Late Medieval Pottery on Dutch Shipwrecks and a Well-Dated Inventory of the Early 15th Century

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SUMMARY

This paper comprises an overview and comparison of the pottery and other artefacts found on board late medieval shipwrecks, excavated in the reclaimed land of the former inland-sea in the centre of the Netherlands¹. It describes a well-dated assemblage of artefacts found in a small cog wrecked in the early 15th century, and the inventory of the standard galley utensils, cooking-pots and pans used on board late medieval ships, and it briefly outlines the difficulties of recording these objects according to the type of classification used for 19th-century cargo-vessels of the Zuider Zee².

INTRODUCTION

Until the end of the 1960s, most of the information about the shape and construction of late medieval ships was deduced from city-seals, miniatures, (wall-) paintings and brief written sources. As to inventories there was hardly any information available.

The Centre for Ship Archaeology (C.S.A.) of the State Service for Archaeological Investigations in the Netherlands (R.O.B.) has been excavating shipwrecks in the province of Flevoland (reclaimed land of the former Zuider Zee: Fig. 1) since 1942. At the time of writing, the remains of 435 ships dating from the 13th to the end of the 19th century have been registered, some seventy of which date to before 1600, the period in which the Zuider Zee was a freshwater lake.

A large number of these wrecks still contained an artefactual inventory and/or parts of the equipment, and sometimes remnants of the cargo. From an archaeological view-point there has been little investigation of the bulk and composition of the equipment and inventories on board ships. In the case of late medieval shipwrecks there has been little opportunity for this because the number of wrecks investigated and published is very small, and only a few had complete or near-complete inventories.

SHIP TYPES

Several medieval ships of different types have been found in the Netherlands, among them ten Hanseatic cogs. Most of these are small, but some remains are of vessels comparable in size to the famous Bremen cog, which was built in 1380, or those recorded in documentary sources (Vlierman in press, a; Heinsius 1956, 92). The submerged remains of such a vessel measuring some 24-25 m long have been excavated in the Noordoostpolder in 1985. It was wrecked in the second half of the 13th century and is the first archaeological example of a cog of this size for this early period. A more complete cog approximately 22 m in length was found on lot OZ 36 in Southern Flevoland in 1981, and excavated in 1983 (Pl. 2)³.

The other cogs which have been investigated provide an interesting range of dimensions and details of construction such as mast-steps and cross-beams; the most important information has been collected by Reinders (1985a). Three small cogs are published (Modderman 1945, 75-81; Reinders *et al.* 1980, 7-15; Van de Moortel 1991), of which two carried a complete artefactual inventory (Pl. 1). The oldest cog so far was probably built in the middle of the 13th century, while the youngest was wrecked in the second quarter of the 15th century (Vlierman 1992a, 1992b and in press a; Vlierman & Koldeweij 1993, 323-333).

Another group of cargo-vessels has been dated to between the early 15th century and 1600. An inland (river)boat measuring almost 16 m in length, 2.3 m in width and having a freeboard of 60 cm was found near the village of Dronten in 1963, and was excavated in 1971 (Pl. 3). Around the second maststep was a cluster of artefacts: two stoneware jugs, two adzes, an axe, an auger, a pair of pincers, a caulking-iron, a 'kidneydagger', small knives, some spare nails and sintels (iron caulking-clamps) and a chain. Eleven silver coins of the cities of Kampen and Groningen, the dioceses of Utrecht and Munster and from Flanders and France provide the best information for the date of wreck, which occurred c. 1460 (Reinders et al. 1980, 17-29; Vlierman 1980).

A more or less comparable, but unknown and probably typical ship-type for the southwest part of the Netherlands, was saved by low tide in the Oosterschelde in the province of Zeeland in 1984. It has a dendrochronological date of post-1374, but was probably built in the 15th century. There may be a connection between the vessel and the medieval village of Nieuwlande, some 300 m north of the find-spot, which was destroyed by the sea in the early 16th century (Vlierman in press b).

Several other flat-bottomed cargo-vessels, most of them measuring 16-20 m in length and c. 4 m in width, have been excavated in the past fifty years. We can recognize at least three or four types, one of which may be related to the historical name 'pot', a late medieval ship-type originating in the northwest of the province of Overijssel and neighbouring regions.

