**NIPWG 07-21.2**

**Paper for Consideration by NIPWG**

**Development of Harbour Infrastructure Product Specification**

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| ***Submitted by:*** | IHMA |
| ***Executive Summary:*** | Introduction of IALA Guideline G1143 |
| ***Related Documents:*** | S-100, S-101, S-125, S-201 |
| ***Related Projects:*** | Potential Harbour Infrastructure Product Specification |

Need to address identification of:

- Terminal
- Berth
- Berth position

from perspective of end user.

1) Navigational safety

Resolution A.893(21) re. “Guidelines for Voyage Planning”: a detailed plan should cover the entire voyage, from berth to berth.
The importance of this activity is highlighted by the fact that most accidents happen between pilot boarding place and berth. Captains complain that this is impossible if they do not have an understanding where the berth is.
Certainly in the tanker and bulk sector a ship is first nominated to a terminal. Later, when the ship is approaching port, the terminal advises the berth, and finally, even after the pilot has boarded, the berth position is known. Having a correct understanding of all 3 of them provides more comfort for safe port and safe berth assurance and planning.

Today pilots, VTS and Harbour Masters use their own ENC’s, with additional information regarding e.g. terminals, berths, berth positions and soundings. This results in less effective collaboration between bridge team (which can only use the authorized ENC of the National Hydrographic Office) and all other parties. Having positions of terminals, berths and berth positions available to the National Hydrographic Office will bring an authorized ENC for all stakeholders a step more closer.

2) Mooring safety

Having a correct understanding of the berthing position will allow a proper pre-planning of the mooring arrangements, e.g. the correct position of spring lines and breast lines. Today most accidents are related to mooring, and pre-planning of these operations is key to minimize the number of accidents.

This will even improve if, after identification of terminal, berth and berth positions, the next step forward can be made by identification of specifications per mooring facility (e.g. Safe Working Load, bollard or quick release hook etc.)

3) Environment – optimization of speed

For optimization of speed it is key to understand which terminal offers which berth and berth position to allow all stakeholders to understand when this berth position will become available, allowing the incoming ship to adjust speed.
Impact on an average size container ship, sailing with an average draught and speed is 23,1% less bunker consumption. Based on an average delay of 3 hours, on a voyage of 200 nautical Miles, and communicated 8 hours before arrival (versus at first Calling In Point).

4) Environment – optimization of draught

For optimization of draught it is key to understand what the berth position of the ship will be. E.g. a container berth may be 3000 meters long, having different berthing pockets with different depths.
Impact on an average size container ship, sailing with an average draught which has been optimized with 0,5 meter is 6,7% less bunker consumption per TEU.

5) Commercial – optimization of speed

Even on a short voyage of 205,8 nautical Mile, with a saving of 23,1% and an average price per Ton HFO of 400 US$, the impact is 6.700 US$ per port call.

6) Commercial – optimization of draught

A large tanker (VLCC), bulker or container ship which can have 15 centimetre more draught can carry 2.250 Ton more cargo.
Profit per ton oil: 22,2 US$ (price difference between buying and selling), result 49.950 US$
Profit per ton grain: 35 US$ (average price, depending on world economics), result 78.750$
Profit per ton containers: 60 US$ (average price, depending on world economics), result 135.000 US$

7) Indirect impacts

The benefits of using standard identifiers for terminals, berths and berth positions are valid for all parties. But how this translates in dollars varies per party. E.g. the impact for parties who invest a lot in collecting data to keep their port data bases up to date is significant (e.g. trading floors).
The benefits of being able to connect to the supply chain industry by using same identifiers has not been calculated. However, it is an IMO / EU starting point to connect the maritime industry to the supply chain industry, recognizing the port is a major a bottle neck in the end to end supply chain.

**Action Required of NIPWG**
The NIPWG is invited to:

- Take note of the above,
- Consider the information for the development of the harbour infrastructure product specification description.