TugeZine

all about tugs

Recovery,
Diving,
Metal,
Gold...

vol. 5 **nr. 27**
December 2024

front page:
Risdon Beazley's DROXFORD was the second purposely designed dedicated cargo-recovery vessel. She was completed in 1958 by John Lewis at Aberdeen. Her winches were suitable to handle grabs up to 425 metres down. On 1 May, 1958, she sailed for the Med on her first assignment. Her first Master was Capt. Frank Hunter, the Chief Chamber Diver Don Jones. Most of the crew had been relocated from TWYFORD. The wreck had earlier been discovered in 430 m of water. A mooring spread was laid but upon inspection it was the wrong vessel. DROXFORD then was ordered to Canada and work MOUNT TAYGETUS in 220 m of water photo: coll. Ray Woodmore

There is cargo and 'cargo'

This issue of TugeZine is a-typical in that for the greater part it is dedicated to salvage. Salvage of cargo to be precisely, general known as cargo-recovery.

We write about tugs , towage and salvage past, present and future. As the participants in the Salvage & Wreck Removal Conference will be busy with today and tomorrow we thought it prudent to deal with the past. Because, as the saying goes: 'he who does not know the past will not understand the future'.

As it was, over the entire period of salvage there have been only four (4) companies that made cargo-recovery their living. Obviously at one time or another many towage and salvage operators have busied themselves with cargo-recovery – as a one-time opportunity or as part of a routine salvage job.

When I operated sonar systems – many years ago – there was always the joyful moment when the blip appeared on the printer in the position you had calculated based on information, extensive research and previous experience.

Obviously the chances with today's technology are greater but at the same time the limits are pushed forward. Will there ever be another dedicated cargo-recovery business? I don't think so. Will there be individuals with the guts to go for a specific wreck? Most certainly. . .

Job van Eijk (editor)

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Cargo Recovery – Beginning

In marine salvage there are two principal categories. 1) is the casualty salvage the essence of which is that it requires a time-critical operation. This may roll-over as 2) recovery / clearance and/or wreck removal operations.

by Job van Eijk

Alain Terme started cargo-recovery as a commercial business *photo: coll. Job van Eijk*

For the second category the operation in most cases is not time-critical except perhaps in the matter of finance. Cargo / Recovery involves the removal or saving of cargo from distressed or sunken vessels or aircraft. It includes, for example, the retrieval of bulk and general cargo, but also hazardous materials like chemicals or ammunition. Another category is that of the precious metals and 'treasure'. Recovery also includes objects from sunken vessels or aircraft.

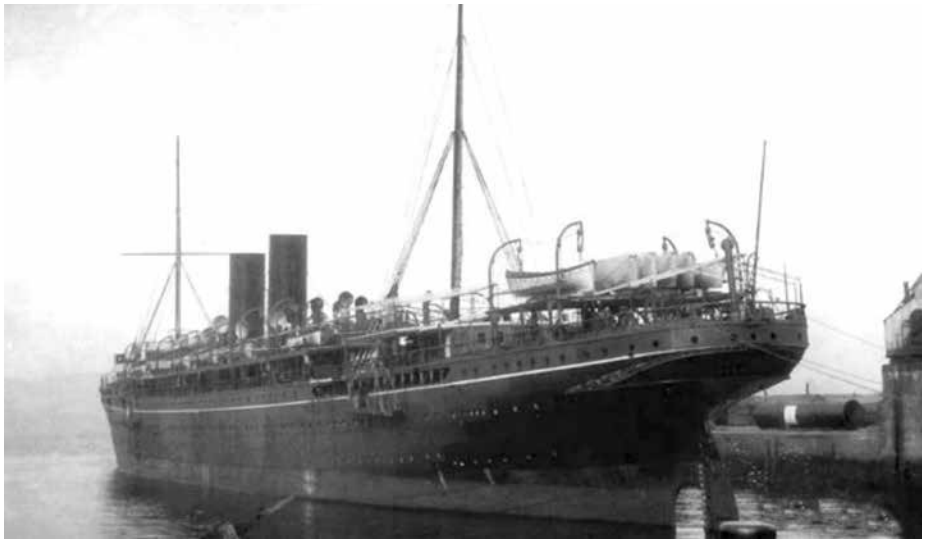
This article traces the history of cargo-recovery of what is generally referred to as 'precious metals' like tin, copper, nickel, aluminium, lead, brass and zinc. More secretive was the 'treasure' business. This article is divided into separate chapters each covering one of the very few companies having been involved exclusively in the market of cargo recovery.

Alain Terme
is accepted generally as the first who went after cargo-recovery in deep water in an organised manner as a business. His target were the non-ferrous metals and high quality steel owned by the French Government. This cargo was lost when the ships that carried it were sunk by German action during World War 1. These shipwrecks were scattered over the continental shelf West and North of France. The contract he obtained in 1920 from the French Government covered 70 ships and their cargoes to exploit over an unlimited period on a no-cure-no-pay basis with a 10% share of the salved value to be handed to the French Treasury.

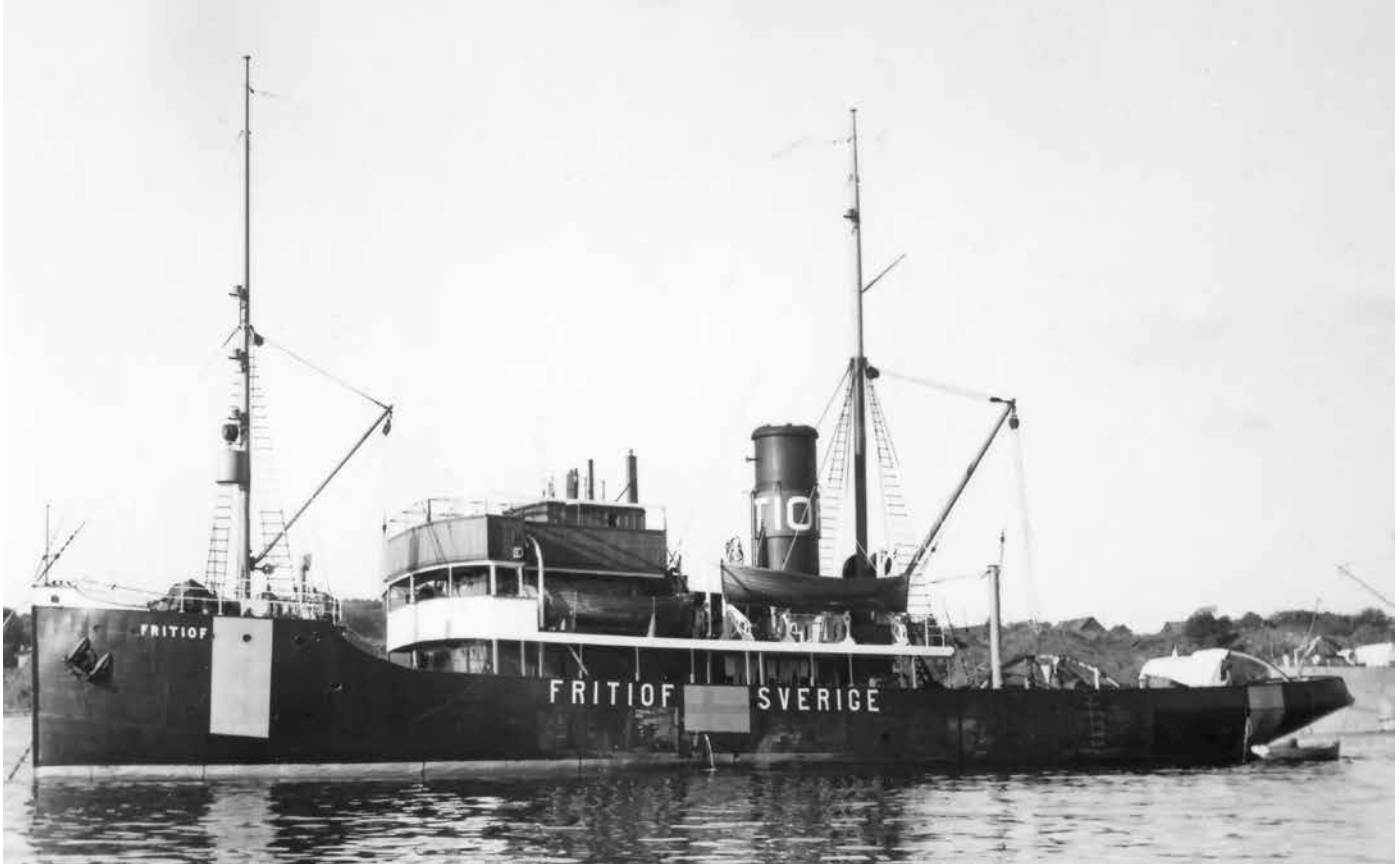
Alain Terme (1891-1975) at first sight seems an unusual candidate to start a marine cargo recovery business. His only connection to the sea was a brother who was a senior naval officer. His father was a General and he himself flew planes during World War 1. After the war he was a test pilot for Blériot and thus used to taking risks. He had become interested in the development of technical aspects of diving, obtained a contract with the French Government but otherwise lacked all experience regarding ships, the sea and seafaring. He was too dependent on people the capabilities of whom he could not judge properly. This showed up in his failed attempt to locate the 1922-sunk liner *Egypt* that went down off the coast of France following a collision. Mr. Terme in 1923 made a first attempt on this wreck. For the purpose he had acquired from Germany a **Neufeld & Kühnke**-made Articulated Diving Shell. His attempt failed to find the ship.

He then took a bold step: he teamed up with the Italian SORIMA company headed by Giovanni Quaglia.

Giovanni Quaglia
had taken an interest in the prospects of cargo-recovery and had given the business some serious thought. He had been working, amongst other things, on a home-made diving shell – better known as an observation chamber, fitted with searchlights, portholes and with a seat for the diver which had to rebreathe his own filtered air and was connected to the surface by a telephone cable. **Alberto Gianni** was his chief diver and salvage officer and he and Quaglia were responsible for the conversion of 1906-built British trawler *Macbeth* into the salvage vessel *Artiglio*. Gianni was a former petty officer in the Italian Navy who with a partner had set up an engineering firm in Genoa which produced ship's equipment in their own workshop. Most of the equipment on *Artiglio* was either designed by him or came from his workshop. For their purposes the vessel was fitted with a steel mast and derrick, a six-point mooring system, a variety of grabs – some designed by Gianni, a magnet for

