



Touring the Kieler Hansekogge

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In co-operation with Haro Rösing
Touring the “Kieler Hansekogge”
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Preliminary note

Since 1991, the cog ship has been sailing on the Baltic Sea and awoken a big interest.

In the winter of '93-'94 this pamphlet was written to provide our visitors with some information. Several notice boards were made to give on the spot information. A few pictures are inserted, for better visualisation.

1.1 General notes

The ship is a replica of a cog ship from 1380 that was found in 1962 near Bremen in the Weser river.

Dimensions:

- Length over all: 23,23m
- Width: 7,78m
- Draught: 2,00m
- Length of Mast: 24,00m
- Sail area: 190m²

Construction materia:

- Rumpf Oak (56m³)
- Nails (hand forged) V4A (11000)
- Mast Larch

Weight:

- Hull: 90t
- Wood 60t
- Ballast (rocks) 26t

Motor: 2 Volvo Penta auf Schottel Pumpjet
(2 x 90kw)

Construction: 1987-91
Verein Jugend in Arbeit e. V.
(a working youth private organisation)
Responsible

organiser: Förderverein Historische Hansekogge Kiel e.V.
(supporting organisation)
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1.2 The Hanse and its cog ships

The cog ship underwent a long development, changing from a mud-land vessel to a seagoing vessel. For over 200 years, it was the porter of the Hanse (13th and 14th century).

The main sailing areas were the North Sea and the Baltic Sea.

The Hanse was trading union of German and Dutch cities. Not only harbour towns but also interior cities belonged to it. The cog ships transported finished goods, like fabric and ironware, as well as wine, beer and salt – very important – to northern and eastern Europe. From those regions they traded their goods for corn, wood, pitch, flax, fur and fish. The Hanse maintained offices in trading cities like London, Bergen and Norwgorog, in today's Estonia. These offices sold the shipment goods and provided the return-shipment to ensure a short stay in the harbour. No ships sailed in the winter.



Abb. 1: The Hansekogge on the Baltic Sea

1.3 The Original Das Original

The original cog ship was built in 1380 at the Weser river. Shortly before completion, the new built ship drifted away and sunk, probably because of a high tide. In October of 1962 the wreck was discovered while constructing a new harbour. From 1972 to 1979 the parts were salvaged and rebuilt in the Bremerhaven Naval Museum. Since 1979, visitors have viewed the ship there.



Abb. 2: The cog ship from Bremen

1.4 The Replica

The replica was built as close to the original as possible. Some parts that haven't been found, like the mast and the rest of the rigging, had to be reconstructed. A few parts had to be modified for security reasons and for smoother sailing (e.g. the deck was waterproofed). The reconstructed parts were mainly designed using old town seals and the experiences from replicating Viking boats.

The modifications that were made for security reasons and suitability were constructed so they could be recognized as modifications. Such modifications are the visible plywood below deck; the modern toilet and cot beds are also noticeable novelties that wouldn't have earlier existed.

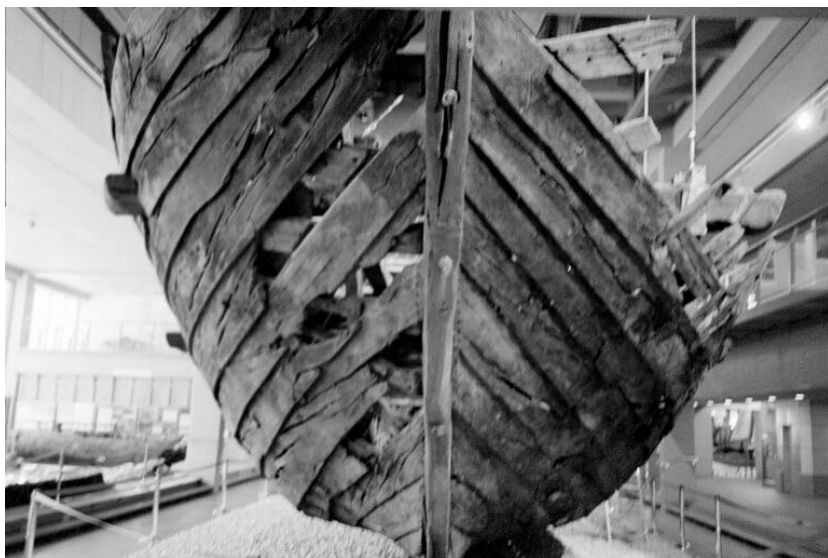


Abb. 3+4: The cog ship from Bremen



Abb. 5+6: The cog ship from Bremen

2 Description of the ship

2.1 The Hull

The hull of the original cog ship is preserved up to the castle on the starboard side; only one- third of the hull is preserved on the port side. Not a lot of the railing of the castle has been found. The hull was planked as known with cog ships- the bottom is carvel planked, the rest is clinker planked. Typical for cog ships is a straight stem and sternpost.

