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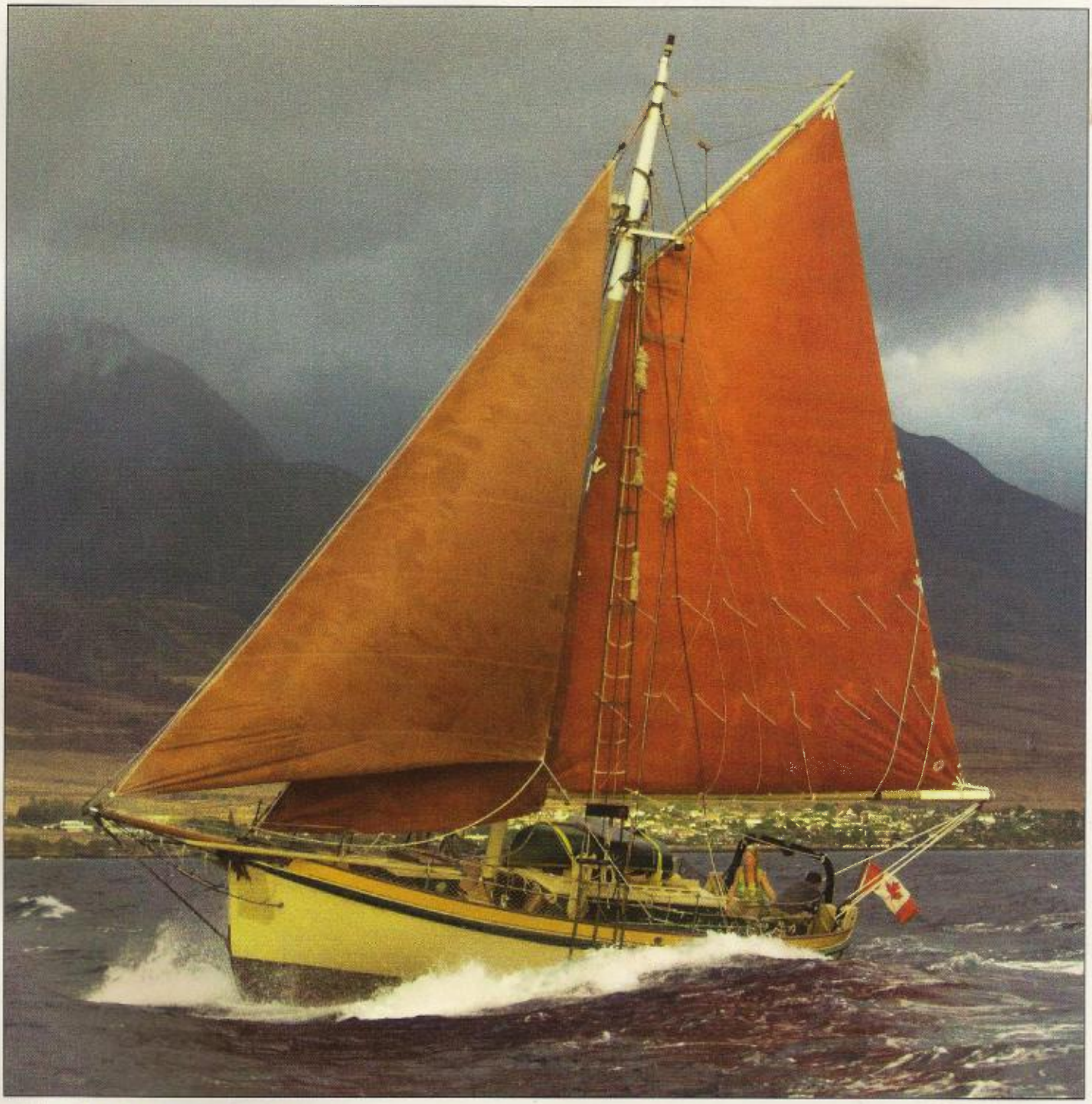