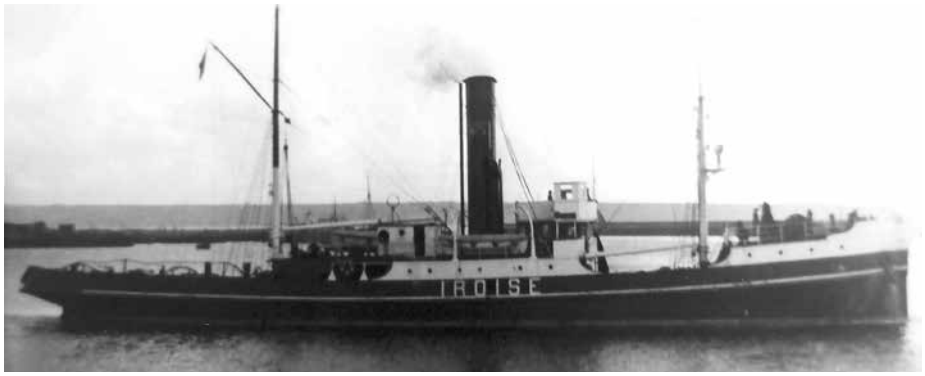


EGYPT was the first target of Alain Terme *photo: Wikipedia*



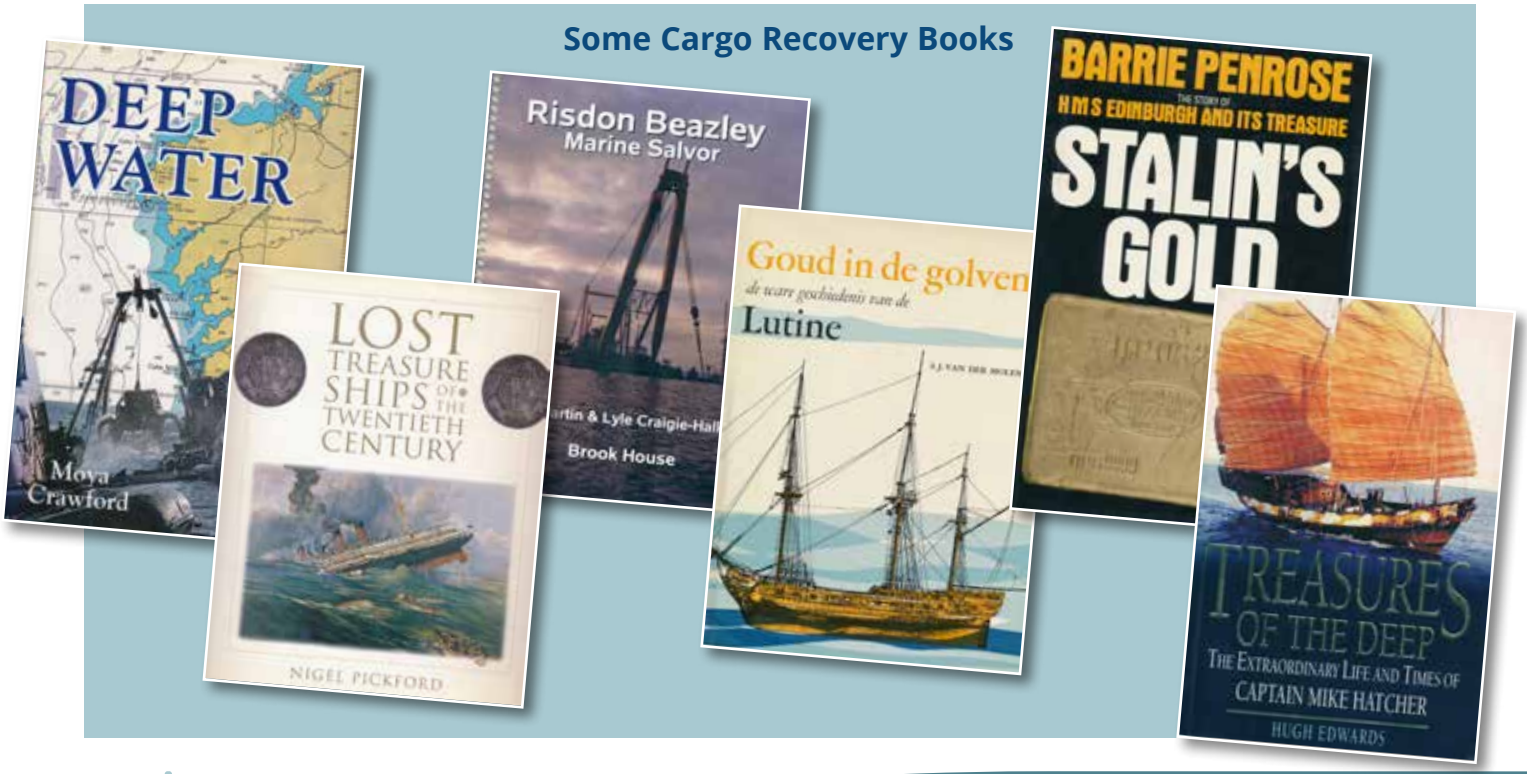
Rodabolaget's FRITIOF was chartered by Alain Terme for the search of EGYPT *photo: coll. Job van Eijk*

retrieving smaller pieces of metal and a motor workboat.
Commendatore Quaglia – as he was generally known – had obtained from the Italian Government the exclusive right for deepsea diving operations in Italian waters. From the National Insurance Institute of Italy – which owned most of the Italian ships and cargoes lost during WW1 – he obtained exclusive rights for cargo salvage from their wrecks in waters deeper than 45 metres.



Likewise, the famous French salvage tug IROISE was involved in the search *photo: coll. Job van Eijk*

Some Cargo Recovery Books



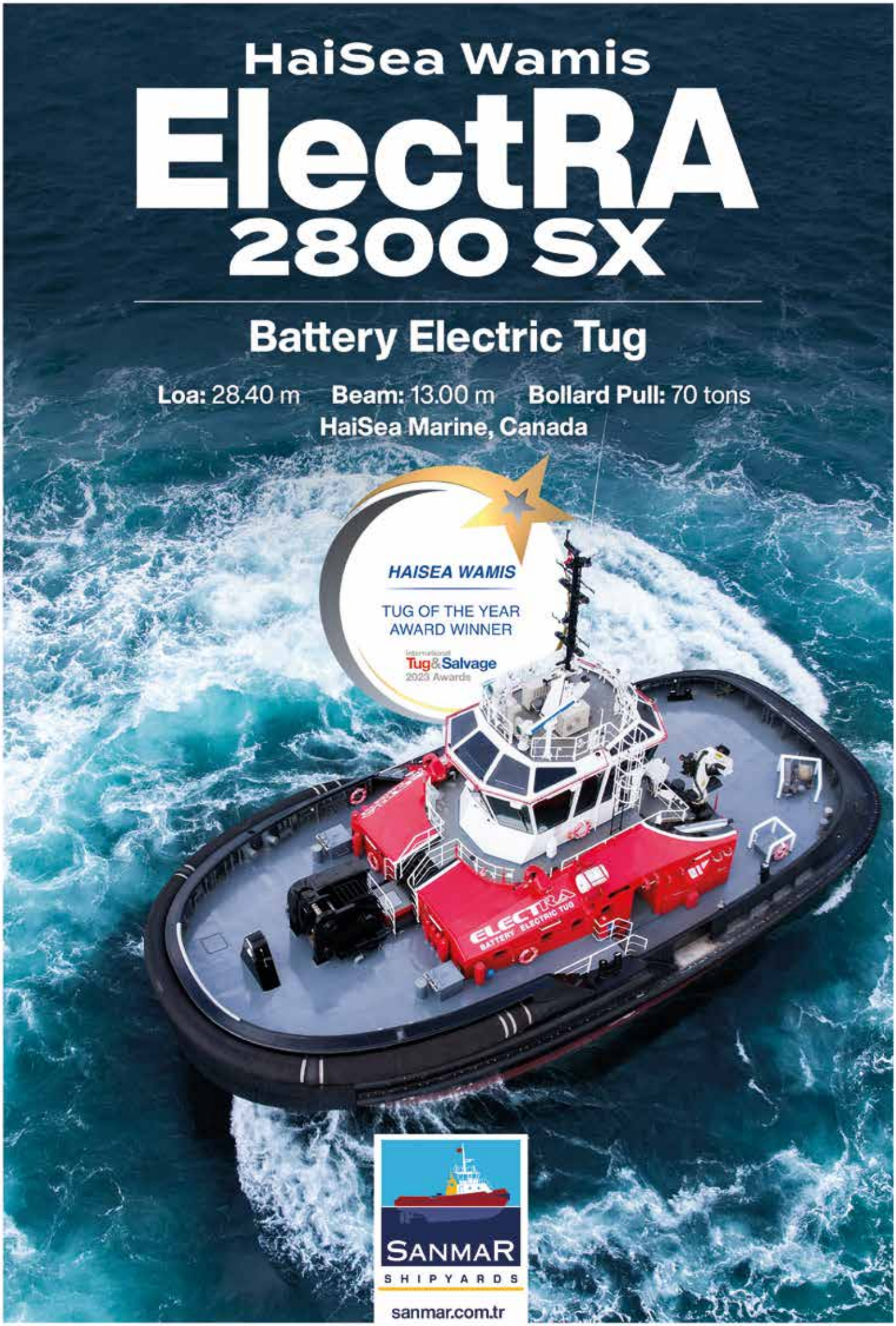
HaiSea Wamis

ElectRA 2800 SX

Battery Electric Tug

Loa: 28.40 m **Beam:** 13.00 m **Bollard Pull:** 70 tons

HaiSea Marine, Canada



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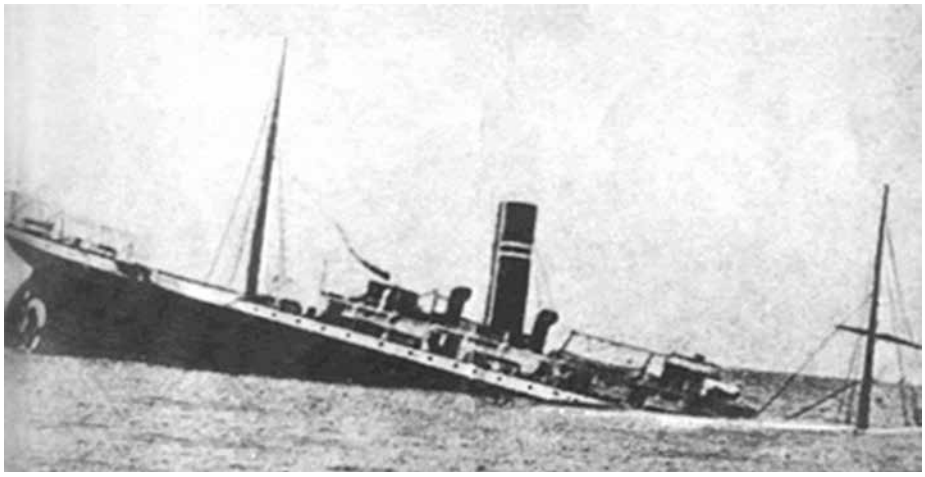
Cargo Recovery 2 - SORIMA

Giovanni Quaglia first studied law and set up as a lawyer. This did not last long as he established a small shipping company operating in the coastal trade. His company pioneered 'salvage and recovery from the deep'.

Giovanni Quaglia headed the first company dedicated to cargo-recovery from the deep

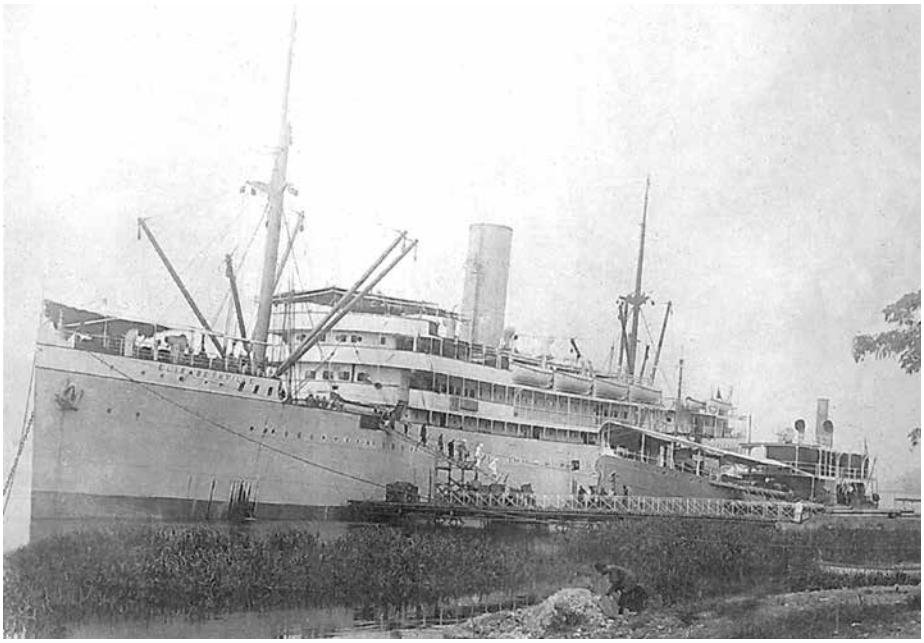
photo: coll. Job van Eijk



WASHINGTON was one of the first jobs tackled by Quaglia in the Med *photo: Wikipedia*

During WW1 Quaglia made his fortune by converting Italian sailing merchant ships into motor ships When the bottom fell out of the market he lost out. After the war he started Citoma, a tanker shipping company. In 1924 Giovanni Quaglia (1881-1955) established the Società Ricuperi Maritimi – better known as SORIMA - at Genoa. The first big job tackled by them was in 1926 when they went to work on the British cargo ship *Washington* (5.080 grt) torpedoed in 1917. The vessel was upright on the bottom at a depth of just over 90 metres some 2 nm offshore Camogli, near Genoa. Amongst its cargo were 2.000 tons of steel bars and 400 tons of copper ingots.

It was on this job that **Alain Terme** joined forces with SORIMA. He transferred his diving equipment and the French Government cargo contracts.



