

**8th CSPCWG Meeting
Turku, Finland, 29 November – 2 December 2011
Paper for Consideration by CSPCWG**

Using vertical clearance in black versus magenta for overhead cables

Submitted by:	SWEDEN
Executive Summary:	Following a discussion between the Swedish Maritime Administration (SMA) and UKHO it has been obvious that the distinction between charting a vertical clearance in black versus magenta should be clarified and it would benefit to have an open discussion at CSPCWG8 regarding this issue.
Related Documents:	Official IHO INT1s (German, French, Spanish) – D20, 26 (especially see the note given to D26) IHO S-4, clauses B-380, 380.1 and B-382, 382.1
Related Projects:	

Introduction / Background

Following a discussion with UKHO, who are in the process of adopting many of the Swedish paper charts, SMA was made aware of the fact that INT1 and S-4 distinguish between vertical clearance and safe vertical clearance for overhead cables. Vertical clearance is charted in black according to B-380 and 380.1 and safe vertical clearance is charted in magenta according to B-382, 382.1. In INT1 an additional note is given to D26 to explain the situation for the users. This note has never been included in any versions of the Swedish INT1 and no distinction has ever been made between safe vertical clearance (charted in magenta) and vertical clearance (charted in black). In fact all vertical clearances, also for overhead cables, have always been charted in black in Swedish paper charts.

As explained in B-382.1 and briefly in the note to D26; safe vertical clearance is the authorised safe clearance (known in the UK as the safe vertical clearance), which is the physical clearance minus a safety margin. This indicates that an authority has set the clearance and has made an allowance for the risk of electrical discharge and that the cable will sag in warmer temperatures and in wintertime from the burden of snow and ice.

Analysis / Discussion

It is of course a mistake of SMA that we have not observed that, in S-4 and INT1, there is a difference between vertical clearance and safe vertical clearance. However, even if this is now the case, we are somehow confused about how the user would respond to a vertical clearance in black versus magenta. If there is one overhead cable with a magenta height of 15m and another one with a black height of 15m in the same chart you would as a user, after studying INT1 (which is perhaps not always likely), expect that it would be safe to pass under the overhead cable with the magenta height if you have a 14m high vessel. How would you then respond to the overhead cable in black? Is it safe or not to pass under that overhead cable with a 14m high vessel?

We are of the opinion that it must be the owner of the overhead cable who is responsible for the correct height being stated on the clearly visible information boards on site and as long as we show the same height in our charts, as stated on the boards, it is not our task to tell whether the owner actually has followed the recommendation from any electricity safety authority. You would of course expect that the owner follows the given recommendations given from the appropriate authority (no one wants to cause any damage), but is it actually the purpose of the chart to state whether or not this is the case?

Perhaps all other producer countries use safe vertical clearance and portray the clearance in magenta (as in D26), but later discussions between UKHO and NGA and NOAA in US indicates that this is not really the case.

Conclusions

Sweden has not been able to investigate how the usage of vertical clearance and safe vertical clearance has been handled in other countries and think the issue would benefit from having an open discussion at CSPCWG8. It would be especially useful to discuss if we really need and if it is actually safe, to have two versions and definitions of vertical clearance for overhead cables. In Sweden's opinion it is confusing for the users to have two versions and therefore we propose to have only one.

Justification and Impacts

During earlier discussions with CSPCWG Secretary, Andrew Heath-Coleman, it was noticed that B-380.1 is not updated according to Technical Resolution 3/1919. B-380.1 should be amended so that, in areas where the tide is not appreciable, the clearance should be referenced to 'a High Water datum', as in B-302.2.2b.

Action required of CSPCWG

The CSPCWG is invited to note and discuss this Paper.