

A Maiden Chart for a Maiden Voyage

Saturday, 10 March, 2007, 12 noon - four and a half months after the Norwegian Pearl had left the Meyer Werft shipyard in Papenburg, Germany, the all new AIDAdiva was about to start her transit to the North Sea.



Fig 1: AIDAdiva at the pier of the Meyer Werft shipyard in Papenburg

Unlike the previous ships the AIDAdiva sailed during daylight, watched by thousands of people along the narrow and twisted Ems River. Stern first and assisted by two tugs she passed all intricate passages without any problems.



Fig 2 and 3: AIDAdiva approaching / passing the Jann-Berghaus-Bridge near Leer

Figures 2 and 3 show the approach to and passage through the Jann-Berghaus-Bridge near the town of Leer.

Normally this is the narrowest point of passage on the way to the North Sea. However, AIDAdiva is different from the other ships built at the Meyer Werft shipyard. She is about 50m shorter than the other ships which went down the Ems River. Thus she could pass the lock to Emden, a German port on the Ems River, instead of going directly to Eemshaven. Now this lock was the narrowest point of her voyage. It meant that a special ENC of Emden port with a scale similar to the ENCs of the Ems River (including the most recent survey data) had to be produced beforehand.

A Tailor-Made ENC of Emden Port

All land feature data was provided by N-Ports, Emden. To create an ENC the Feature Manipulation Engine (FME) from Safe Software was used to convert all relevant features directly into the SevenCs working format 7CB (FME S-57 writer). The preprocessing was carried out using the proven products of the ENC Tools Family, ENC Designer, ENC Optimizer and ENC Analyzer. Figure 4 shows the results.



Fig. 4: ENC containing land features

The next step was the conversion of the bathymetric survey data into the ENC format. The survey data was also provided by N-Ports, Emden. However, it was in a format different from that of the land feature data.

This process was much more complex than converting the land features. All depth contours had to be created before the bathymetric survey areas could be inserted into the ENC. Digital tools from Helical company were used to create depth contours at 1m intervals, and to export the results directly into the 7CB format.

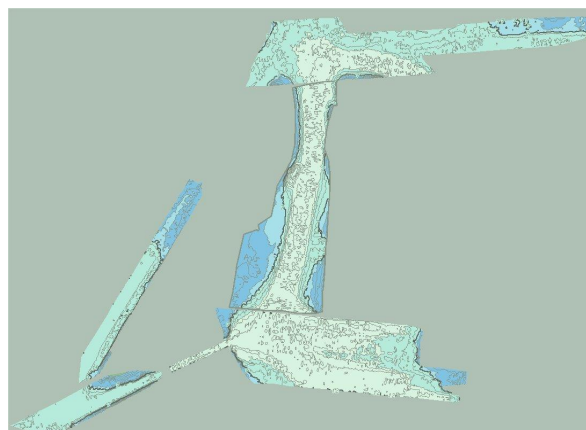


Fig. 5: Bathymetric survey areas

An ENC Designer tool “make skin of the earth” was then used for the automatic creation of Group 1 objects (Fig 5 shows depth areas only). The depth area values were determined utilising the values of the previously created depth contours.

Finally, ENC Designer was used to insert the bathymetric survey areas into the ENC. Figure 6 shows the new ENC ready for use. Probably this is the first ever ENC with depth information inside the lock area.

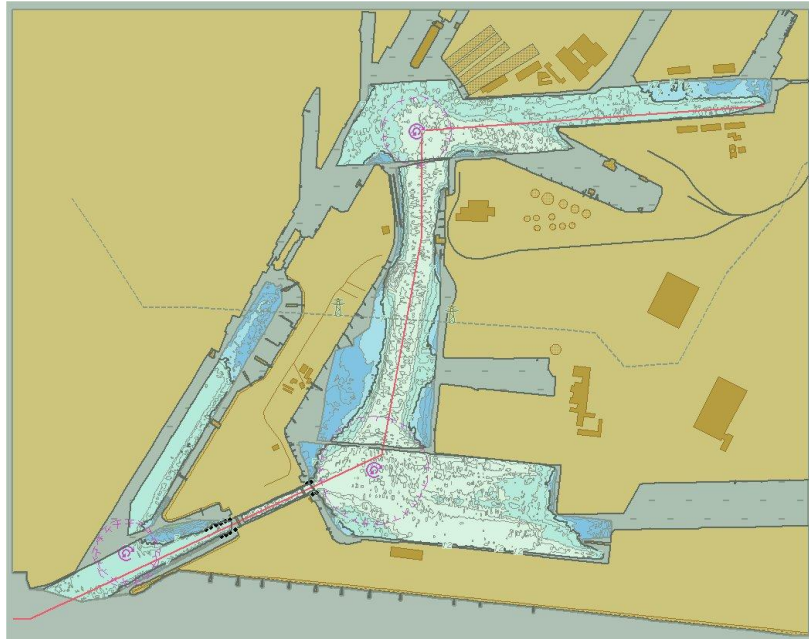


Fig. 6: The first ENC of the port of Emden in 1:5 000 scale (© A. Freytag)

The red line indicates the centre line of the transit channel, as used by the pilots. All task-specific information, e.g. the deviation (in decimetres) of the ship from this line, was shown on a conning display. Sailing inside the harbour was not the challenge – it was rather the approach to the Emden lock (see Fig. 7) after the first short sea trials in the North Sea. Of course, the approach happened late in the evening when it was already dark



Fig. 7: Emden lock

Two hours later AIDAdiva was moored at the Marine Kai in Emden.