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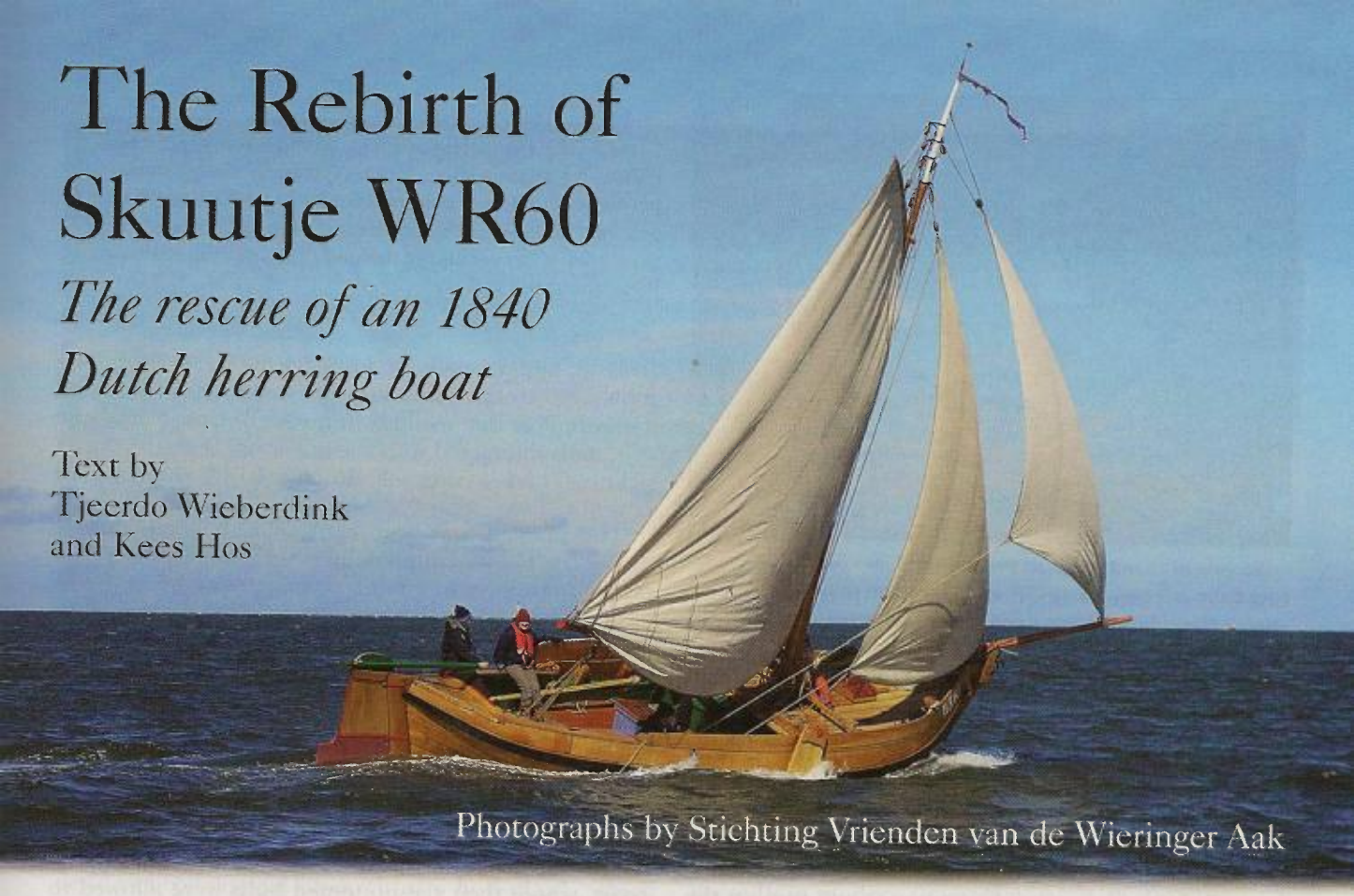
The Rebirth of Skuutje WR60

