**CSPCWG6-INF2**

**6th CSPCWG MEETING**
**Monaco 1-3 December 2009**

## Paper for Consideration by CSPCWG

**Flood lighting in highspeed routes**
**(HIB – Hurtigbåt indirekte belysning)**

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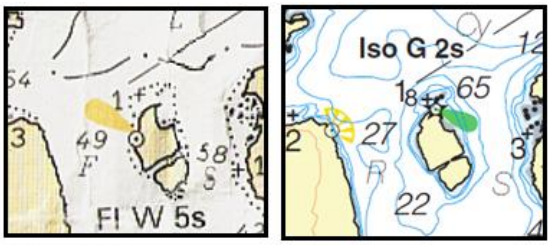
| ***Submitted by:*** | Norway |
| ***Executive Summary:*** | HIB is a Norwegian abbreviation for high speed route floodlights. They are placed out by the Norwegian Coastal Administration for indirect illumination and identification of navigation marks. |
| ***Related Documents:*** | INT 1 and S-4 |
| ***Related Projects:*** | |

**Introduction / Background**

To navigate safely in narrow fairways at 30 knots, reliable visual navigation infrastructure is crucial. Two specific accidents where high speed passenger crafts were involved in the coastal waters of western Norway showed the need of optimising lights and marks in high speed routes.
The report from the accident with *Sea Cat* in 1991, recommended alteration of light characteristics to shorter dark periods, and also installation of indirect fixed illumination of marks and shoreline terrain details.
The report from the *Sleipner* accident in 1999, recommended accelerating both the coverage of electronic charts and the floodlight installations in the high speed routes.

**Analysis/Discussion**

The Norwegian Coastal Administration have developed a type of aid to navigation and named it HIB. Large numbers of these installations are placed in critical positions in difficult narrows and straits along the routes of the high speed crafts.
Although it is often difficult to show this information due to other important detail, NHS has decided to chart these HIBs as a floodlit symbol.
The installations often need extra power supply in addition to solar cell energy. The charts therefore have a large density of power cables in these areas. To reduce energy consumption LED will be used in the future.



*Old chart (1991)* *New chart*

**Example from the area of the *Sea Cat* accident**


1st generation 2nd generation Future

The HIB may also in addition have a regular light installation.
The white information panels are fitted with a fluorescent colour band in accordance with the IALA lateral system (and the colour of the light if fitted). In addition to the panels, the ground below the installation may also be indirect lightened, if required. The identification number is the same as the 2 last figures of the Light List number.

*From Norwegian List of Lights*

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|---|---|---|---|---|---|---|---|---|---|---|
| | Ryfylkefjordene | | | | | | | | | |
| 113710 16 | Uppsahlholmen<br>I sjøen sør for Uppsahlholmen. | 59 08.1166<br>005 53.6713 | FR | 6.0 | HIB på stang<br>7.8 | 1 | 1.2 | R | 0.0 - 360.0 | Rundtlysende |


**PAPER CHARTS**
The position of the installation in narrow areas does not allow NHS to use space consuming symbols for cartographic depiction.
On land without a light installation the HIB is printed in the NO paper charts using a black position circle and a yellow P63, B-478.2 symbol. Red INT symbol is not used due to the density of other information.
The black centre position circle is replaced by the symbol for the actual AtoN, eg a light star or a beacon symbol as required.

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| **B-478** | **VARIOUS SPECIAL FORMS OF LIGHTING** |
| **B-478.1** | **Not currently used** |
| **B-478.2** | **Floodlighting** of a structure (eg a pier, pier-head lighthouse) or a danger close to navigable water, should be indicated by the symbol:<br>or **P63**<br>The symbol must be in magenta, or yellow/orange on 'multicoloured' charts. Alternatively it may be indicated by the legend '(illuminated)', the **international abbreviation** '(illum)', or equivalent, against the structure or feature being lit, on the appropriate side if known.<br>Exceptionally on very large scale charts, if it is required to chart the actual floodlight, this should be by means of a small position circle and the legend 'Floodlight', or equivalent. |

**Conclusions**
From a Norwegian point of view the specifications in INT 1 and S-4 are fully covering this object.