Approach Hvide Sande:

The entrance of Hvide Sande Harbour directly faces the North Sea. The entrance to the harbour is protected by two breakwaters.

The water depth at the entrance is 6,0 meters in the leading line. The entry is marked by a leading line with white flash every two seconds.

Note that the leading line passes through a point that has a center approx. 9 meters south of the midpoint between the outermost piers.

The difference between mean HW and mean LW water is abt. 0.6 meters.

About 300 meters from the breakwaters, a transverse current can strongly increase, especially from northerly direction. Good speed must be maintained when passing the breakwaters.

Special attention must be made for ships and vessels' increased draft due to high seas and swells.

In order to reduce seas and swells in the harbor channel, the harbour master can stop outflow of water from the "Ringkoebing Fjord".

Maximum recommended draft to the port is determined by the minimum measured depth specified in the latest sounding chart minus 1 meter at sea level = 0 DVR 90. Maximum draft is 6,0 meters at water level = 0 DVR 90. Attention to latest received soundings charts shall be taking, e.g. if strong wind has occurred after soundings has been carried out.

For ships with length \ge 90 meters please refer to Report No.: 111-20935 issued by Force Technology. (insert link to report) <u>Note that used UKC = 2.0 meter.</u>

For further information, contact the harbour master on tel. +45 97 31 16 33 (24 hours a day).

Pilotage performance:

Pilotage is usually carried out between a position 1,5 nm. west of the entrance and the harbour or vice versa.

Pilot boarding is performed at maximum 10 m/s from westerly directions corresponding to a mean wave height / swell of 2.0 meters.

Westerly wind directions = wind coming from directions: N - NW - W - SW - S.

Visibility should generally be minimum 500 meters.

Maximum size of ships to the West Harbour, Pier 110 and 111 is 140 meters. Maximum width will be assessed according to weather conditions and the ship's maneuverability.

The following are recommendations of pilotage for vessels of more than 125 meters in length, as well as barges, including barges or other floating equipment without own propulsion and whose **total length** incl. tugs and towing lines are more than 125 meters in length:

- Maximum wind speed 7 m/s from westerly directions.
- Maximum wind speed 5 m/s from westerly directions. for vessels with large surface / deckload / upright equipment.
- Maximum mean wave height / swell 1.0 meter.
- Maximum cross-flow current 0.5 knots measured outside and near the breakwaters.
- Reliable current data must continuously be available online.
- The breakwaters must be sufficiently illuminated.
- Only ASD or Voith tugs to be used as stern connected stopping tugs.
- Stern connected stopping tugs must have a minimum of 30 tons pull.

Towing operations: refer to report number: 118-23584 issued by Force Technology (insert link to report).

Please note that in the report is used ASD tugs with 60 tons pull and with a <u>draft of 4.5</u> meters.

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