Over thirty so-called '*waterschepen*' have been found. There are two types: clinker-built vessels measuring 16 m in length, dating to before the 16th century, and carvel-built vessels measuring some 20 m in length, in use from the middle of the 16th century (Pl. 4).

The 'waterschip' was the most characteristic workingvessel on the Zuider Zee between the 14th and the middle of the 19th century and except for the modification in building (technique and dimension), remained almost unchanged throughout that period. It was also multifunctional and used as transporter of living fish ('koopschuit'), as a fishing boat, as a warship in the Eighty Years War (1568-1648) and as a tug-boat for towing the East-Indiamen of the Verenigde Oostindische Compagnie in lighters to and from Amsterdam over the shallow waters (Pampus) in the Zuider Zee (Reinders et al. 1978, 29-33).

A remarkable shipwreck, a three-masted sea-going vessel or warship of the second half of the 15th century and probably an example of a 'hulk' (Reinders and Oosting 1989, 118), was excavated in 1986 and 1987. It was originally at least 35 m long and had a sternpost 7 m high, an open ceiling; about 40 cm above the ceiling was an unusual and previously unknown floor of basket-work over which lay a deposit of sand and a stone-pavement. The floor was supported by light pile-work.

EQUIPMENT AND INVENTORY

To gain a better insight into the equipment and inventories on board small inland water vessels we tried to classify objects (over 700) of the late 19th-century cargo-vessel 'Lutina' by function. The main reason for this provisional classification was to facilitate comparison with the inventories of small and mediumsized vessels which sailed on the Zuider Zee. The artefacts found in a shipwreck are divided into the following categories: equipment, inventory and personal belongings, which in turn are subdivided in eleven groups. Cargo and merchandise form a further category. The general classification as a whole is as follows (Reinders 1985b):

A. Ship with standing and running rigging

B. Equipment

- 1 Ship's equipment
- 2 Working equipment
- 3 Military equipment

C. Inventory

- 4 Documents and stationary
- 5 Navigational instruments
- 6 Tools
- 7 Household effects
- 8 Kitchen utensils
- 9 Eating- and drinking gear
- 10 Victuals

D.11 Personal belongings and Skeletons

E. Cargo, Merchandise

Comparison of the inventory of an early 15th-century cog with those of four different late medieval ships of the 14th and 15th century and those of the postmedieval period have produced some interesting results (Vlierman 1992a, 13-14). These show that the usual number of objects on board more or less comparable cargo-vessels is 25-100 in the (late) medieval period, 150-300 in the 18th and 19th century, increasing rapidly to 500 or more in the second half of the 19th century; the 18th- and 19th-century inventories can in principle be classified according to the eleven categories applied to the objects of the '*Lutina*' and '*De Zeehond*', wrecked in 1888 and 1886 respectively (Zwiers and Vlierman 1988; Oosting and Vlierman 1990; McLaughlin-Neyland and Neyland, in press).

For the medieval period this classification presents some difficulties, because of the smaller number of objects and their multifunctional nature. Apart from the ship and working equipment, there are three groups of objects:

- objects associated with cooking, eating and drinking
- tools (maintenance of the ship)
- personal belongings and weaponry

COOKING, EATING AND DRINKING

The hearth

To allow cooking, roasting and frying on board, medieval ships carried a hearth. This comprised a square wooden box measuring 80×80 cm and 20 cm in height, filled with boulder-clay (in the 13th century) or later with sand, and topped by bricks or tiles (Col. Pl. 3d). In the late medieval period the box was placed