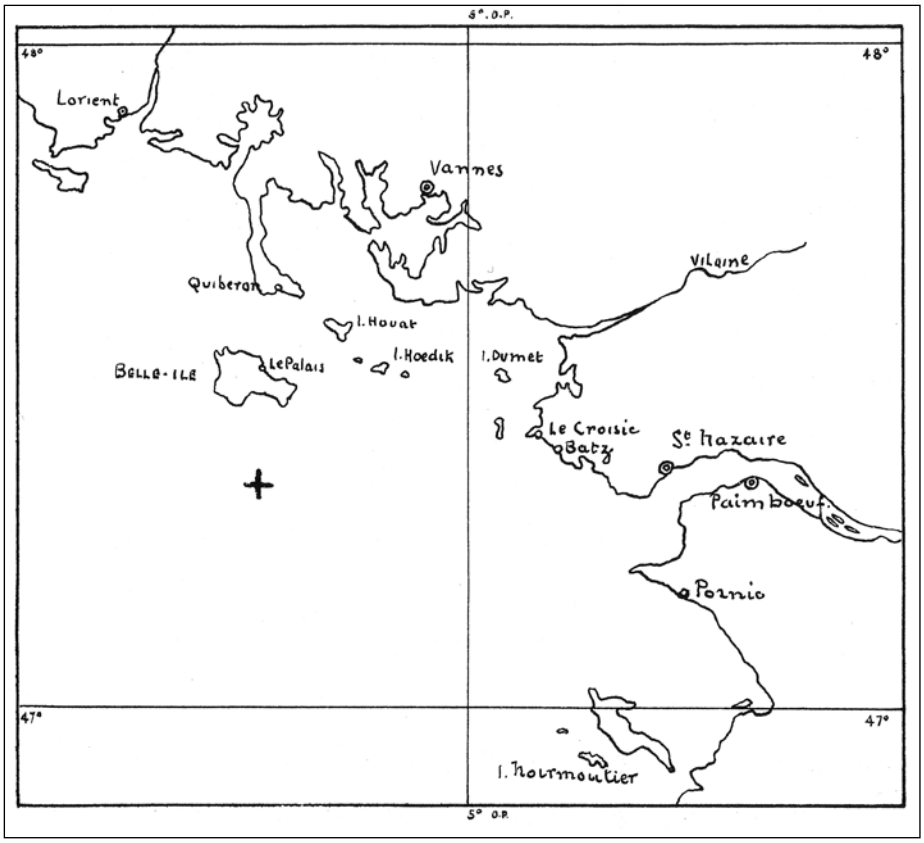
ELISABETHVILLE operated by the Cie.Maritime Belge was torpedoed on 6 September, 1917, off Belle-Ile

photo: CMB 100

Alain Terme next became their agent in France where he dealt with the intricacies of the wheeling an d dealing with the French Government facilitating SORIMA's operations out of French ports and in French territorial waters.

The *Washington* job was a success judging from the fact that when they wrapped up in 1930 they had added a further three salvage vessels to their one-ship fleet: *Arpione*, *Raffio* and *Rostro*. Later *Rampino* and *Rastrello* were also part of the fleet. Apart from the steel an copper they had recovered a massive number of railway trucks and 7 locomotives. *Raffio* by that time had recovered 450 tons of copper and 200 tons of zinc from the Italian vessel *Primo* lying in 75 metres of water off Cape Palos, Spain. In 1930 *Rostro* recovered large quantities of wool and tallow from the wreck of Ravenna in 90 metres of water off Savona in the Gulf of Genoa.

In 1928 SORIMA turned to the French Atlantic coast and the *Egypt* for which *Artiglio* and *Rostro* were mobilised. But first came the wreck of the Belgian steamer ***Elisabethville*** lying on the bottom in some 75 metres of water. At the time the only way to locate a wreck – any other obstruction below the surface – was **sweeping**. This method required two vessels steaming a parallel course some distance from



ELISABETHVILLE wreck location off Belle-Ile *map: CMB 100*

each other with a wire between them. When the wire caught anything the position was marked, the diving vessel moored with an anchor spread and the an observation chamber was sent down to identify the object. A time consuming business that had to be repeated often since most of the positions for the sinkings were inaccurate to some extent. Anyway *Elisabethville* was located and a recovery operation started. Their research – later proved wrong – had shown a consignment of diamonds. Using the blast-and-grab method they made their way through the hull into the cargo holds but found nothing of value except for a load of ivory.

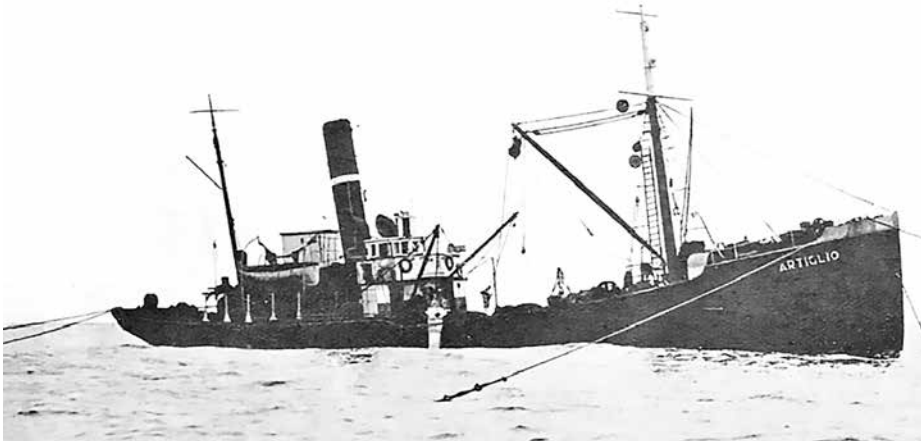
The "Egypt"

The 8.000 tons liner *Egypt* had left London on 19 May, 1922, en route for Marseilles and onward to Bombay. On board were a crew of 291 and 44 passengers – most of the passengers would join at Marseilles. She also carried gold, silver bars and coins to the value of 1.054.000 Pound Sterling. On 20 May she was approximately 30 nm west of Pointe du Raz in the main shipping route in thick fog. In those circumstances she was rammed in the side by the steamer *Seine*. This vessel unfortunately was built with an ice-strengthened bow which had no trouble at all with the hull plating of Egypt. Despite the weather conditions *Seine* managed to save 29 passengers and 210 of the crew. The liner fell on her side and sank in 20 minutes. The radio-officer managed to send out an S.O.S. including her estimated position, repeating this for 20 minutes. Several radio stations were able to take bearings, but these and the Captain's estimated position were all that was available to locate the wreck.

Peter Sandberg was a well-known British engineer with a Swedish background. It was he who had first come up with the idea for the recovery of the 1 million Pound Sterling cargo for which the **Lloyds** underwriters had paid out the full amount. Sandberg had thought about means to recover the cargo – which was beyond the limits of conventional diving – and convinced Lloyds to invest in new means of diving. He also contracted with the Salvage Association to locate the wreck for which the **Gothenburg Salvage and Towage Co**. (Rödabolaget) was contracted to locate the wreck and recover the cargo. In 1923 their salvage tug *Fritiof* and two smaller tugs appeared on the scene with a navigator, **Capt. Hedbäck**. After two months they located what they thought to be the wreck, then returned to Sweden awaiting the next season.

Things were delayed as the salvage gear designed by Sandberg had as yet to be constructed and tested. Jointly with his associate Swinburne he had produced designs and specifications for the recovery equipment. He came up with an observation chamber for a two-man team and fitted as a sort of control room for a number of other devices such as cranes, boring tools, blasting gear etc. that could move around on the seafloor driven by electric motors. When compared these ideas which at the time would have been cutting-edge technology – have only today been realised in the remote-controlled offshore subsea construction gear.

In 1925, however, a new contract for the search and recovery operation had been concluded between the Salvage Association, **Sandberg & Swinburne**, London, and the **Union d'Entreprises Sous-Marins** (Alain Terme). The offer included the use of the Neufeldt & Kuhnke 'diving shells' with German divers. In the summer of 1926 the French salvage tugs *Iroise* and *Pélican* carried out the search



ARTIGLIO at work on the Egypt *photo: coll. Nereo Castelli*

but did not locate the wreck. The diving shells, however, performed well.

From the log of *Iroise:* "The work began the next day. During the operation, *Iroise* was anchored with a 3.000 kg mooring buoy, with 400 metres of 34 mm steel wire cable, and two chain links. In addition, to facilitate the descent, we were obliged to moor, for the duration of the operations, on moored buoys arranged for this purpose. The state of the sea made the manoeuvres very difficult, forcing us to change the position of the mooring buoy, and causing losses of anchors, grappling hooks, ropes, and steel wires, etc. due to the rough sea. Furthermore, the impact of the buoys alongside caused damage to the ship's hull and to various parts of the hull which we cannot define. The ship being afloat I have reservations on this subject until *Iroise* is in dry dock". The log was duly signed by Capt. Louis Malbert.

SORIMA proved the capability of modified Neufeldt &-Kuhnke gear -adapted by SORIMA - that allowed a diver to be lowered to a wreck to effectively direct grabbing and blasting performed by the surface salvage ship. In addition this gear allowed for some movements and the use of its grippers. Taking note, Sandberg saw no further use in developing his own salvage gear.

The SORIMA crews - not discouraged by the failure of the *Elizabethville* operation - started the search for the P&O liner ***Egypt*** and her cargo of gold and silver. It took them almost two years – 1929 and 1930 - to finally locate *Egypt* 30 nm off the coast of Brittany in 120 metres of water. As winter time was approaching the recovery operation would have to wait for the next season.

Alberto Gianni, SORIMA's Chief Diver and Salvage Master who transformed the first ARTIGLIO into a recovery vessel *photo: David Scott (70 fathoms down)*

Out with a bang

Meanwhile the salvage vessels and crews were kept busy with minor salvage and demolition work in more sheltered waters. *Rostro*, *Artiglio* and *Raffio* were contracted to for demolition of dangereous wrecks near Quiberon. *Artiglio* was tasked with the demolition of the American steamer *Florence*. The 9.000 tonnes vessel was on the bottom at the side of the entrance channel to St. Nazaire. She carried a load of ammunition when in 1917 she missed her convoy and had to proceed on her own. To avoid navigation close to the shore at night she anchored. Later that night the ammunition in the forward hold exploded blowing off the bows. It was later established by divers that the forward hold had been sabotaged when loading in New York. A timer device had been fitted intended to explode when the vessel had entered St Nazaire.

In October, 1930, *Artiglio* began the operation. It was known to all that the remaining parts of the vessel also carried ammunition. Gianni as the salvage master had decided to use explosives to trigger the explosives inside the hull. One big bang would demolish the vessel – much quicker than a lengthy demolition process which might have taken months.

At a depth of some 17 metres the divers worked in rubber suits which made placing explosives much easier. After placing two big charges on each side of the hull *Artiglio* retreated some 2 nm meanwhile veering the electric cable which would ignite the explosives. Nothing happened., except for two smell holes in the hull. A second try with more charges had the same result. The next try was by lowering the charges between the ammunition in the hold. Again no result except for minor damage. The thought now was that so many years under water had deteriorated the cargo and rendered it more or less harmless. Gradually, the safe distance had become less and less. Two tons of high explosives had been fired and meant nothing. Even

ARPIONE was another recovery vessel owned by SORIMA *photo: coll. Job van Eijk*

so the hull had been shred to pieces to reach the contractual depth above the wreck of 12 metres. Part of the cargo had sunk in the sand. Only the stern had still to be cut down.
On 7 December, 1930, the work was to end with the demolishing of the stern. Extra heavy charges had been placed. The safe distance kept by *Artiglio* was now reduced to 275 metres. When Gianni made the electric contact to fire the charges the entire load of the *Florence* exploded in one very big bang. *Artiglio* was hit by the shock wave end engulfed – her hatches and accommodation doors were open – sinking her at once. The seven survivors were rescued by *Rostro* which was some two nm from *Artiglio* and had rushed to the scene. Amongst those that perished was Gianni, master diver, salvage master, engineer and inventor.

"Artiglio" (2) and the "Egypt"
As a replacement Quaglia purchased another former fishing vessel, the *Maurétanie*. Which he had acquired at Bordeaux. For a great number of years she had been fishing, amongst others on the Grand Banks near Newfoundland. A skeleton crew brought the vessel over to Penhoët shipyard at St. Nazaire where she was extensively rebuilt. The *Rostro* meanwhile was busy with the demolition of the old *Artiglio*. A lot of salvage equipment like winches, wires, grabs, etc was recovered from the wreck. Both the Neufeldt & Kühnke diving gears had also survived the explosion. In addition the fore mast was recovered and installed on the new *Artiglio*. In May, 1931, *Artiglio* entered Brest to start a new season on the *Egypt*.

The plan was to break – or rather blast - away the top hamper of the wreck around the approximate location of the bullion room – down through a number of decks. This would create a space of 15 x 9 m which was easy to recognise when returning to the wreck. The charges had to be placed in position with guidance from the diver in the observation chamber. Finally the scrap would then have to be removed out of the way. This was not an easy job due to the current running. There was constant movement of the observation chamber caused by movement of the salvage vessel – even though it was held in position by a six-fold anchor spread.

By 9 August, 1931, they had reached the last deck below which was the deck with the bullion room. Over three months' time only 26 working days could be made – the other days the weather was too bad. In this period in approximately 200 dives they removed some 250 tons of steel using 5 tonnes of explosives. It took, however, until December before they reached and cleared out the bullion room. With the weather too bad to continue diving. *Artiglio* replaced the anchor spread with heavier buoys to withstand the winter season. Next the vessel made its way to Brest and lay-up until the next season.

Success
In May, 1932 the work was resumed. Quaglia in the meantime had found additional funding to carry on. The first dive was on 16 May but it was noted a lot of small debris had entered to room which would have to be cleared first, in addition to removing more of the deck above. On 9 June using the small grab proof was found they were in the right spot when the grab came up with some marked planks which carried numbers that tallied with the inventory list. On 22 June the first golden Sovereigns were brought on board. The same day the first two gold bars landed on the deck of *Artiglio*.

From then on with each haul gold bars and gold and silver coins came aboard. In two days a value of some 60.000 Pound Sterling was recovered. On 25 June the decision was made to go and deliver the first load – an estimated value of 190.000 Pound Sterling – to Portsmouth, to avoid any hassle with authorities in French ports. The next day they moored in Portsmouth ready to discharge the first cargo.