Not only was the ENC of Emden the first ever tailor-made ENC – a paper chart of Emden port based on this ENC was the first of its kind, too.

A Tailor-Made Paper Chart of Emden Port

An advanced version of ENC Cartographer, the newest member of the ENC Tools family (developed by HSA, Australia), had been released just two weeks before the AIDAdiva's transit. It was a perfect opportunity to provide the Ems pilots with a paper chart version of the ENC as well.

With generous help from HSA in Australia the author was able to create a tailor-made paper chart of Emden port. Due to the new user-friendly interface of ENC Cartographer creating a paper chart based on an ENC was quick and easy.

The software sets the basics like borders, graduation, grids and linear scales automatically. Only text information needed to be added to this chart. After finishing the text placement a pdf file was created directly from ENC Cartographer and printed (see Fig. 8).

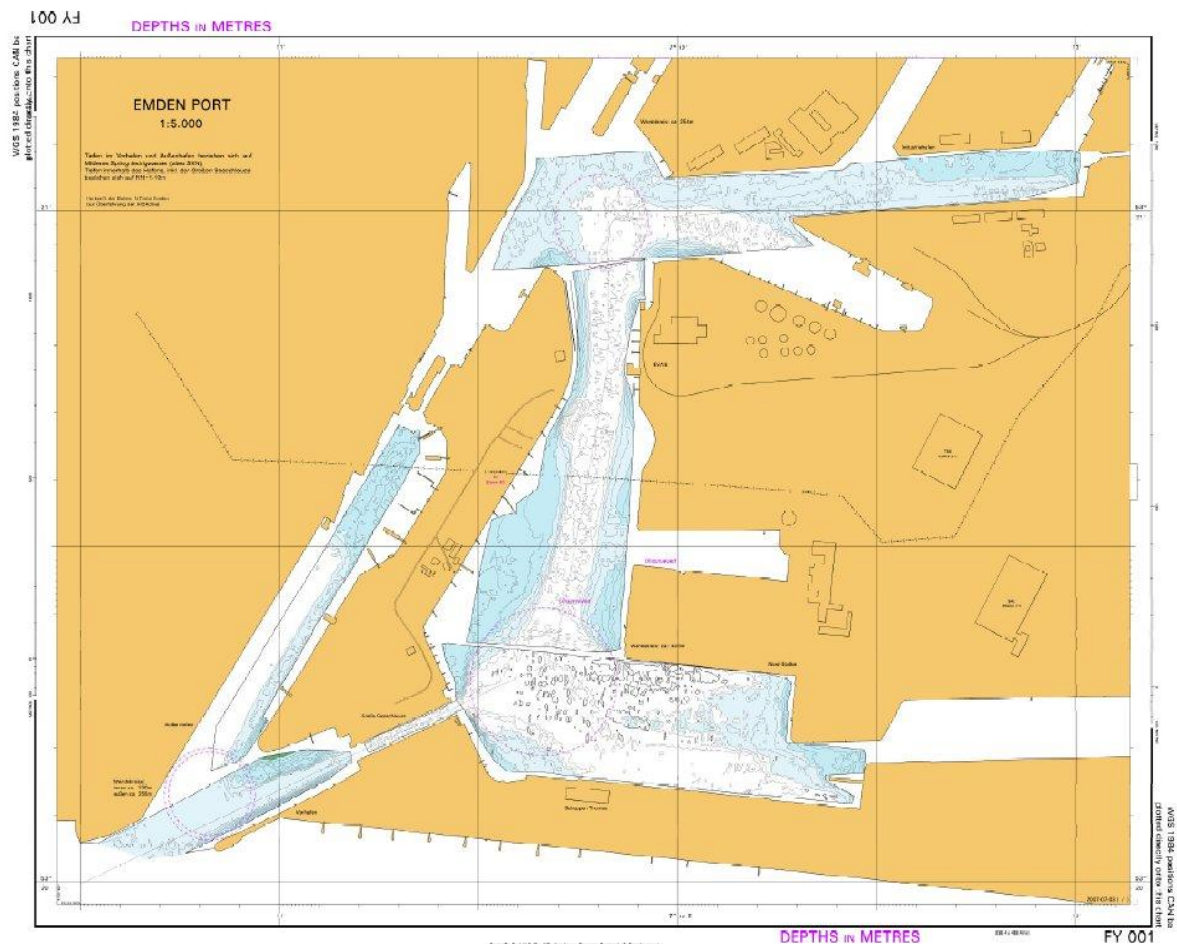


Fig. 8: FY001 – a tailor-made paper chart of Emden port (© A. Freytag)

The Ems pilots were more than happy with this paper chart of Emden port. It offered a detailed view of the depth inside the port and the lock and is a perfect basis for further development.

Text and Photographs by Anette Freytag