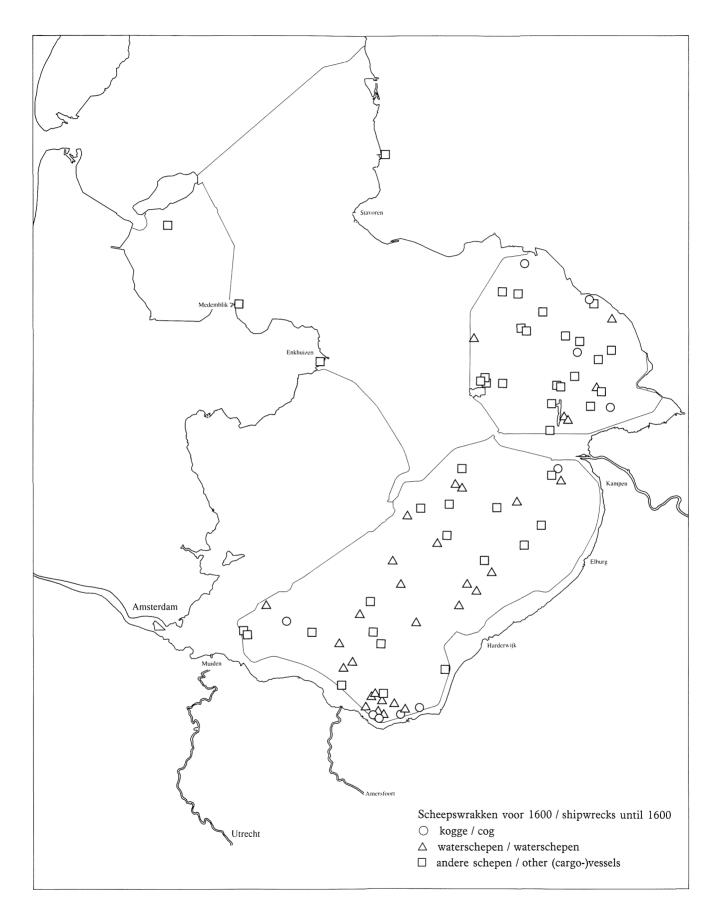
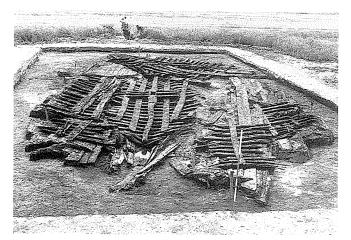


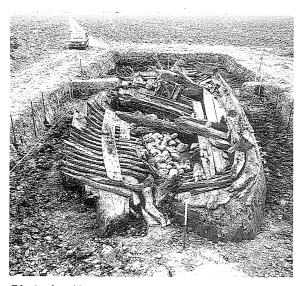
Fig. 1. Late medieval shipwreck sites in the ZuiderZee region.



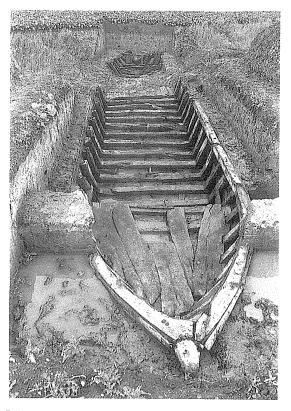
Pl. 1. The ceramics, a brick and a floor-tile from the hearth, and a split-pin of antler (for rope-splicing) found on board a cog wrecked c. 1325, from lot N 5 (Reinders et al. 1980).



Pl. 2. A late 13th-/early 14th-century cog on lot OZ 36 in situ (viewed from the stern).

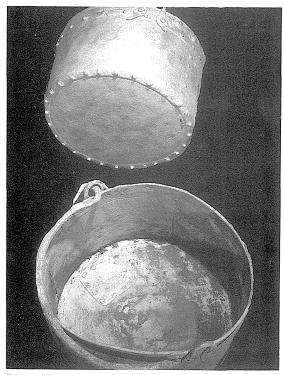


Pl. 4. A mid-16th century carvel-built 'waterschip' on lot W 10, during excavation in 1975 (Reinders et al. 1978).

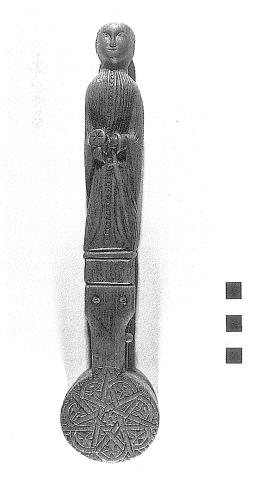


Pl. 3. An inland (river)boat wrecked c. 1460, from lot K73/74 near Dronten (viewed from the bow; Reinders et al. 1980).