ARTIGLIO at work tearing material from the hull of a wreck *photo: David Scott (70 fathoms down)*

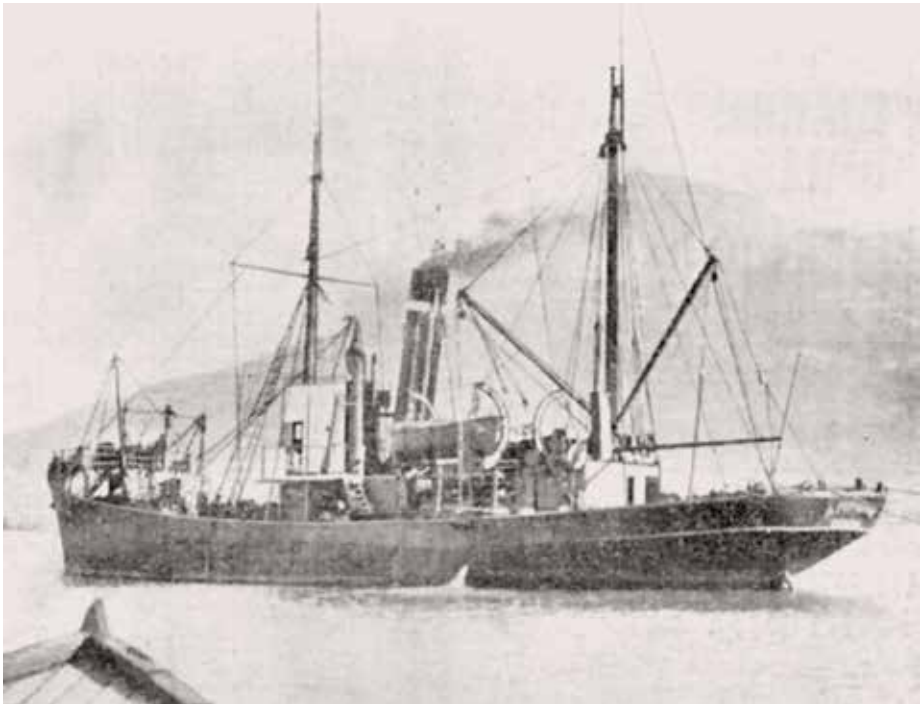
ARTIGLIO delivering the first recovered gold bars from EGYPT to Plymouth 27 June,1932. The gold is being re-packed for transport to London

photo: newspaper photo published 28 June, 1933

After "Egypt"

SORIMA was quite successful in cargo recovery. They had the 'Terme' contracts with the French Government but in addition their British agent Count Buraggi negotiated several contracts with Salvage Association and the British Government War risks Insurance Office. Alain Terme also added new contracts with the French Comité des Assureurs Maritimes in Paris. The entire Sorima fleet of three – *Raffio* was lost off Sark during the recovery operations on *Jeanne Marie* (cargo of copper, steel and aluminium for the French Government) - was fully engaged right until the start of WW2.

Among these contracts were the Spanish steamer *Noviembre*, torpedoed in 1917 in 60 metres of water some 10 nm off the Gironde River entrance, the *Lincolnshire* torpedoed in 1917 near the S.E. coast of Ireland in 50 metres of water, the *Ludgate* torpedoed in 1917 in 50 metres of water, the *Spectator* torpedoed in 90 m of water, *Belgier* sunk 30 nm west of Belle-Ile in 110 m of water after gunned by U-boat and *Nydal* torpedoed off the Gironde in 80 metres of water. *Noviembre* had a cargo of 2.000 tons of



ARPIONE at work in Table Bay, South Africa, where she discovered a number of wrecks from which they recovered an unknown quantity of 'material'

photo: newspaper clipping coll. Job van Eijk

ROSTRO (2) was built in 1941 by Jos. L. Meye, Papendrecht, Germany, reportedly as UJ 1407for the German Kriegsmarine. Acquired by So.Ri.Ma. .in 1950. 1967 still registered under Sociéta Artiglio. She was a replacement for ROSTRO (1) which was sunk by British gunfire off Liten, Libya, on 17 September, 1942

photo: SORIMA (Skyfotos)

copper matte, *Lincolnshire* had a cargo of 1.500 tons of copper, 525 tons of zinc, 47 tons of brass as well as machinery. *Ludgate* had a load of copper bars while *Spectator* had a large tonnage of copper on board. *Belgier*'s cargo included 1.000 tons of copper, 982 tons of cast iron, 512 tons of wire and a load of machines and bales of cotton. *Nydal* yielded some 2.000 tons of copper, zinc and brass. In these cases most of the cargo was recovered by SORIMA.

The final operation prior to WW2 was the recovery 426 tons of tin from the holds of *Eumaeus*. She had been torpedoed in 1918 and sank in 90 metres of water. *Artiglio*, *Arpione* and *Rostro* worked on this contract. On 16 September, 1939, just after the start of WW2 *Rostro* was the last to leave and sail for Italy.

After WW2

SORIMA re-established itself. Their salvage vessel *Artiglio* (2) had been used as a block ship at the port of Oneglia, Italy. So the first thing they did was to raise and repair her while they were engaged in wreck clearing operations in Italian ports.

As an aside: it was on this clearing of the port of Oneglia that Quaglia worked with a British lieutenant named Crothall. Many years later they would again meet when **Allan Crothall** worked for the Risdon Beazley company.

SCALPAY was acquired by SORIMA for use primarily as a search vessel. She belonged to a class of armed trawlers. Seen here during WW2

photo: coll. Job van Eijk

Anyway, it was not long before SORIMA cast its eye on further cargo-recovery. Apart from *Artiglio* they used *Rostro* (built 1941) and a new addition, the second *Raffio*. In 1948 they added the steam trawler ***Scalpay***, built in 1942 by Cook, Welton & Gemmel Ltd as one of a series of armed trawlers of the 'Isles' class. Dimensions were 50,00 m x 8,38 m with a draft of 3,2 m. Displacement was 545 tons (735 tons at full load). The 850 ihp triple-expansion engine gave her a speed of 12 knots. The first thing Quaglia did was to put an Asdic in, making her the primary search vessel in the fleet.

The first job for *Scalpay* was to locate the wreck of the British ss. *Wentworth*, a 3.828 grt cargo vessel dating from 1913. In 1917 she had been torpedoed some 36 nm off Belle Ile while en route New York to La Pallice. At the time she carried a cargo amongst which 460 tons of copper and brass in addition to steel owned by the French Government. It took only one day for *Scalpay* to locate the vessel. This was confirmed when *Artiglio* had laid her mooring spread and lowered the observation chamber to a depth of 110 m. Contrary to many shipwrecks this one was on her beam ends so difficult to

work. SORIMA decided to move on and leave this one for later.

The second wreck *Scalpay* was tasked to find was the Greek ss. *Neion*, a 5.154 grt cargo vessel built in 1918. She had been torpedoed in June, 1940, in position 47.09 N – 4.17 W. It was a difficult search in which *Scalpay* located seven wrecks – each time involving *Raffio* to lay the mooring spread and send the observation chamber down only to find it was the wrong wreck. On the eight attempt *Neion* was finally found at a depth of 130 m. *Raffio* then started the recovery of a cargo of lead.

Over the following years SORIMA continued to locate lucrative wrecks. One of the problems of the blast-and-grab method was that during the recovery process – which sometimes takes several seasons – the hull more and more blends into the echoes of the surrounding area. They acoustically disappear so to speak. This made them harder to re-locate the next season which meant time lost which translates into a smaller working window. Coupled to the list of valuable cargoes thinning out and their salvage vessels ageing this became a bit of a worry, although they still made successful recoveries.

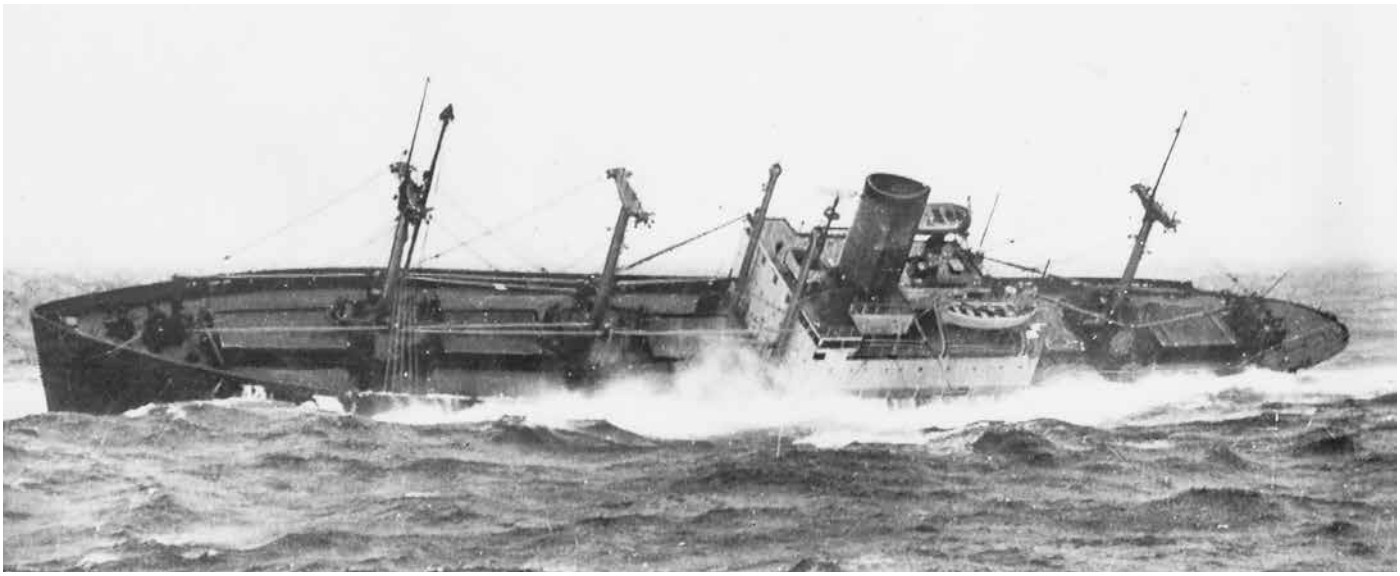
In 1953 SORIMA went for the famed freighter ***Flying Enterprise*** which had sunk in January, 1952 some 50 nm from Falmouth. This casualty gained world-wide fame because of her Master, Capt. Carlsen, who stayed behind while his crew was rescued. The ship was adrift

ARTIGLIO (2) moored over a wreck *photo: coll. Job van Eijk*

with a severe list when the salvage tug *Turmoil* (Capt. Dan Parker) managed to make a connection. His Mate, Ken Dancy, also gained fame when he managed to jump aboard the *Flying Enterprise* to assist Capt. Carlsen in connecting and maintaining the tow. In the end, however, the two men had to abandon ship just before she rolled over and sank.

SORIMA came for the mail bags which contained some USD 200.000. *Rostro* did not find the bags but instead brought up a hold full of the general cargo. This was later sold off at auction. Since she sank, there has been much speculation why the Master stayed on board. But that is the subject of another story altogether.

Two years later, in 1955, Giovanni Quaglia, founder of the company, passed away. Following this in 1956 the company ceased operating. Over its lifetime the company had recovered significant amounts of non-ferrous metals. They did so with in part improvised equipment and with mainly old ships. They had taken big risks in underwater exploration. They ventured where no-one had ventured before. Nevertheless it was their early success in the recovery of *Egypt*'s gold that made their name in the annals of salvage.



The FLYING ENTERPRISE saga with her lone Master on board kept the news agencies busy. It never became clear why the Master stayed aboard until the vessel took her final plunge. SORIMA later went for recovery of a large sum of money carried on board but this was not apparently very successful *photo: coll. Job van Eijk*

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Cargo Recovery 3 – going deep

Risdon Beazley was born in 1903 at Southampton. In 1914 his father and associate mr Kemp were listed as Beazley & Kemp, yacht builders. By 1920 Kemp had taken over the yard while Henry Beazley had acquired the Clausentum Yard at Bitterne.

SALVICTOR - a King Salvor class ocean salvage vessel was completed by Simons in 1944. Several of this class were managed by Risdon Beazley during WW2

photo: coll. Job van Eijk

It was in 1926 that Henry's son, R.A. Beazley formed **Risdon Beazley Marine Trading Co. Ltd**., a marine engineering and yacht building business. .In the mid-1930s the company had developed a scrap metal business, was involved in small-scale wreck removal and in demolition work around ports. In 1936 they acquired the salvage vessel *Recovery of Leith* and in 1938 the tug *Aid*.

At the start of **World War 2** the British Government was caught – like in WW 1 – with their pants down. No salvage capability worth mentioning was under Government control. To rectify this all suitable ships were requisitioned and handed over to civilian management. The British coast was then divided into sections each with a salvage capability. The **Liverpool & Glasgow Salvage Association** operated the West Coast from Cape Wrath to Land's End, **Metal Industries** (formerly Cox & Danks) operated the East Coast from Cape Wrath to Harwich and the Northern Isles. The **Port of London Authority** operated Harwich to North Foreland and **Dover Harbour Board** from North Foreland to Beachy Head. The remainder of the South Coast, however, was not covered.