The rescue of an 1840 Dutch herring boat

Text by
Tjeerdo Wieberdink
and Kees Hos



Photographs by Stichting Vrienden van de Wieringer Aak

Until midway through the 19th century, almost all commodities coming to and from The Netherlands were transported via wooden ships and boats. Roads were scarce in coastal regions, so the numerous waterways were filled with vessels of all sizes and descriptions, among them fishing boats working constantly. In the northern Netherlands, one type of herring boat, the *skuutje*, was so common that its very name is an old Dutch word that translates simply as "small ship." Despite the slow disappearance of the type after the middle of the 19th century, one skuutje survives on the former island of Wieringen, near the fishing harbor of Den Oever. This last skuutje, WR60, has been restored over the past several years as a reminder of a rich history.

In addition to the traditional job of catching fish and gathering shellfish and seaweed in the shallow waters of the Zuiderzee and the Waddenzee, skuutjes were used for other work, such as piloting large merchant ships through shallow channels to and from Amsterdam. Around 1850, when skuutjes were most prevalent, a few hundred were in use. Soon, larger boats came into favor to meet the demand for fresh fish as the population of Dutch cities increased. Machine processes made larger nets practical, and the use of ice allowed boats to spend longer times at sea and then, after returning to port, to distribute the catch by fast rail and steamboat lines. All of these influences encouraged the construction of wider and longer boats to accommodate larger catches, although boats still had to have shallow draft to work in the shoals.

Skuutjes carried a gaff mainsail, jib, and outer jib. They carried distinctive leeboards, heavy boards rigged outboard on each side, which pivoted so they could be lowered much like a centerboard. When underway, lowering the leeward leeboard improved windward sailing ability by reducing leeway, but hoisting it dramatically reduced draft to about 50 to 60 cm (about 20″ to 25″) for sailing over the shallows. A leeboard can also be raised or lowered to adjust the helm balance. Just as with an airplane wing, the leeboards were given a specific profile that not only resists leeway but also gives the boat some lift to windward when close-hauled.

The boats were also fitted with built-in livewells,

Above—After a full restoration in which nearly every piece of wood was replaced, DE JONGE JAN sailed again in 2015 with a new rig consisting of handmade flax sails and hemp cordage. Leeboards, characteristic of Dutch shoal-draft boats, improve her windward performance. *Right*—Once the boat was opened up, it became evident that her very heavy frames, many of them original to her circa-1840 construction, all would have to be replaced.

To begin the reconstruction, first the hull was braced to restore its original shape and then its floor timbers and frames, shaped from compass timbers, were replaced one by one. Planking, which proceeded from the bottom up as the timbers were replaced, helped retain the hull's shape throughout the project.

box-like structures fitted against the planking amidships. Two large openings through the hull bottom planking, fitted with removable perforated copper plates, allowed seawater into the well to keep the catch alive and fresh.

In addition to the well, the boats' decks amidships had loose planks that could be removed for access to a fish hold. Skuutjes were often used in the herring fishery, for which the livewell was not useful. The vulnerable herring did not survive being netted, and in addition the sheer volume of the catch would overwhelm the livewell. Instead, herring fishermen would remove the loose deck planks and use the whole 'midship area as a fishhold. Sometimes the catch was so abundant that the mass of fish even blocked the fo'c's'le companionway, forcing the crew to go below through a foredeck hatch.

In the fo'c's'le, most skuutjes had a firebox built over ceramic tiles, with the smoke vented through a simple opening in the deck. The peat fuel gave scarce heat. What little light there was came from a candle lantern or an oil lamp, since petroleum was not commonly used until 1870.