To increase stability, the cog ship has 5 cross beams, with ends extending outward from the hull. The joints are made with either nails or with wooden dowels.

The hull is copied as exactly as possible and completed symmetrically.

Even the small asymmetry of the original ship is found in the replica.

About 56 m³ oak and 11.000 nails were used for the replica.



Abb. 7: De fortes poutres dans la proue

2.2 The Rigging

The rigging is completely reconstructed. The original was found without a mast and the rigging. Only the lanyard existed, where the bottom ends of the shrouds were fixed.

The reconstruction had to be based on illustrations of old seals. The rigging was optimised with the help of the collected experience from the Danes, who had sailed in reconstructed Viking boats.

2.3 The mast

With the permission of the Danish Forest Administration, a 30 m larch was cut down in the Jaegersborgskov, a forest north of Copenhagen, especially planted for such purposes.

The mast has a height of 24 m. The cross atop the mast is a symbol of Christian seafaring and peaceful intentions.

The vane wears the colours of the Hanse, which are found in many Hanse city crests.

2.4 The sail

The sail consists of a mainsail and three bonnets, each fixable to the foot of the preceding sail. The mainsail has an area of 100 m²; each bonnet has an area of 33 m². The whole sail area is almost a square of 200 m². Depending on the weather, the sail can be reduced in half, by removing the bonnets.

2.5 The Rudder

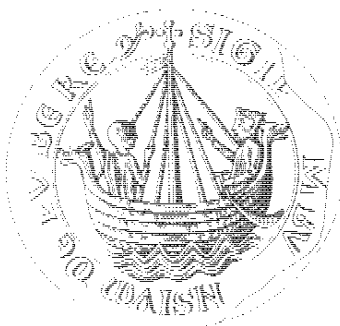
Like many ships today, the rudder of the cog ship is mounted on the sternpost. In former times, this was a huge improvement; earlier, the rudder was mounted at the side of the hull (as known with viking boats). The manoeuvrability was much better with a stern rudder. The rudder irons were found, but not the rudder blade. Its reconstruction was possible due to the rudder irons and illustrations of old town seals. The rudder is moved with a heavy tiller. Normally a single man can handle it; only in a heavy sea or a strong wind he does need some help. The helmsman has no possibility to look where he is steering. He gets the instructions from the men on the castle. From his position, it is only possible to see the sail and nowadays a steering compass.



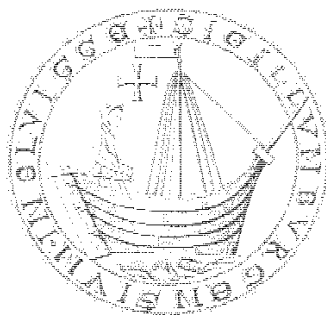
Abb.8: HELMSMAN WITH COMPANION



Abb. 9: The rudder



Seal of Lübeck 1226 with side rudder



Seal of Elbing 1242 with stern rudder

2.6 The Deck planks

In the original ship the deck planks were not fastened by nails. With today's knowledge the planks were laid loosely, so that they can be removed for loading. That means that all water that came on deck by rain or sea, accumulated in the bilge (the lowest area on board).

Therefore, the load had to be protected from moisture, e.g. by packaging.

In the replica, the deck is connected by nails and sealed with plywood. Even here, water comes from the deck into the bilge, so the water has to be pumped out of the boat after a heavy rainfall.



Abb. 12: The deck is sealed

2.7 The windlass

The windlass is a horizontal winch, built out of the trunk of an oak. Eight persons are needed to turn it with the help of capstan bars. Therefore, 4 capstan bars are inserted on each side of the windlass, and a quarter turn is made. Then, the capstan bars on the stern side and afterwards the ones on the front side of the windlass are removed and inserted in the lower-most holes. The next quarter turn can be executed.

In this way, it is possible to lift heavy objects. Measurements using a spring balance showed that a normal team can lift 2,5 t. In this ship, the yard is lifted with the help of the windlass. In former times, the windlass definitely was a huge help while loading or unloading the ships.