By 1940 the search had reached Southampton and Risdon Beazley. Mr Beazley had seen the writing on the wall in the run-up to WW 2 and started buying vessels with salvage capability – as well as some that had the potential to be reconstructed as such. Risdon Beazley was awarded the contract for the area between Beachy Head to Land's End. Some twenty more vessels were put under Risdon Beazley management as well. Over the ensuing years the Risdon Beazley managed fleet of salvage vessels had vessels added and taken off as and when demand required. An unusual 'salvage vessel' was the requisitioned *Forde*, the first cross-channel ro/ro ferry. This vessel survived the war and returned to the ferry services. *Longtow* on the other hand was a former fish carrier.

UPLIFTER belongs to the Admiralty Coastal class of salvage and mooring vessels. She was completed in 1944 by Smith's Dock. Seven of the class of nine were managed by Risdon Beazley during the war

photo: coll. Job van Eijk

From 1943 onward a steady stream of new dedicated salvage vessels became available. Six of the 'King Salvor' class came under Risdon Beazley management. Of the 'Coastal' class seven of the nine completed vessels were brought under Risdon Beazley management. By that time the RB-managed salvage vessels were not only operating around Britain but also overseas.

Risdon Beazley Ltd during WW2 ended up running the biggest salvage fleet in the world salvaging over 2.000 (other sources probably wrong state 3.500) ships and some 3,5 million tons of cargo. In 1944 Risdon Beazley employed 77 vessels, tugs and lifting craft on behalf of the British Admiralty.

Cargo recovery during the war concentrated in the main on 'precious metals' that were needed for the war effort. In the aftermath of the war it was realised that many wrecks in somewhat deeper water also carried this type of cargo. Wartime inventions like Asdic (sonar) and Decca (radio positioning) were now available for commercial use. And there was a load of ships and other equipment that was sold off as surplus to requirements. This is what launched mr Risdon Beazley into coastal towage, rescue salvage, cargo recovery and sale & purchase activities with especially cargo recovery doing well.

An Admiralty Coastal salvage vessel at work clearing a liberated port during WW2 *photo: coll. Job van Eijk*

D-Day

Preparation for what was to become D-day landings – **Operation Overlord** – had started several years prior to the event. The maritime part of 'Overlord' was named **Operation Neptune**. All the salvage vessel assigned to 'Neptune' were controlled by Risdon Beazley. The plan assigned two salvage vessels to each of the two British and the single Canadian beach. Each beach was also assigned a Navy wreck dispersal vessel – these were to blow up anything that could not be salved and was in the way. Wo other pairs of salvage vessels were assigned to the artificial Mulberry ports. Five were kept in reserve to clear captured ports. The American beach also received a few British vessels to beef up the US salvage group already on location. When the port of Cherbourg was taken an immediate start was made removing mines. As soon as possible the salvage fleet entered consisting of *Help*, *Abigail*, *LC 15*, *LC 17*, *LC 21*, *LC 22*, *USS Swivel*, *USS Diver*, *USS Brant* and twelve lifting camels. They had to clear 67 shipwrecks and a lot of port equipment that had been destroyed.

Following war's end the Risdon Beazley owned and manged fleet was gradually reduced by returning vessels to the Admiralty and to pre-war owners. By 1946 most of the war-related work was ended. The company now concentrated on general salvage work, rescue and coastal towage, cargo recovery and sale & purchase. In the late 1940s *Lifeline*, *Foremost 17* and *Foremost 18* were employed on cargo recovery work around the U.K. coast. The ocean tug *Twyford* (ex *HMS Warden*) was chartered from 1947 to 1941 from the Admiralty and kept employed with deepsea towage and rescue, including so-called scrap tows. The tug *Ashford* (ex *Empire Sandy* – chartered from 1948-1952) was also kept busy this way. When deepsea towage and salvage dried up due to European competitors having rebuilt their fleets Risdon Beazley left this market.

The cargo-recovery arm of the business was strengthened by the charter of *Lifeline*'s sister, *Help*. The latter later became Wijsmuller's salvage vessel *Help*, later reconstructed as *Krab*. Also on the drawing board was a **newbuilt** dedicated deep-water cargo recovery vessel. *Twyford* was constructed specifically for these operations, which could be performed in waters as deep as 800 feet (nearly 250 meters). Her range was 3.200 nm.

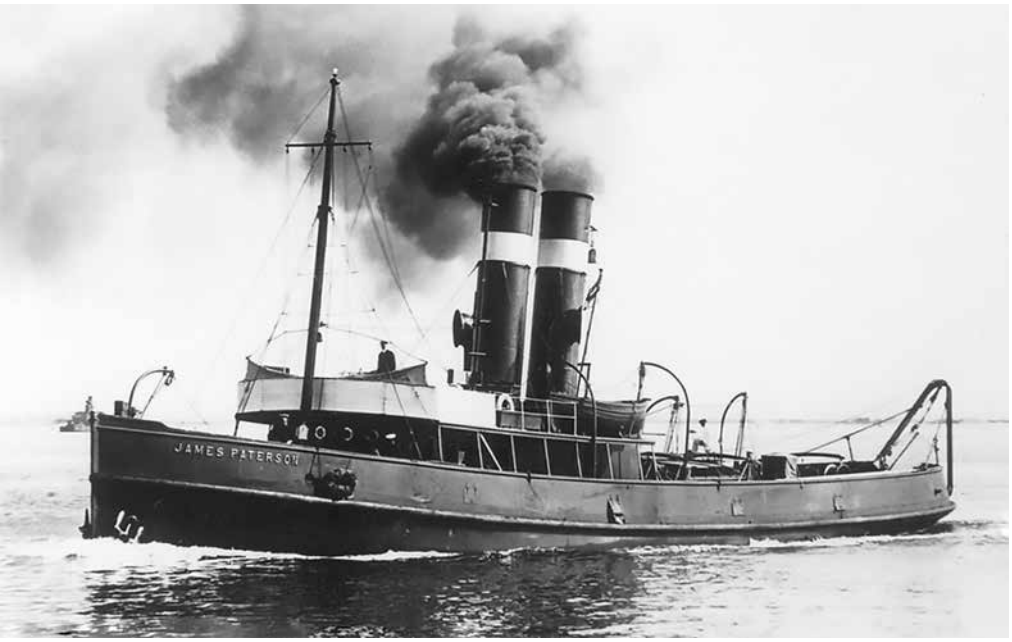
TOPMAST 18 was a reconstructed landing craft adapted for salvage and cargo recovery *photo: coll. Job van Eijk*

Galeazzi brand observation chamber - designed for 550 m water depth *photo: coll. Job van Eijk*

TWYFORD - the first dedicated newbuilding designed for cargo recovery *photo: coll. Job van Eijk*

At first sight peculiar she was designed as a steamer and fitted with steam winches. But at the time steam propulsion was technically reliable and the steam winches were much faster than electric or hydraulic. The ship was also fitted with two **Galeazzi observation chambers** – at one time one of the chambers was lowered to a depth of 430 meter when searching for a particular wreck!. To assist in laying the mooring spread two 8,50 m specially designed launches were shipped, built in Risdon Beazley's own shipyard. In 1954 the vessel recovered 1.200 tons of copper from the Dutch liner *Klipfontein* sunk off Mozambique and nearly 1.300 tons of metals from the *Efstathios* off the Spanish coast. They also worked off the Canadian coast recovering cargo from a depth of 720 feet.

At the time *Twyford* was delivered *Help* was recovering cargo off the Canadian coast and *Foremost 17* off Australia. *Lifeline* and *Foremost 18* were working in north-west Europe. *Foremost 17* had been shipped out to Australia at the end of 1951 – towed by Smit's *Poolzee* – for an intended period of five years working several wrecks on the Australian coast. The operation had been shrouded in secrecy but it soon became known what it was all about. The 1915-built steamer *Cumberland* owned by the Federal Steam Navigation Co. in 1917 had fallen victim to a mine laid by the German raider Wolf



JAMES PATERSON was involved in the initial salvage attempt of CUMBERLAND. Seen here with minesweeping gear aft. The story goes that her Master at the time refused a glassed wheelhouse which was rectified immediately upon his retirement. Built in 1902 she survived until broken up in 1966 *photo: coll. Buster Browne*

near Gabo Island. Salvors succeeded in saving her but the tugs James Patterson and Champion had to abandon her to seek shelter during a severe storm when the steamer was towed back to Eden for further repairs. The storm, however, also caused the temporary patches to break she sank about 5 nm southeast of Green Cape, NSW, in about 110 metres of water. Her cargo of valuable metal was lost with her. Until 1952, that is . . .

As soon as *Foremost 17* had her Asdic fitted they set out for the position of the wreck. They located her on the first try so they laid the mooring spread and started work. In July the winter season ended he recovery and the ship was left at Melbourne for maintenance while the crew flew home. Upon return for their next season they recovered nearly all of the remaining copper and lead. A total of 1.858 tons had been recovered.

Risdon Beazley meanwhile had been approached for the recovery of the remaining 35 bars of gold that had been left in the **wreck of the *Niagara***. The 13.500 ton liner – owned by the Canada-Australia Line - had been carrying 12,5 tons of gold from New Zealand to Canada in 1940 when she hit a mine off New Zealand and sank. The Bank of England, owner of the gold, wanted to try and salvage this cargo. To this end they set up a secretive operation the execution of which was contracted to a syndicate set up by **Captain (later Sir) John Williams**. He formed the United Salvage Syndicate and – still acting secretive – began to assemble the required equipment, some of which could be made by his own or befriended workshops. It was to be a shoestring operation since the Bank of England was keener on the salvage of its property – that was resting some 110 metres below the surface - than it was on the percentage for the salvors.

As a salvage ship capt. Williams discovered a stranded rust-bucket he repaired and set up as the salvage vessel *Claymore*. An observation bell, grabs and a mooring spread were obtained as well as explosives. A blast-and-grab operation was carried out in 1942 recovering gold valued at 2.379.000 Pound Sterling.

(continued on page 218)

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New crew members often face steep learning curves and traditional training methods take time to equip them with the necessary theory and knowledge on the use of tugs. In addition, not all tug operators employ experienced and skilled teachers or are equipped to provide up-to-date and innovative teaching materials. Training of tug crew is traditionally done onboard, by senior tug masters, who may not have the resources to organise the necessary training in a structured way.

Moreover, a lack of sufficient knowledge has been identified as a root cause for many incidents and various investigative boards have strongly advised the tug industry to develop and implement (uniform) training to ensure that all crew members have a thorough understanding of the use of tugs.

Digital innovation
In an era defined by technological and digital advancements, the traditional landscape of education has undergone a remarkable transformation. E-learning has now become an integral part of the educational ecosystem, offering an array of opportunities for learners worldwide.

Over the years e-learning has proven to be very effective, due to the combination of theory, interaction and visualisation of complex issues.

Thanks to these innovative and varied assets, e-learning provides an engaging and highly effective learning tool. Various studies have shown that this combination of visuals, text and audio leads to a higher engagement and a better understanding of the theory.

What's more, e-learning is completely flexible as there is no need to travel to a physical location or schedule a meeting with a teacher, and the student can study whenever and wherever this is most convenient. A welcome side effect is that as there are no travel expenses or the costs of a physical infrastructure, e-learning is very cost-effective. Especially in the maritime world, where students and professionals are travelling in various time zones, e-learning provides an excellent opportunity to offer training that suits their needs.

Polestar Digital Academy
Building on 30+ years of knowledge on tugs and tug training, Polestar Publishing introduces e-learning for tug masters, pilots and all others dealing with tugs in port. The e-learning is based on Captain Henk Hensen's comprehensive *Tug Use in Port*, the standard text book in the tug industry on harbour tugs. The content has been adapted and completed for e-learning by a team of experts and with the support of many partners in the tug community.

Currently, the following elements are being discussed:
- Tug requirements
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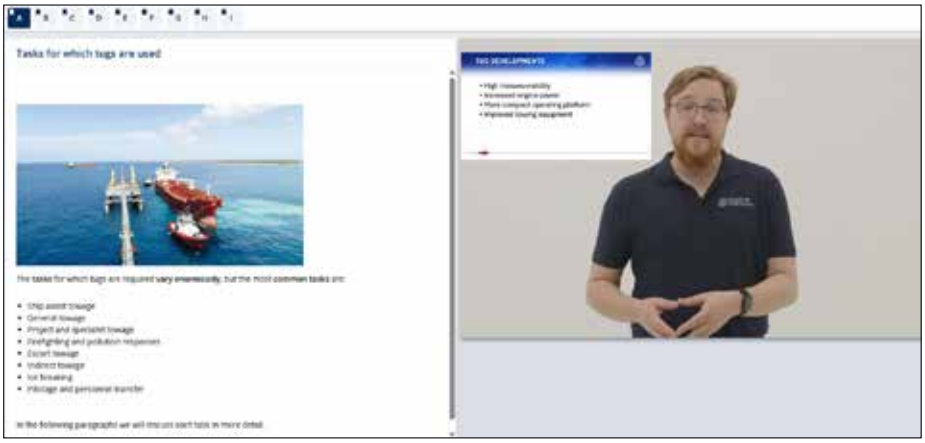
- Effective tug and ship handling
- Ship assistance
- Towing equipment
- Bollard pull

The e-learning will consist of several modules, of approximately 30 minutes each, and knowledge and insight will be tested in quizzes. The progress can be monitored in a simple dashboard and lessons planned by the trainer.