Construction of a Skuutje

Below the waterline, oak planks 6cm thick (a little less than 2½″) were fastened to the oak sawn frames with softwood trunnels, each one split on the outboard end to receive an oak wedge so that it would flare out when driven home. For better holding power, each trunnel was driven at a slight angle. This commonly used method of fastening (see WB No. 226) not only held the planks tightly to the frames but also proved reliable and long-lived, since there was no metal to deteriorate. Trunnels found on boats of the skuutje's era are still in great condition after 175 years—something that iron, steel, or even bronze has yet to accomplish.

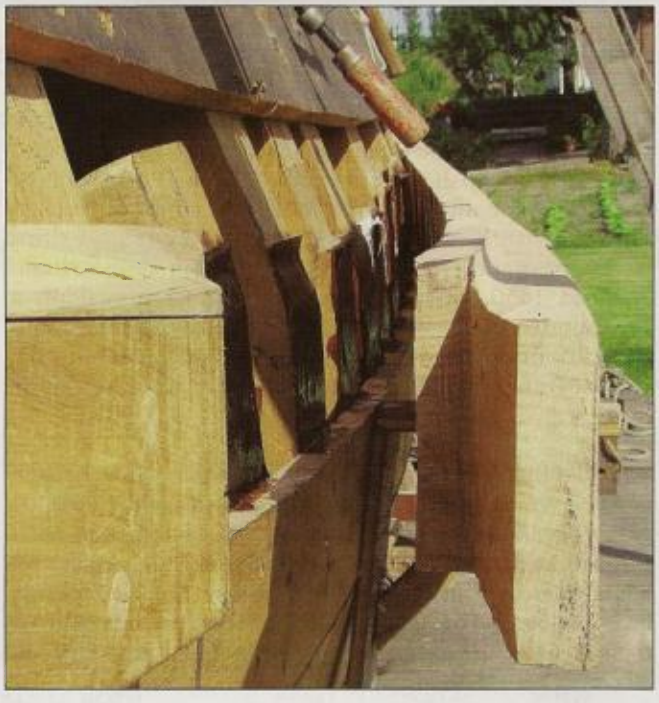
Because trunnels can loosen when wood dries out, trunnels were not used on the boat's topside planking. Instead, square nails of forged iron were used. The nails were countersunk into the wood, leaving behind a square hole that could be bunged. But, over time, the iron nails interacted with the acidic oak, creating "iron sickness" and leaving telltale blue stains around each fastening hole.

The plank seams were caulked with hemp or flax driven in place, followed by pitch. Wealthy skippers often ordered a particular type of seam in the wale timber (see photo). In these seams, called "dry seams" or "lifted seams," the piece's top edge is shaped to shed water, reducing the chance of leaking and rot. A boat built this way could be expected to last longer. Shaping such timbers, however, required more labor, so these boats were more expensive. The Skuutje WR60 was restored using this type of seam, most notably on the wale, or rubbing strake.

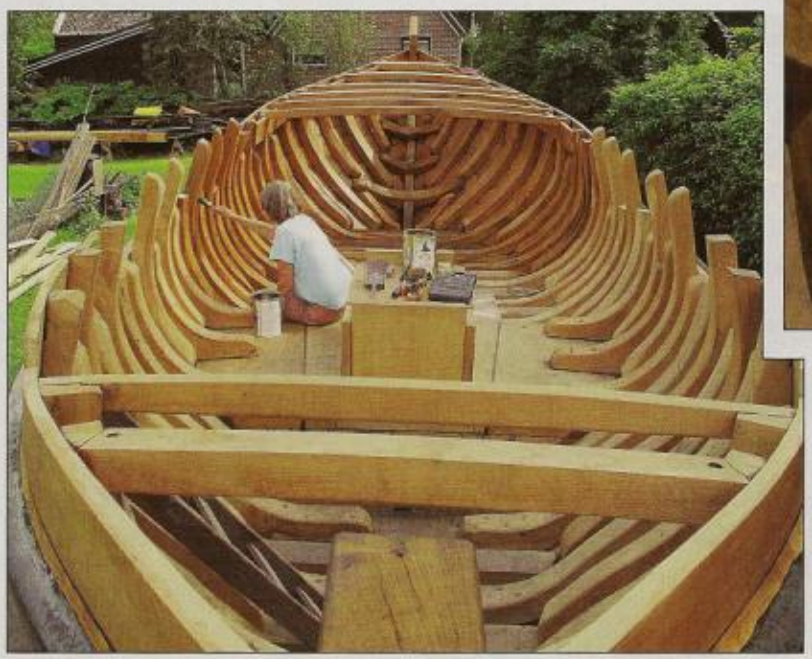
Because the municipality of Wieringen did not get its first harbor until 1891, skuutjes had to lie along the coast, where their flat-bottomed hulls were allowed to "dry out," or settle on the bottom at low tide. This continual grounding out, however, significantly strained their hulls.

