Projects: | S-67 |

Introduction / Background

IHO have taken on the work to present the mariner with guidance on how to use CATZOC values as specified in in ENC charts. This is much appreciated by the industry as there today exist a plethora of interpretations on how to use the CATZOC values. The S-67 now in draft v0.7 (or 0.8: the document says 0.7 the filename says 0.8) and as commented by the DQWG in their report is that the document is in need for more work. INTERTANKO agrees on this position and will in this commenting paper suggest a way forward.

Effective use of CATZOC is a very important topic which is coming more and more in picture with wide introduction of ECDIS and digital data services. It is extremely important to keep two processes in harmony and well progressing:

- Gradual improvements of ZOC assignment to ENCs (good improvements are here especially in N.America.)
- Introduction of CLEAR guidance for the mariners for effective and unambiguous use of ZOC by the mariners within a scope of their regular navigational tasks.

Transition from a paper chart navigation to an electronic navigation introduced new practices relevant to the handling of chart information. Frequently the same survey data (as to date, quality, accuracy etc.) for an area is used for paper charts and for respective ENCs. However, when the very same hydrographic information is being used as ENCs in the ECDIS it often has very different implications operationally compare to paper charts. The scope of additional precaution measures (e.g. documented risk assessment if ZOC is not good enough etc.) is much higher in case of ECDIS. As a result, the reality does not quite fit the conceptual requirement introduced by the IMO in the Performance Standard: "ECDIS should reduce the navigational workload compared to using the paper chart."

Analysis/Discussion

This section is divided into initially more detailed comments on the guideline. After that is a discussion on the way forward for the document.

Detailed Comments on S-67 draft v0.7:

1) (section 4) - Suggestion to move section 4 into the Annex to the document or make it a later section after current 5.x.

4. The components of an assessment

Change heading to: The components of an assessment for assigning ZOC values by a Hydrographic Office

2) (section 4)

This section 4 need a more general introduction on who does this etc. It now jumps straight into details.

3) (section 4)

3a) Amend wording "The next most important criteria is position accuracy" at the time of survey.

3b) The wording

“The least important criteria is depth accuracy, simply because it is the controlling factor in only a small proportion of the world’s coastal waters”

is not at all helping the mariner for whom this is equally important to the other factors as laid out above.

4) (section 4)

In general don't say what the mariner should and should not know as an example:

“Mariners should not require a detailed understanding of survey characteristics”

If that is not required, then why is the document written. The wordings need to be in a way that it educates the mariners out there on what is essential to know to make educated decisions on CATZOC and UKC.

5) (section 4)

The last section on page 7.

There is a discussion here that is important, but no guidance is given to the mariner or a link to guidance further on in the document on what to do.

The consideration in this part is more for HO rather than for the mariner. If HO did not include a survey date into the ENC – then there is nothing the mariner can do about it. If availability of the date of survey is essential for assessing the situation then it is more practical to leave it to HO to assess this and to change ZOC if appropriate.

5a) (section 5). The goal of recommendations provided in sections 5.2-5.6 should be to provide a clear guidance including advised safety margins values (horizontal and vertical) to be applied in order to bring the risk associated with ENC data accuracy to a tolerable level when used for navigation.. Practical advice could include ‘how to do a navigational risk assessment for passage across Cat C/D/U waters’ – there is far more to it than adding more safety margins.

6) (section 5.2 & 5.3)

This section state the following:

“In practical terms, mariners should only require a relatively small allowance for an under-keel clearance in a ZOC A1 area.”

UKC is a factor that have many variables when being calculated. In the tanker industry we use CATZOC as one of the variables to that make up a UKC calculation.

Here is an extract from an INTERTANKO guidance where the parts making up UKC are laid out:

The UKC applies to the dynamic condition of the vessel where variables as listed below are applied to the static draft.

- (a) The effect of squat based on the vessel’s speed through the water.
- (b) The location of the vessel: open waters or confined waters.
- (c) Environmental conditions such as: water density, prevailing weather, height of swell, tidal height and range, atmospheric pressure, local anomalies, current.
- (d) The nature and stability of the bottom (e.g. sand wave phenomena, silting).
- (e) Reduced depths over pipelines or any other obstructions.
- (f) The vessel’s size and handling characteristics and how the vessel squats, whether by head or stern.
- (g) The reliability of the ship’s draft observations and calculations, including estimates of hogging or sagging.
- (h) Increase in draft due to heel when turning/rolling.
- (i) Wave response allowance, which is the vertical displacement of the hull due to heave, roll and pitch motions.
- (j) The accuracy/reliability of hydrographic data and tidal predictions. This is generally found described on tabulated source diagrams or as Zones of Confidence and takes into account how the depths were obtained originally, i.e. via hand leads or sophisticated survey methods (see chapter on CATZOC).