The first module of the e-learning is currently being tested by several tug operators and, after processing their feedback, we expect to launch the final version early 2025. Interested in receiving updates or would you like more information? Please contact us at **digital@polestar-publishing.com**.



It was the remainder of this cargo *Foremost 17* was after. The contract was set up by Johnno Johnstone who had been John Williams' chief-diver. As the salvage vessel was nearby in Australia this seemed an opportunity too good to let pass and on 5 April, 1953 she arrived in New Zealand. Having searched in vain with the Asdic in the position given to them they were finally directed to the correct position by a local fisherman. The anchor spread was laid and recovery began. On 24 April the first bar of gold came aboard. On 25 July, 1953, the final bar was landed Auckland. They recovered 30 out of 35 bars to a value of 120.000 Pound Sterling. Having completed the job the vessel was made ready for the return tow to the U.K.

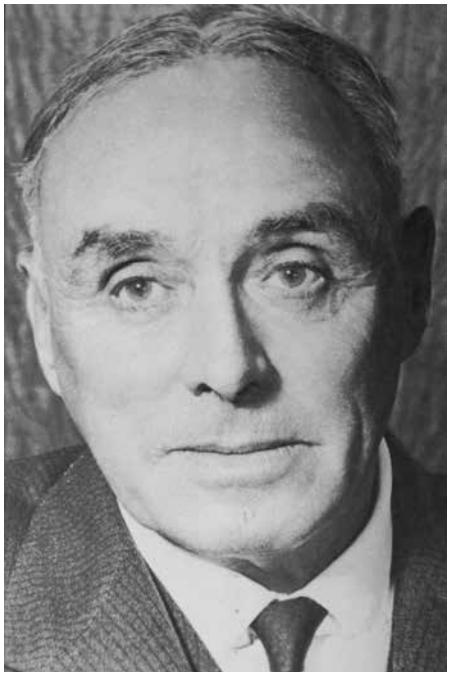
In the following years the salvage fleet was kept employed in cargo recovery but also took on regular salvage work and wreck removal operations. The problem with cargo recovery was that the recovery of the accessible wrecks was went faster than replacements sinkings with valuable cargo. The market was shrinking having an effect on the companies with cargo recovery as their main source of income.

Risdon Beazley soldiered on. In the early **1950s** the company improved on their Asdic capability. They also became one of the first to install the WW2-invented Decca Navigator now commercially available while they also installed radar. As a result of tall this they were now in a position to go for wrecks in much deeper water. They also ordered the first purpose-built cargo-recovery vessel: *Twyford*.

He first year saw her working off South Africa where they were searching for the wreck of *Hannington Court*. Having failed to find the wreck *Twyford* went to locate *Empire Manor* some 180 nm South of Cape Race. Having located the wreck in 100 m of water they discovered it was upside down on the bottom. *Twyford* nevertheless managed to open up the hold that supposedly held the lead, zinc and gold cargo after blasting its way through the double bottom. They found nothing and it was assumed the heavy weight of this metals had burst through the hatch when the vessel turned turtle so it could be anywhere.

The first success was location of the Greek *Efstathios* torpedoed in 1917 in 150 m of water off Cape Penas, North Spain. A total of 1.299 tons of brass, copper wire, cadmium etc was recovered. In 220 m of water the wrecks of *Mount Pindus* (cargo included 800 tons of copper) and *Mount Taygetus* (with 950 tons of copper) were located – the deepest commercial Asdic locations so far.

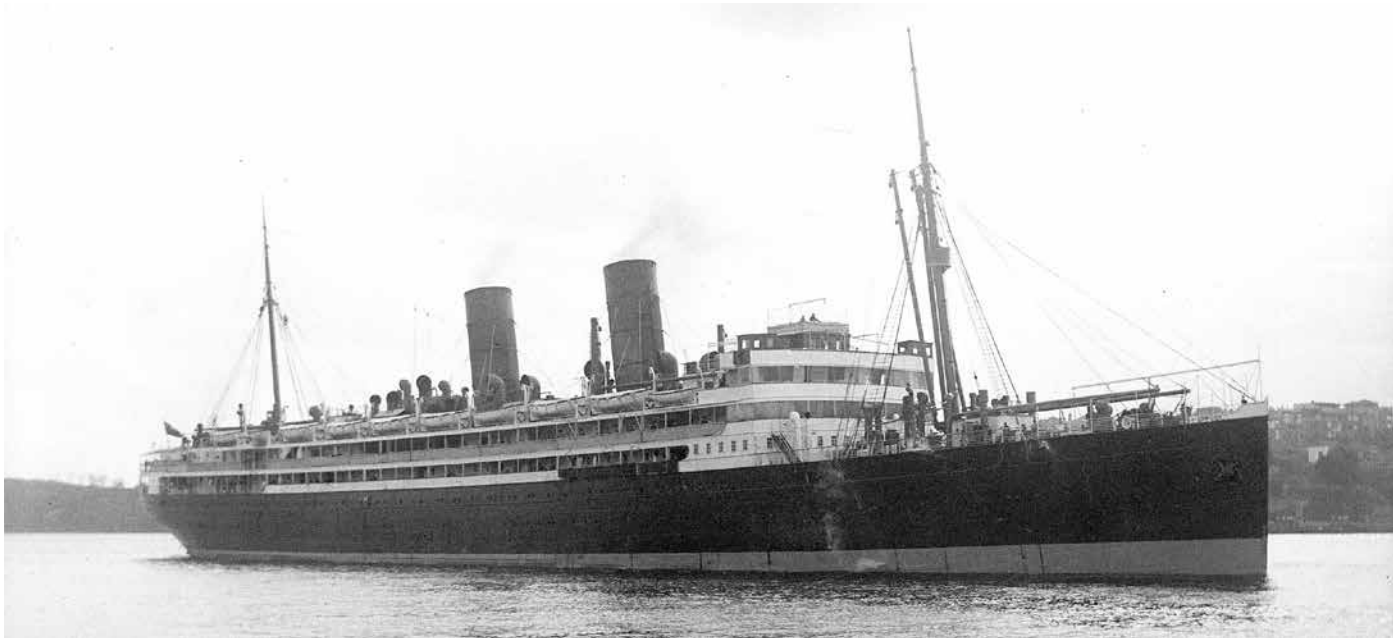
In Northern Europe and the Western Approaches *Help* in the period 1953 – 1956 located not less than thirteen shipwrecks. One of those was *Kong Sigurd* – a small Norwegian steamer that sank in 200 m of water. From this vessel *Lifeline* recovered 156 tons of copper cathodes which was another record for water depth recoveries.



Capt. (Sir) John Williams organised the recovery of gold from NIAGARA *photo: coll. Job van Eijk*

The success of the recovery of metals is in direct line with its market value. In the late 1950s the price of copper had sharply fallen making it uneconomical for *Droxford* to be employed in that market. In 1959 *Twyford* was contracted for the search and recovery of a lost prototype aircraft in the St Georges Channel off Pembrokeshire in 120 m of water. This concerned a GBP 2 million top-secret Victor Mk2 bomber. The search went on into 1959.

The initial search for the lost aircraft was carried out as expected by a number of warships from the fleet. When the 15-month **Operation Victor**



NIAGARA leaving Sydney for Vancouver *photo: Wikipedia*

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Search was initiated more useful naval vessels were selected, like *Barnstone* and *Barglow* –'Bar' class boom defence vessels, *Reclaim* – a deep-diving vessel, the survey ship *Shackleton* and several minesweepers. Later the salvage fleet was extended with no less than 27 fishing vessels of different types – they were engaged in groups of between eight and sixteen vessels over the period of the operation. The fishing vessels shot their nets 11.069 times from the first recovery of wreck parts. In total 592.610 pieces were recovered to the equivalent of 70% of the plane.

By 1960 the cargo recovery business was slack. In addition it must be remembered that for cargo-recovery business the winter months in general are too rough to work in other than sheltered shallow water. So the specialised recovery vessels were usually laid up outside the workable months. During this period they were refitted for the next season. When money was leaving the cash register faster than it was replenished *Help* was sold to the Caribbean to work on construction jobs. *Topmast 16* and *Lifeline* were converted for long-term charter to the Ministry of Transport for their Port emergency Scheme.

The Ulrich Harms connection

For a few years Risdon Beazley and the German **Ulrich Harms** company had cooperated to their mutual advantage, with Risdon Beazley providing divers for Harms and in turn Harms providing sheerlegs for civil engineering contracts obtained by Risdon Beazley.

At the end of 1968 Harms made an offer for Risdon Beazley which was accepted and on 13 January, 1969, the new firm of **Risdon Beazley Ulrich Harms** (RBUH) was incorporated in the U.K. At the same time Harms' **Ernst Borucki** had developed an interest in the cargo recovery business and liked to get in there. This suited Risdon Beazley to a certain extent as it opened up opportunities which Harms had had to pass on as they did not have the required experience. Apparently RBUH initially bare-boat chartered from the parent companies then went on to purchase the chartered vessels.

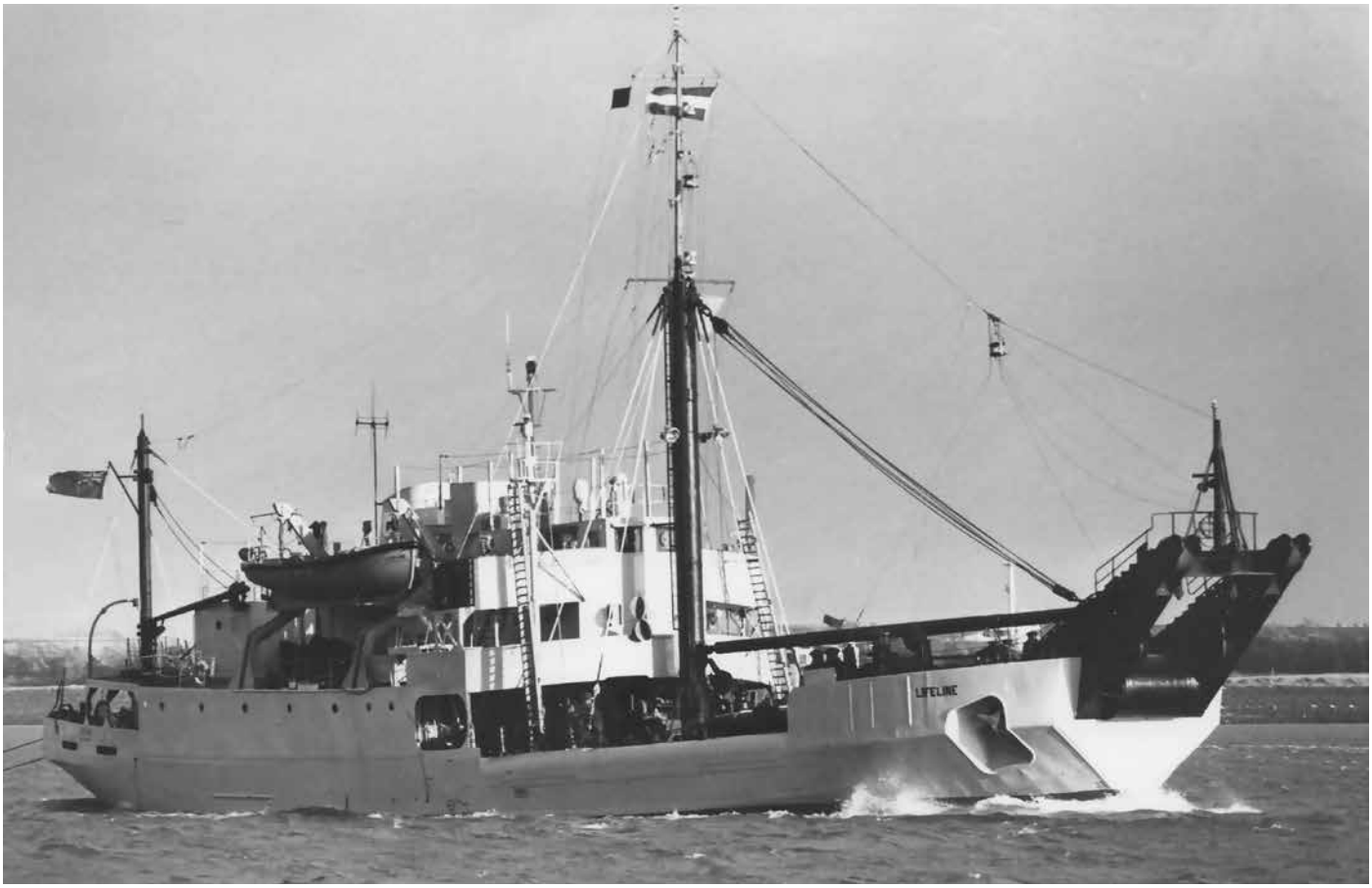
Ulrich Harms GmbH, however, had experienced quick growth but therefore also assembled a large debt. They had quickly grown to be the world leader in salvage heavy lifting using first-class modern equipment. This was not to the liking of the Dutch **Smit** organisation so when Harms ran into financial difficulties they purchased two of their sheerlegs. Another blow came when Borucki - who saw the writing on the wall - left the firm and joined Smit International. In December 1971 he founded **Interbergung** - a 100% Smit subsidiary – that started competition in Hamburg. It took just over a year for Ulrich Harms to give in. In 1973 Smit International purchased Harms including all and any liabilities. The company was restructured as **Harms Bergung GmbH** with Ernst Borucki as its manager.