Abb. 13+14: The windlass

2.8 The Castle

The castle was built to defend the ship. In former times, pirates like Störtebecker and other greedy people attacked the merchant ships. Since it was easier to fight from above rather than on one level, high defense platforms were built.



Abb. 15+16: The castle

2.9 The capstan

The capstan is used to haul the cordage. The rope (e.g. a sheet or the anchor warp) is wound therefore a couple of times around the capstan. Then, up to six capstan bars can be inserted into the holes of the capstan. With the capstan bars, one can turn the capstan and haul the rope.



Abb. 17: The capstan

2.10 The toilet

This is the oldest recorded ship's toilet ever found.



Abb. 18: The original

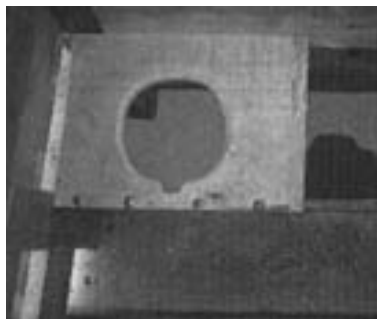


Abb. 19: The replica

2.11 The Ballast

The stones seen here are ballast. With these stones, the centre of gravity is as low as possible and the ship lies safe in the water. In our ship it is secured against slipping for security reasons. The ballast was removed before a ship was loaded and replaced by the heaviest parts of the cargo. After unloading the cargo, new ballast had to be loaded.



Abb. 20: The ballast before layering the floor

2.12 The Hold

In former times, the whole area beneath the deck was used as the hold. It was filled with cargo right up to the top. In this ship, it was carefully designed for its purpose. The most important changes were the waterproof deck and the even board, built to secure the ballast from slipping. The other modifications to the original were built with a different kind of wood.



Abb. 21: The hold of the replica while on a trip

2.13 The Motor

In the first few years this ship sailed without a motor. It was accompanied by an old smack called “Gotland”. The smack helped with departing and docking and in some other situations when it was necessary to be towed.

Schottel pump jets were used to keep the influence of the motor on the sailing capabilities as low as possible. They look like a manhole cover and lay flush with the floor.

The jet pumps the water in from the middle and propels it out to the side. The Schottel pump jet system has a 360° range of motion; thus, allowing the ship to be propelled in all directions, including transverse. It is driven by two 6-cylinder Volvo Penta Motors (a 90kw).



Abb. 22: The pump jet seen from below

3 Life and Work on Board

3.1 The Navigation

Cog ships were mainly built for coastal navigation. When this ship was built (at the end of the 14th century) neither sea charts nor compasses probably existed. Coastal landmarks like churches, windmills and outstanding formations guided the sailors. Simple buoys as well as some lighthouses with open fires marked dangerous areas in navigable waters. Otherwise, the lead was the most important helper. At the bottom end, there was a tallow filled cavity, used to take ground samples. Last but not least, the skipper and the helmsman took advantage of their lifelong experience, since cog ships mainly sailed within the same regions. Literate sailors used written sailing instructions. With the right wind, cog ships could sail up to seven knots, as we have tested. However, it was not possible to beat to windward.

3.2 The Galley

In this cog ship, the galley is housed on the port side underneath the castle. In former times, probably the helmsman or a passenger slept here. Certainly there was no gas stove like on our boat. We don't know anything about the cooking habits in these days. Food supply lists were handed down over generations, so we are sure that the sailors had warm meals on board.

The food consisted mainly of porridge, leguminous plants, bread, salted meat and definitely fish, which they caught on the way. They transported livestock as well.

Cog ships didn't spend as much time at sea as the ships in the following centuries. That's why they never had any problems with diseases like scurvy (a lack of vitamin C), one of the main illnesses of former sailors.

4 Further information about the „ Hansekogge“



“ Die Hansekogge von 1380 “

The book describes the finding, reconstruction and preservation of the Cog ship from 1380.



“ Die Kieler Hansekogge “

A book about the construction of the “Kieler Hansekogge”.

4.1 Sister ships

The cog ship from 1380 has not only been the basis for the construction of the “Kieler Hansekogge”. The following ships are also replicas of the Hansekogge:

“Ubena von Bremen“ from Bremerhaven, finished 1991

“Roland von Bremen“ from Bremen, finished 2000

4.2 Contact information

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