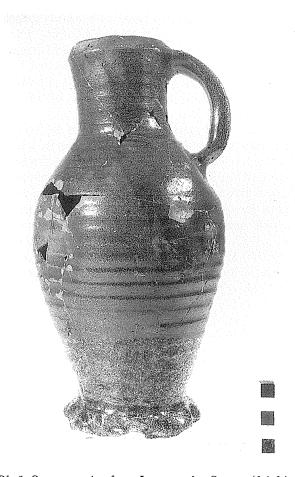
MEDIEVAL POTTERY ON DUTCH SHIPWRECKS



Pl. 5. Two examples of the standard copper kettle found on board late medieval ships, from a late 16th-century 'waterschip' on lot U 86.



Pl. 7. The early 15th-century 'leper's' clapper.



Pl. 6. Stoneware jug from Langerwehe. Storage/drinking equipment from the Almere cog, wrecked between 1420 and 1440.

amidships behind the mast (the most stable place in a ship). From the end of the 15th century the hearth was gradually moved to the fore-part or stern of cargo-vessels, and from the end of the 16th century it was nailed to the frames. The crews cooked their meals on small open fires of peat and placed the kettle or pots on a trivet or old bricks. To keep the fire going they had fire-tongs and flint and steel. This kind of fireplace and method of use did not change until about 1600 (Vlierman 1992c, 51-52).

Standard galley utensils/cooking-pots

We can speak of standard galley utensils in the late medieval period. Depending on the dimensions of ship and crew (for example two or three people), at least one copper kettle is always found. Its shape is cylindrical with a flat to slightly convex bottom and it is made of plates which are riveted together with small rolled copper rivets. It has two vertical lugs of copper and a handle of iron. The dimensions are mostly 130-170 mm high and 220-240 mm in diameter, providing a capacity of 6-7 litres (Pl. 5). This type of kettle is the only one found in vessels of the period 1300-1650, but was sometimes still used on board 18th-century vessels. Another standard object is the well-known bronze cooking-pot, with three little feet, two vertical lugs and iron handle. The capacity is generally 3-5 litres. This pot was also common in the late medieval period and remained in use until at least the middle of the 18th century (*ibid.* 55-56).

Engravings and paintings often depict kettles and bronze cooking-pots hanging above the fire in houses. Witteveen (1992, 17) makes a distinction between the meaning of the Dutch names ketel and teil, based on historical information in cookery-books, A ketel never stood in the open fire, but was always hanging above it. "... ende water opt vier (vuur) ghehangen in een ketel..." ("... and hang water above the fire in a kettle...") or "... doeghet van den rooster ende werpet in den ketele die daer over hangt" ("... take it from the grill and throw in the kettle hanging above . . ."). A teil is not as big as the ketel, has feet and was placed in the open fire. In historical sources concerning the inventories of small ships we always read ketel and never the name teil, "I Coopere Vleesketel met zijn Deksel, 2 dito Visketels" ("1 copper meat-kettle and its lid, 2 ditto fish-kettles"). On board, the ketel always stood directly in the fire on a trivet. It was certainly too dangerous to hang the relatively small and light kettles above the fire, even when the ship was ashore (Vlierman 1992c, 52 and 56; Oosting & Vlierman 1993, 80).

In old inventory-lists metal kettles and cooking-pots were always described by name, on account of their value. For the ceramic galley utensils one generally reads of 'some earthenware'. Therefore it is interesting that several complete sets of pots from the galley have been found, such as that in the cargo-vessel excavated on lot LZ 1 in 1990 (Col. Pl. 4a). This shows us what a crew of two or three people needed for the daily preparation of food and liquors, and their storage.

The most common form is the ordinary tripod cooking pot in red earthenware. These vary in size; at least one or two will have a capacity of 4-5 litres, while between one and four smaller ones (sometimes of different shapes) have a capacity of 0.25-1.5 litres. Not all have burning marks. Those found in late 15th/ early 16th-century assemblages typically have a pearshaped profile (Col. Pl. 4d) with heavy lower body and narrow neck; they are very stable and were clearly useful on board (Vlierman 1992c, 56). For frying, at least one of the well-known types of flat redware pan is found, sometimes with feet. From the 15th century onwards a taller version with a bent handle (a so-called 'kromsteert') and one or two small handled bowls with tripod feet are occasionally found. Small lugged bowls with footrings first appear in the early 16th century.

Earthenware plates are found on board from c. 1500, usually one or two, with diameters up to 400 mm, probably used as dishes. Some bear light burning

marks on their undersides. They were probably used for serving and for so-called "stooven tusschen twee scotelen" (stewing between two dishes: Witteveen 1992, 19), a special way of preparing food in that time. Alongside these dishes, small redware plates for eating off appear during the first half of the 16th century.