On 17 April, 1973, a new company was formed. **Risdon Beazley Marine** took over the assets and activities of Risdon Beazley Ulrich Harms. On 30 April, 1973, Risdon Beazley Ltd – the original company – went into voluntary liquidation. The liquidation process was completed on 14 May the same year. *(Note: an extensive history of Harms Bergung was published in TugeZine 12 and TugeZine 13)*

Endgame

The new owner Smit also purchased **Risdon Beazley Marine** which was a majority shareholding of Harms. And apart from Borucki, the Smit management in the form of Paul van den Berg also showed a great interest in the possibilities of cargo recovery.
A reshuffle of the fleet was carried out to optimise both Harms and Risdon Beazley. A blow to the set-up was when Paul van den Berg unexpectedly passed away in 1977. That year, however, Risdon Beazley made a great coup when they finally found *Glenartney* in a trench in just over 300 m of water. In two seasons *Droxford* recovered

An 'iron man' diving suit used on the NIAGARA recovery operation. Variations of this have been used since before EGYPT. In general the salvors found these suits too cumbersome and preferred the option of the observation chamber in many cases *photo: coll. Whangarei Museum*



LIFELINE seen here 16 May, 1976, passing Hook of Holland. She was painted in a peculiar colour of eau-de-nile, perhaps to do with making her less obvious when working certain wrecks

photo: Job van Eijk

750 tons of tin valued at GBP 14 million. Risdon Beazley Ltd at the same time received approval from Smit head office to acquire a supply vessel and convert it for cargo-recovery research. The conversion of *Seaford* was plagued by delays and when finally ready she was often employed on towing jobs with the sheerlegs effectively taking time away from the search operations. It had also become clear that to continue into deeper water a new cargo recovery vessel was needed. Reports on this subject were written by the company but by that time support from the Smit head-office for that type of work had almost disappeared. For 9 out of 10 years in the 1970's the cargo recovery business had delivered a good profit which supported the annual results of Smit in not a small way. Nevertheless none of the profits were ploughed back into the company so the writing was on the wall for the cargo recovery part of the business. Further vessels were taken out of the fleet and by 1980 personnel began to be laid off. **In 1980 Risdon Beazley Marine was closed down** but remained 'active' though 'dormant' in the books. The final blow had been when the Risdon Beazley offer for recovery of the gold carried by the cruiser *HMS Edinburgh* when torpedoed in WW2 was rejected by the **British Government**.

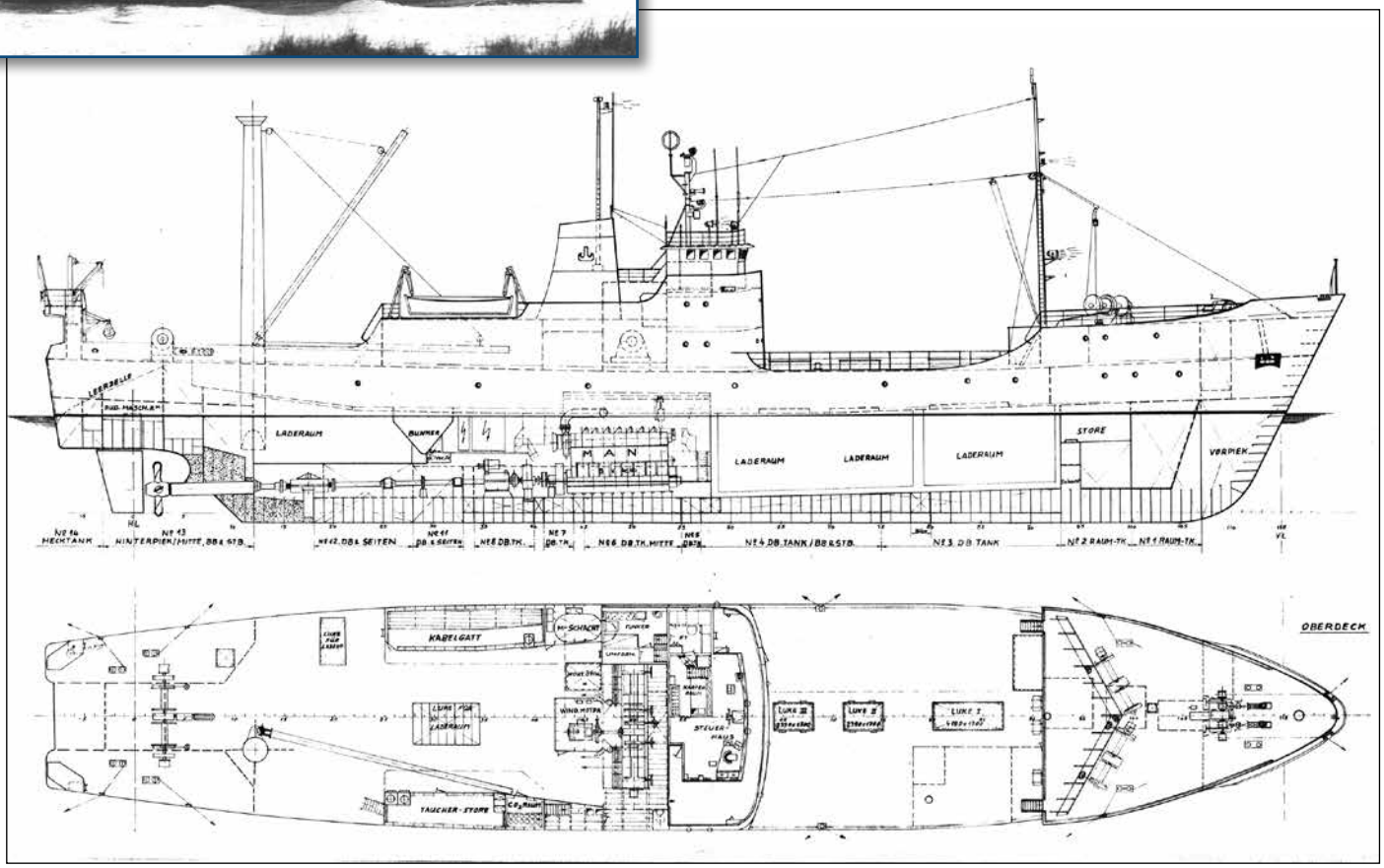
SEAFORD was a former tug / supply vessel adapted for searching for wrecks in deep water

photo: coll. Job van Eijk

The last of the RB vessels were taken over by **Smit International South East Asia**. These included the *Seaford*, the sheerlegs *Telford* and the barge *RB 35*. *Lifeline*, which was already in the Far East since 1978 on cargo recovery operations was scrapped in 1980. These were about the recovery of tin which in those years was traded for up to GBP 10.000 per ton. Smit South East Asia meanwhile made *Smit Malacca* available as a search vessel. This was the former North Sea stern trawler *Clearwater* dating from 1964. She was salvaged after having sunk and taken over by Smit-Tak as a diving support / salvage vessel. They located and inspected two wrecks, *Engen Maru* and *Taigyo Maru*. From the latter vessel *Lifeline* recovered 825 tons of tin. *Engen Maru* yielded 750 tons of tin.

In the years 1947-1980 Risdon Beazley recovered some **50.700 tons** of precious metals.

Harms Bergung's TAURUS prior to the sale to associated Risdon Beazley. The vessel was descibed as cargo-recovery / research / salvage vessel. With Risdon Beazley she was renamed ASHFORD *photo: Job van Eijk*



TAURUS later ASHFORD *drawing: Harms Bergung*

SMIT MALACCA *photo: Airfoto Malacca*

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Deep Water Recovery

It all began in 1972, when divers Simon Martin and Alec Crawford teamed up to make a living out of diving. Basically, doing what you like best and getting paid for it.

by Job van Eijk

Foula was close to where the White Star liner *Oceanic* had run aground never to be freed.

The ship had been subsidised to some extent by the Government so it was constructed with in-built strengthening for the eventual placement of 4.7" guns. In 1914 the Government lifted the option and she was rapidly converted into an armed merchant cruiser. On 7 September, 1914, in a flat calm and reasonable visibility she ran aground on the Hoevdi Grund, better known as the Shaalds Reef, a shallows that in a flat calm does not disturb the surface. Its position some 2 nm east of Foula. The Admiralty salvage vessel *Lyons* was sent. On 29 September a gale smashed the liner to pieces.

When Moya Gerrard arrived on Foula, taking a summer job at one of the crofts she met Alec and Martin who were at work on the *Oceanic*. To cut a long story short, she married Alec Crawford and began participating in the wreck recoveries that Alec and Martin carried out. Soon she was the official deck hand.

Acquiring ever bigger boats for the work they finally acquired *Redeemer*. They strove for minimum overhead and low cost machinery. Alec himself designed all the solutions to the extent that one man in the wheelhouse could handle the entire recovery process. The Crawfords broke down the technical barriers for deep-water cargo recovery.

An extensive article on this company will be published in a forthcoming issue of TugeZine.

The tanker PACIFIC GLORY in 1970 October 1970 collided, started sinking and caught fire. The tanker was moved to a sandbank to avoid a possible total loss. The fire was extinguished but the tanker could not be freed by the tugs. The lightering tanker HALIA operated by Shell U.K. was chartered for a ship-to-ship transfer (STS) operation. After lightering the casualty was refloated and towed to a shipyard for repair. In this photo the STS is ongoing. To recover 18.000 tons of oil 7 days of fair weather were needed. Barely visible alongside is the Smit (NRS) tug SMITHBANK *photo: coll. Job van Eijk*

This photo from June 1932 was taken on board the cargo-recovery vessel ARTIGLIO (2). The company owner, capt. Quaglia (centre) is seen here drying silk fabric recovered from the wreck of the EGYPT. Commendatore Quaglia liked to be on board when important stuff was going on. In this case they had just reached the strong room and were about to empty it. At the same time the silk had been recovered when cutting and blasting a way to the strong room. Compared to the gold the silk was not worth much but Quaglia treasured every penny

photo: coll. Job van Eijk

The Dutch treasure wrecks

In The Netherlands we have two treasure wrecks. A significant amount of 'cargo' has been recovered in the early years after the vessels met their fate, but some of the cargo is still missing. Or is it?

by Job van Eijk

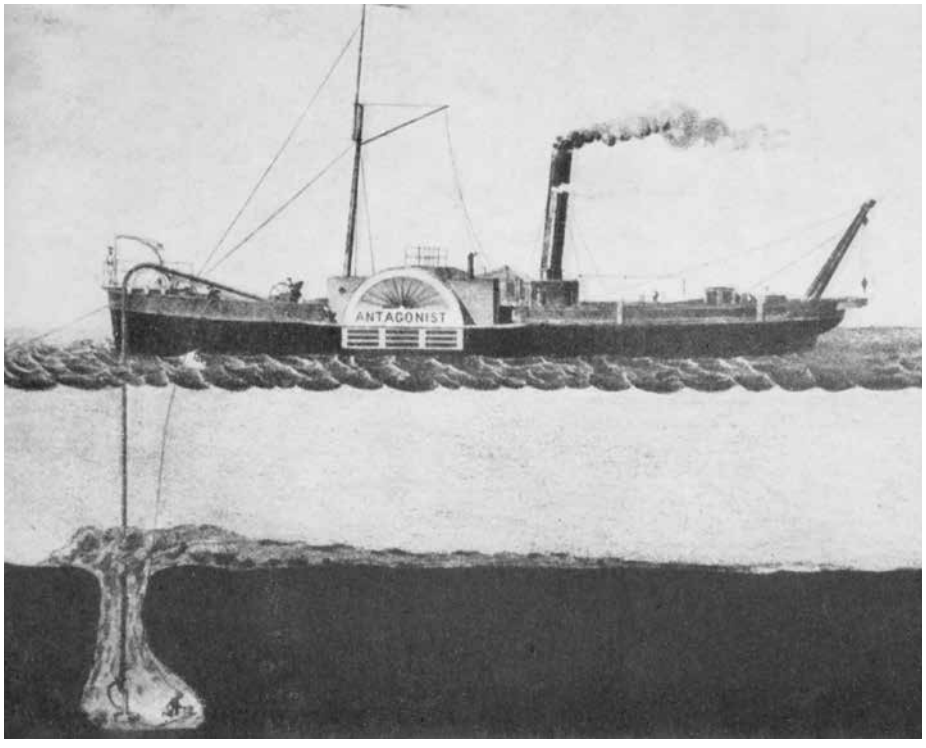
HMS LUTINE being driven ashore - by unknown artist

For the purpose of this article we omit the V.O.C. (United East India Co.) and the W.I.C. (West India Company) wrecks around the world.