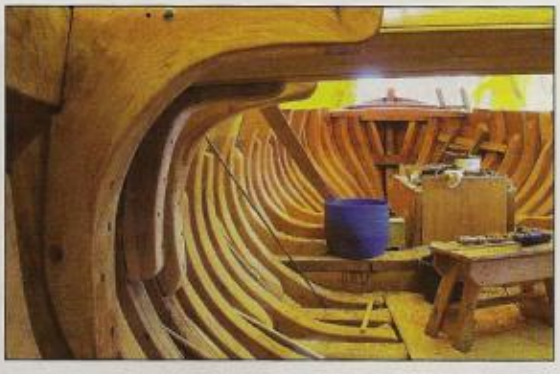
The Herring Vessel "Skuutje WR60"

Skuutje WR60's name is DE JONGE JAN. Since being registered for fishing in 1883, she has carried the number WR60, the letters indicating her homeport of Wieringen. She is 9.85m long, 3.10m wide, and has a draft of 50cm (32′ × 10′ × 20″).



A distinctive characteristic of the better grade of skuutjes is the cross-sectional profile of the wale plank. This photograph shows the shape end-on at the scarf joint during installation. The curve laboriously carved into the upper edge is intended to shed water away from the seam between the wale and the plank above it.





Left—Once the 80 futtocks were replaced, the interior was oiled with a traditional combination of linseed oil and resin called *harpuis*. *Above*—Natural crooks were used to make very heavy hanging knees in way of the mast partners. These obviate the need for shrouds, leaving the skuutje's gunwales clear for handling fishing gear. The box-like structure is part of the livewell, used to keep the catch fresh.

DE JONGE JAN's exact date of construction is unknown, but oral history tells us that she was built around 1840 in Makkum, in the Dutch province of Friesland. This construction date is confirmed by dendrochronological research of a hull plank, which was found to have been cut from an oak tree that started to grow in the French Moselle area in 1690 and was felled around 1835.

In 1942, more than 100 years after her maiden voyage, DE JONGE JAN received her first engine, a one-cylinder, 10-hp Bolinder diesel. It was replaced in 1970 with a 16-hp Sabb diesel. Currently, she has a three-cylinder, 27-hp Volvo Penta.

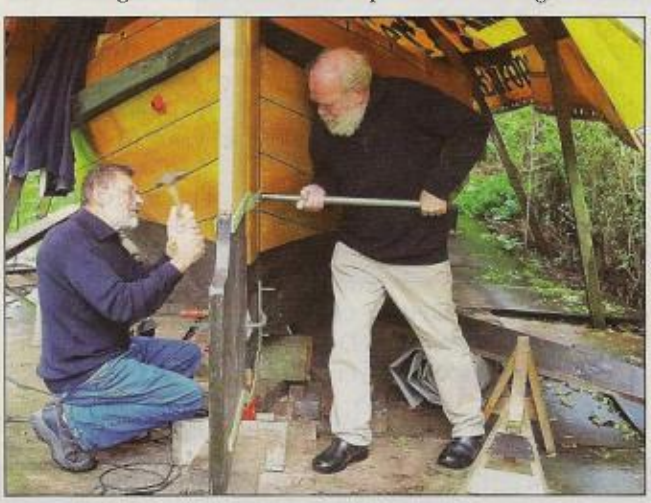
Until 1967, the boat was used for fishing. Since then, she has only been used for leisure, and her maintenance was limited to only what was absolutely necessary. In 2011, a team of enthusiastic volunteers moved her ashore to start a major restoration for the boat's new owner, Stichting Vrienden van de Wieringer Aak (Friends of the Wieringer Aak Foundation). This organization helps keep Wieringer fishing boats sailing. DE JONGE JAN's restoration has been supported through subsidies and donations by many interested people, and she was relaunched in April 2015.