For transporting and storing liquids on board small vessels or on short journeys some ships carried a redware jug or jar, and always two or more stoneware jugs of different dimensions and/or type. Most also carried a wooden barrel with a bronze spigot for drinking-water. Products from Langerwehe, Raeren and Siegburg are very common on 15th- and 16th-century ships. From the end of the 16th century 'Bartmann' and stoneware jugs with stamped relief-decoration occur.

The ceramics on board the vessels of the Zuider Zee are generally second- or third-class products, and seldom first-class (Vlierman 1990, 9; Hacquebord & Vlierman 1991, 11). Considering the status of the skippers, this is only to be expected, as most of them belonged to the poorest part of the population.

THE INVENTORY OF A SMALL COG

The vessel

In the new city of Almere in the southwest of Flevoland, about 16 km east of Amsterdam, a more or less complete small cog was excavated in April 1986⁴. A paper reconstruction of the vessel showed that it was orginally approximately 16 m long by 4 m wide, with a stern 2.7 m high⁵. The publication of this cog from Almere will present the inventory, which will be compared with those of four other small cogs and related vessels of the 14th and 15th century (Hocker and Vlierman, in preparation).

Ship- and working-equipment

Eighty-three objects were found on board the Almere cog (Vlierman 1992a & b); all were conserved and restored at Ketelhaven. These included a well-preserved brace-block which would have served the square sail as part of the running rigging of the vessel⁶. Some rope and several spare nails and sintels also formed part of the ship's equipment. The working equipment was represented by an iron spade.

Ceramics (cooking, eating and drinking utensils)

When the cog sank, there was no fireplace on board; no fire-tongs, and neither the usual copper kettle, nor the bronze and/or redware cooking-pots and pans were found. Some worn sherds of the latter are probably from utensils used long before the wreckage, suggesting that the cog once had a fireplace. The redware sherds derive from eight vessels: three small tripod pots, the broken handles of three flat pans with or without feet, and two small tripod bowls or early plates of deep form.

For drinking and storage the crew probably relied on two stoneware jugs of the well known Langerwehe type with a capacity of 2.5 litres (Pl. 6). The incomplete one has a sherd of a comparable jug stuck to its base. The fragments of a third and smaller jug belonged to another type with a yellowish-grey sherd, possibly made in the Maas/Rijngebied. The ceramics from the cog have been published in the 'Corpus Middeleeuws Aardewerk' series (Vlierman 1992b).

Tools (maintenance of the ship)

The third group of objects are standard tools: an axe and a handle of a handsaw. The blade of the saw had completely corroded away, but we may assume that it was originally similar to that of a saw in the collection of the Nordiska Museet, Stockholm (Goodman 1964, 126, the upper example on Fig. 133).

A well-forged and very well-preserved tool is an adze with two long and narrow fasteners for the handle, unusual on board shipwrecks in Flevoland; we have yet to find a comparable medieval example. The caulkingiron is of the usual narrow type for this period, and shaped like a chisel. Another standard tool is a split-pin of antler, used for rope-splicing. In later periods iron examples are also found.

A lump of fat, the underside of which is moulded to the shape of a small pot base in which it had probably been stored, shows the imprints of a sail-needle.

Personal belongings and weaponry

This category includes the upper leather of an old ankle-shoe/boot and the remnants of an old leather shoulder-bag with turn-up, remodelled to a pouch. The engraving 'Two farmers' by Pieter Breughel the Elder shows a shoulder-bag of this type (Besançon, c. 1950). A knife and a blade of 'kidney-dagger' form are wellknown types in the 15th century. Such daggers are seen on paintings and engravings as personal weaponry (for example, 'The lost son' by Hiëronimus Bosch). The spur is an unusual find on board a ship in Flevoland. A special object is the decorated wooden clapper found in association with the leather pouch. It shows a young woman, leaning with her right hand on a sword and having an unidentified disk in the other hand (Pl. 7). Its function is unkown; it may be an instrument used in a cultic or profane context, but it could also have been a leper's clapper (Vlierman and Koldeweij 1993, 323-333) This find is, as far as we know, unique (certainly for the Netherlands).