As can be seen from this, CATZOC is part of the last item that make up a UKC calculation. In this document, there should instead of laying out what UKC a ship shall or shall not have, discuss the part of UKC that a CATZOC value should add to the overall UKC calculation. This must be clarified, probably before this section 5.2 on how CATZOC relates to the overall UKC calculation.

Further the margins added to UKC here would seriously affect the cargo intake a ship can take today and is far beyond what we use today. Such statements will massively impact commercial shipping. These figures must be clearly defined in terms of how they have been calculated and how they have been achieved.

7) (section 5.2 & 5.3)

The statement: "If the Master considers that there is the possibility of undetected features, such as in an area where depths may have recently changed, it may be wise to allow another 2m safety margin."

This seem to be a comment coming from nowhere? Where is the 2m safety margin coming from? If this is to remain, there need to be a detailed discussion on how this figure is calculated.

8) (section 5.2)

The statement

"Conversely, the Harbour Master or pilot may advise that a smaller under-keel margin is possible. This will be the result of what is known as a 'Special Order' survey. While still within the overall ZOC A1 category, these surveys have achieved vertical accuracy better than +/- 0.25m. Under-keel margins this small should only be considered on the specific advice of the Harbour Master or Pilot, supported by real-time tidal observations, or with the benefit of excellent, and very recent, local knowledge. Without this knowledge or advice, under-keel margins as small as these should not be considered."

Seem to have no place here although it is factually correct. This has nothing to do with CATZOC values in ENCs and should be left out of this document.

9) (section 5.4)

The statement

"As a general recommendation, it would be prudent to allow *at least* an additional 5 metres under-keel margin"

Such massive margin would make many ports in the world not usable any more. Further the margins added to UKC would seriously affect the cargo intake a ship can take today in other ports and is far beyond what we use today. Such statements will massively impact commercial shipping. These figures must be clearly defined in terms of how they have been calculated and how they have been achieved. INTERTANKO assumes that these consequences are not intended.

Note that former use of the same hydrographic information as part of paper charts did NOT require such additional margins, or at least it was not a common practice. Vessels could enter ports with use of paper charts and now these additional values need to be considered while entering the same ports just because the very same data is shown as ENC in the ECDIS.

10) 9) (section 5.5 & 5.6)

Here no guidance is given at all on the impact on UKC, in order for the guide to be usable, this need to be added. As it is now laid out now, the recommendation is more or less not to sail in waters with CATZOC C & D even if this is not explicitly stated. As can be understood, this is not helpful at all seeing that commercial ships have to sail in waters with CATZOC C & D. I refer specifically to the table in 5 of the document. More guidance is needed. See also 5a above.

11) (section 5.7)

Again, there is no guidance for the mariner here at all, it's stating facts. More guidance is needed.

12) (section 6)

The statement

"Put in simple terms, mariners should be able to navigate with confidence in areas with ZOC A1 and A2 classifications."

Doing the math derived from the table in 5 again, a mariner can navigate with confidence in 1.7% of the area of world's coastal ENCs. This is not really guiding the mariners as a summary, it's not giving confidence as they have to sail in all CATZOC categories.

13) (section 6)

Here again is a reference to pilots and port specific surveys. This is not helpful for the mariner who only has the ENC at hand. IHO and member organizations should ensure that ports report in surveys to the national HO and that surveys are pushed out with weekly updates. This is the only way around this. However, again, this is not for this guideline to discuss.

14) (section 6)

The table Zones Of Confidence Categories and associated text is better placed in the beginning of the document.

Conclusions

The document has not set the intended reader, the mariners out there navigating ships, in the focus of the document. The document lacks guidance where it is needed the most, on how to add the CATZOC margin to their UKC calculations. The document here take an overly restricted approach. This approach, should this be the guidance, will have major impact, in a negative way, on specifically the tanker industry. We would there for ask IHO to carefully again look at the numbers (or lack thereof) in section 5.2 – 5.7 of the guidance. If no numbers can be given, guidance on how to do a navigational risk assessment for passage across Cat C/D/U waters would be very helpful.

The document in many parts jumps straight into a very technical discussion without a proper introduction. The document also plays down the importance of depth accuracy which is not helpful for the mariner onboard evaluating the depth.

Recommendations

It is recommended that IHO seek input or participants to the working group of this document from active seafarers. INTERTANKO would be interested to participate in the work, should we be invited.

Its recommended the IHO take the conclusions above into account when further developing the document.

Seeing the important information contained in the document, we would recommend that IHO put forward a paper to IMO MSC or NCSR (whatever comes first after the document is in its final draft state) and ask them for comments recommendations.

IHO is invited to consider how the CATZOC implementation on the ENC and ECDIS can be simplified with automated functionality to meet the IMO in the Performance Standard: "ECDIS should reduce the navigational workload compared to using the paper chart."

Action Required of HSSC

The HSSC is invited to:

- a. Note: The comments made the Analysis/Discussion section above
- b. Discuss: The Conclusion and Recommendations as set out above
- c. Take action: As appropriate