The Restoration

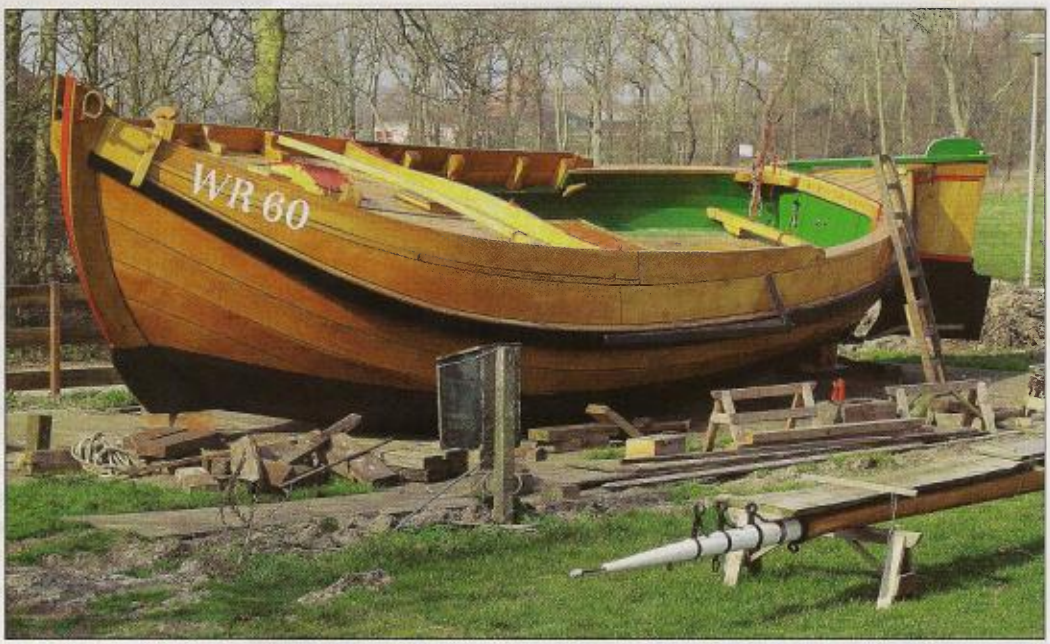
Soon after she was hauled out, it became evident that the boat was in bad shape. The team realized it would be necessary to replace all of the wood, piece by piece. First, her original shape had to be restored by wedging and bracing the keel until its original rocker was reestablished.

Then the deteriorated frames needed to be replaced. In the original construction, each futtock was hewn from naturally curved wood, which is stronger for the purpose than straight wood sawn to shape. Since most sawmills in modern times deal only with straight wood, curved wood is hard to come by. However, at the time of the restoration, a large stand of oak trees was being cut in Germany in preparation for a mining operation, making a large amount of "compass timber" available for sale. A large trailer was necessary to transport all the large tree trunks and branches to the restoration site—12 cubic meters in all (424 cu ft), eventually whittled down to 80 futtocks, with a final combined volume of 3 cubic meters (106 cu ft). The leftover wood is slowly ending up in the fireplace.