Dating

Three coins of Gelre and Utrecht are important dating evidence for this wreck. They provide a t.p.q. of

c. 1420 and a *t.a.q.* of 1440. Coins of the Burgundian-Netherlands, a great number of which were minted after 1434, are absent, while the coins of Gelre and Utrecht no longer occur in the several large coin-finds from the Netherlands which have closing-dates of 1430-1440. We may conclude, therefore, that the cog was wrecked early in the second quarter of the 15th century. There is no contradiction between this dating and the general date ranges of the other diagnostic artefacts (Vlierman 1992b, 4, 5).

CONCLUSION

The Centre for Ship Archaeology (C.S.A.) at Ketelhaven possesses data on at least ninety late medieval ships, with parts of their equipment and inventories. Around seventy were wrecked on the former Zuider Zee, the others being sunk in one of the larger or smaller rivers in the Netherlands. The vessels which have been investigated show a great variety in type and dimensions. The first comparison of five 14thand 15th-century inventories of small cogs and related ships yields information concerning cooking, eating and drinking. In principle there was always a fireplace in the form of a square wooden box with a floor of bricks or tiles. This box would have been removable until about 1600.

Standard equipment included a small cylindrical copper kettle (with a capacity of 6-7 litres) and the well-known bronze cooking-pot. In particular, the ships' inventories inform us about the standard (and number of) redware pots and pans and stoneware jugs on board, information which is almost never described in historical sources. All the redware found so far was made in local potteries in the Low Countries, perhaps the home-ports of the skippers (?). There is no question of imported redware on board the inland and Zuider Zee vessels in the late medieval period. In the case of the stoneware, however, we are describing imported utensils. The well-known products from the Rhineland were used from the 12th century for transport and storing liquids.

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Resumé

Cet article offre une vue générale et une comparaison entre les céramiques et autres objets, trouvés à bord d'épaves datant de l'époque médiévale tardive, mises à jour dans des terrains gagnés sur la mer grâce à l'assèchement du golfe formé autrefois par la mer dans le centre des Pays-Bas. Cet exposé met en évidence un groupe d'objets de datation certaine trouvés dans un petit cog échoué au début du 15ème siècle, et présente un inventaire typique de batterie du cuisine utilisée dans la marine, ainsi que des casseroles et des poêlons en usage à bord de bateaux de l'époque médiévale tardive. Cet exposé souligne enfin la difficulté qu'offre l'enregistrement de ces objets en se basant sur les types de classification utilisés quant aux cargos du 19ème siecle de Zuiderzee. breeuwmethode als dateringsbron voor middeleeuwse schepen. Flevobericht.

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- Footnotes
- 1. This text is derived from a paper presented at the 1993 MPRG Annual Conference in Southampton.
- 2. The term 'inventory' is used in the sense of an itemised list or catalogue of the contents of a ship.
- Lot (plot of land) = Dutch 'Kavel'. The old Hanseatic city of Kampen will build a replica of this vessel, which shall start in spring 1994.
- 4. After excavation and recording the vessel, its structural elements were numbered, transported to the workshop at Ketelhaven and put into storage. In 1988 five students of Texas A & M University drew all the timbers and planks of the cog at a scale of 1:10.
- This cog is comparable with a shipwreck in the Noordoostpolder excavated in 1944 (Modderman 1945, 75-81).
- 6. Comparable blocks can be seen on the famous 15th-century 'Mataro' model in the Prins Hendrik Maritime Museum, Rotterdam.

Zusammenfassung

Diese Studie gibt einen Überblick und vergleicht Töpferei und andere Artefakte von spät-mittelalterlichen Wracks, die auf einem Binnensee-Koog im Zentrum der Niederlande ausgegraben wurden. Die wohldatierte Artefaktgruppe stammen von einer kleinen Kogge, die im frühen 15. Jahrhundert auf Grund lief. Das Inventar bestand aus den normalen Küchengeräten, Kochtöpfen und Pfannen wie sie an Bord spätmittelalterlicher Schiffe üblich waren. Der Bericht geht auch auf die Schwierigkeiten beim Aufzeichnen ein, wenn man der Klassifizierung Frachtschiffe zugrunde legt, wie sie im 19. Jahrhundert auf der Zuider Zee benutzt wurden.