For a spiling batten, we used a thin, flexible plank with short slats nailed on perpendicularly, the ends of which indicated the width of the new strake. This spiling batten was then laid flat on planking stock to indicate the outline of the individual planks that were fitted together to make up the full-length strake. Rather than using steam to coax each plank into a tight bend,



Stainless steel was used for longevity in the boat's fittings, including her rudder hardware. The boat's original 1840 fittings were very likely of wrought iron. Authors Kees Hos, left, and Tjeerdo Wieberdink were among the project volunteers.



Looking much as she probably did at her launching in 1840, DE JONGE JAN by spring 2015 was nearly ready for relaunching and her new role in historical preservation and sail training with an emphasis on youth.

the sawn and planed oak was heated over an open fire, just as in the 19th century.

The boat had had some less-than-skilled repairs in the past, which compromised her authenticity. For example, the hull is a bit narrower to starboard than to port. The restoration team tried to restore her to original condition as well as could be determined.

All Dutch fishing vessels typically had forestays but avoided the use of mast shrouds. The skuutje is no exception. Without shrouds in the way along the sheer, the task of setting and retrieving fishing gear was much easier. The mast and maststep, along with the futtocks and knees in way of the mast partners, are of extra-strong construction in order to withstand the increased stress on the hull caused by the lack of shrouds.

These days, planks are usually fastened with screws and the holes plugged with wooden bungs. This method has only recently replaced the earlier use of forged nails. Stainless-steel round-headed screw nails were used for the restoration, then driven home with a custom-forged square nail set, resulting in a square hole bunged just as the earlier type had been.

Fittings such as belaying pins, leeboard eyes and hooks, and rudder fittings, are also of stainless steel.

Historically, ships such as these would be painted with *harpuis*, a boiled mixture of linseed oil and resin. Harpuis, the predecessor of yacht varnish, provides great protection for wood and is easy to maintain, but it stays sticky. For this reason, it is applied only on the planking and frames on the inside of the boat. The exterior was coated with multiple applications of tung oil, which has proven to be of great value for the wooden components aboard the steel-hulled clipper reconstruction STAD AMSTERDAM, launched in 2000. One traditional coating used often for the skuutje is Stockholm tar. All wood-to-wood joints were coated with four layers of newspaper soaked in tar, a method that historically has proven to prevent rot. Decades-old, but still-readable, tar-soaked newspapers were discovered in the original joints.

The sailcloth chosen for WR60 is of heavy flax (No. 1, about 900 grams per square meter, or 3 oz per sq ft). The sails are hand-sewn with hemp thread, and the leech line is hand-laid hemp rope. Dutch flat-bottomed boats are often fitted with what the English call a "loose-footed" mainsail, but in Dutch the term is *losse broek*, which translates literally as "loose trousers." By intelligently cutting and sewing the luff, the leech, and the foot, the sail is given the proper belly, which is good for the ease of sailing.

Relaunching

After three years of restoration, the skuutje was launched in early April 2015 and sailed beautifully in her first outing. DE JONGE JAN is translated as "The Young John," and in celebration of her name there were three young Jans aboard that day. Thanks to her fine ends, the boat cuts through the water, in stark contrast to full-ended Wieringer barges, two of which (WR4 of 1900 and WR173 of 1916) later escorted her to the harbor of Den Oever, along with the Staverse jole KH44, built in 1900. The skuutje sailed 10 to 15 degrees closer to the wind than the barges and easily kept up with them.

Because the boat was first launched 175 years ago, the Dutch phrase *weer weeromkomst*—which translates as "again comes-again" and was used in the lyrics of a specially composed song—was appropriate for the occasion. With nice Dutch gin, 240 people toasted the good fortune of WR60, giving her a festive return. With the restoration completed, we next will develop a sound business plan, one that will involve youths with the boat, not just for sailing but also for maintenance.

Tjeerdo Wieberdink is a retired physics teacher and information and communication technology project manager. His sailing experience began on traditional Dutch boats from the early 20th century. In addition to volunteering on the WR60 restoration, Kees Hos, who retired 17 years ago from public works supervision, has restored his own Wieringer Aak WR4 and several other wooden boats.

For more information, see www.wr60.nl.