The oldest of the wrecks discussed is the British naval vessel *Lutine* (a.k.a. *La Lutine*) which ended up running aground in the shallows between the islands of Vlieland and Terschelling. This happened in 1799. The second wreck is that of the *Loodsboot 19* (pilot boat) sank in the Rotterdam Waterway when during WW2 she hit a mine.

"La Lutine"

by origin and design was not English at all. She was built at Toulon, France, to a design by J.M.B. Coulomb. Classed as a frigate she served in the French Mediterranean fleet. Political hassle led to *La Lutine* being handed to the British Navy. Next she was adapted to British standard and employed as a warship in the North Sea. *La Lutine* was completed in 1779. Her displacement was about 1.100 tons with an approximate length of 41,50 m (oa) and a beam of 10, 80 m (mld). Average draught some 4,15 m.

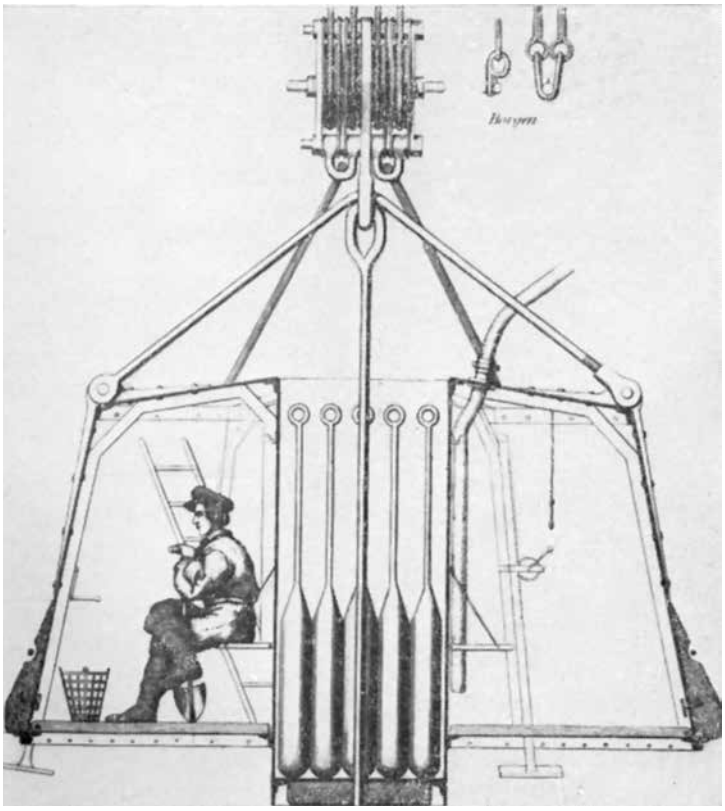


The sand-diving method invented by Ter Meulen

At the time Europe was in turmoil. The Netherlands – at the time known as the Republic of the United Provinces – was oppressed by the then French Government and renamed the Batavian Republic. France in turn had clashes with England while England had invaded part of Holland and Brittania ruled the waves. In 1799 a financial crisis had a large scale impact on Hamburg traders. England had a vested interest in the Hamburg trade and decided to help out. British banks supplied a large amount of money to ship out to Cuxhaven. In September 1799 a series of storms had disrupted the this trade route and no such vessels were available to carry the precious cargo to Germany. The Government therefore chose the frigate *Lutine* - which was available at Yarmouth – to carry out this urgent and important task.

On 9 October 1799 *Lutine* departed Yarmouth with on board apart from her regular crew some 30 passengers, the mail for Germany and a load of gold, silver and coins. Halfway the North sea the weather changed to strong gale with much rain. For some unexplained reason – the ship and crew had frequently been om the Dutch coast – the ship must have drifted south off the NNE course line which should have brought them to the north of the Wadden Islands. This was not the case and she was caught in the shallows between Vlieland and Terschelling. They ran hard aground so the masts may have gone by the board instantly. They were in a position 3 to 4 nm off Terschelling as well as Vlieland.

The LUTINE bell at Lloyds head office in London. The bell in the underwriters room was rung in case of overdue or lost ships



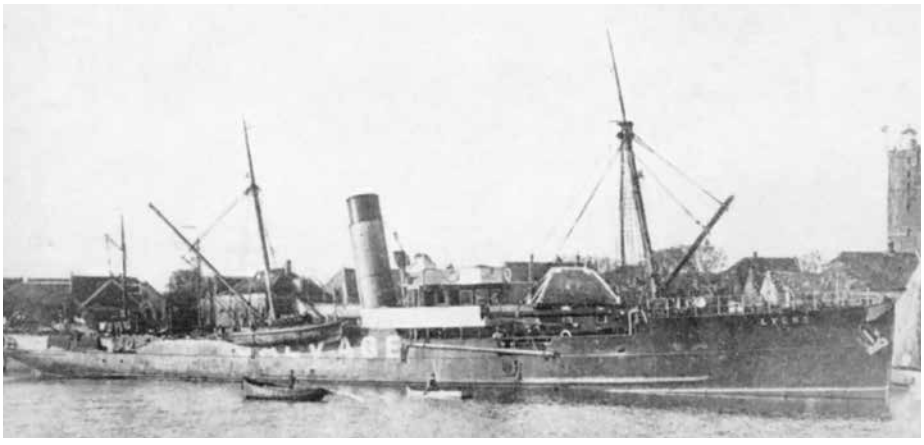
The diving bell annex work caisson was a design by Taurel for diving on the LUTINE

Distress signals were send but the weather and to position made rescue operations impossible. *Lutine* was soon a complete wreck and the 270 people on board save one all drowned.

What exactly happened will never be revealed as the Admiralty contrary to their norms apparently did not make an attempt to get to the truth. Also the one survivor was shielded from contact with the press. This may have had to do with the nature of the cargo. Could the insurers blame the *Lutine* crew, i.e. the admiralty, for neglect then Lloyds would have unloaded the responsibility of the insurers onto the Admiralty.

What followed was a 200-year hunt for gold and silver

The British – Terschelling and Vlieland were occupied by them – acted quick to protect their interest. They manned a small cutter and send this out to guard the wreck. But even before that local boats had already raided the wreck for useful material. The local Receiver of Wrecks also acted pointing out the illegal pilfering of the wreck by locals – as well as by the English occupiers. He then was appointed as the legal sole salvor. In August, **1800**, the first gold – 7 bars - and an amount of Spanish coins was recovered. The news of this attracted a lot of attention. One group that was very visible were fishermen from Urk. Their presence forced the Receiver to make a deal and allow several to join in the salvage. In later years stories popped up more or less suggesting that some of the fishermen had acquired a lifestyle above what may have been expected from just fishing. Nothing, however, was ever proven about the alleged sticky fingers. In 1810 mr. Robbé - the Receiver of Wrecks – was replaced by mr **Pierre Eschauzier**. In 1813 the British were kicked out of Holland and the next year Eschauzier obtained a subsidy for a salvage (recovery) attempt. Except for some gold and silver coins nothing was achieved and *Lutine* disappeared in the sand.



The salvage vessel LYONS at Terschelling - from an old postcard

Lutine gradually fell apart and when the wreck could no longer be reached by simple methods like hooks, nets, etc. more ingenious methods had to be devised. In **1821** the wreck was again located. Eschauzier formed a syndicate and purchased a **diving bell** developed by the British engineer **Rennie**. Another purchase was a schooner that rigged for handling the 3-tonne (open) bell. A few hours of work found the *Lutine* anchors but bad weather drove the team to abandon the attempt. When they returned *Lutine* had again disappeared. From then on various expeditions were made by a variety of interested people. As a result new diving techniques were developed or proposed.

In **1823** the British diving family **Bell** arrived with their vessels. And a reputation in cargo recovery from

sunken ships. More attempts by various entrepreneurs were made in **1834**, **1835, 1842** and **1843**. In **1857** the engineer Louis **Taurel** managed the recovery attempt with hardhat divers. They found items belonging to the ship but nothing else. In **1860** Taurel had designed and built a new type of diving bell, as well as a dedicated mother ship but by 1862 the money had run out.

In **1867** Willem Hendrik **ter Meulen** approached the syndicate with a proposal to recover the cargo using his **'sand diver'** invention. The syndicate provided the money to buy a suitable ship. This was he British tug *Antagonist*. In this tug the paddle wheels could be uncoupled from the drive shaft which was the used to drive the centrifugal pump. The idea was to use a vertical pipe through which water was pumped at high pressure which would fluidise the sand that would then be carried to the surface by the water flow. Full scale tests proved the system the only drawback was the diver needing to carry a serious amount of ballast. The water depth over the wreck, however, was a crucial point and ter Meulen had to wait for this situation to arrive.

In **1893 The Lutine Syndicat.** The construction they thought was the answer collapsed twice. For 5 years they had found nothing.

In **1900** one of the partners in The Lutine Company established the **New Lutine Company**. They proposed bucket dredger never arrived.

In **1910** the British **National Salvage Association**'s salvage vessel *Lyons* arrived at Terschelling. The former cross-channel steamer was reconstructed as a salvage vessel. With a length of 80 m and a beam of 9 m her draught was only 3 metres. The engines produced 1.650 hp and when coupled to the pumps some 2.200 tons of sand could be moved per hour. Her lighter – **Bill O'Malley** - was fitted with a pump delivering 380 t/hr. The manager of this project was **Capt. Charles Gardiner** who had an extensive experience with cargo recovery salvage. The start was promising with lots of parts of the ship but also silver and gold coins. It never amounted to much but *Lyons* was kept in business through the occasional ordinary salvage. The start of

P.A. van Hecking Colenbrander with his improved coal grab with water injection - on board STORTEMELK in 1924

WW1 ended her presence on the *Lutine* as she was recalled to England.

In **1923** tests were caried out with a coal grab modified by messrs **van Hecking Colenbrander** and **van der Wallen**. The grab was fitted with jet pipes and a high-pressure water hose. The jets fluidised the sand allowing the grab to lower through the sand to the wreck. As long

The first Beckers-designed tower for working over the wreck of LUTINE

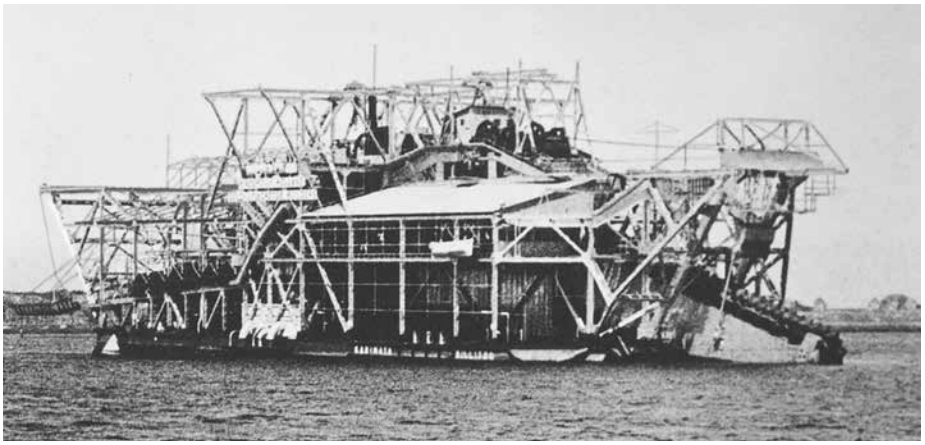
The world's biggest (tin)dredger KARIMATA *photo: Dutch National Archives - photo Rijksvoorlichtingsdienst*

KARIMATA working the Lutine location

as the jets worked the way back to the surface remained open. Tests carried out in open water looked promising so a syndicate was established. In 1924 work was started from on board the chartered Doeksen tug *Stortemelk*. Apart for some small pieces of the wreck nothing of value was recovered.

In **1928** the local salvage companies finally entered the fray. The **Steamship Company Texel** and **Shipping Company G. Doeksen** joined forces obtaining a salvage contract for five years. They started removing sand with their shell dredgers *Texel* and *Volharding*. Again small stuff was found but nothing of real value. In 1932 they halted the project. In **1933 Frans Beckers** entered the stage. His design was a conical shaped chamber – like a caisson - which was to be positioned on the bottom at the wreck site. It would sink into the bottom by its own weight until it rested on the clay layer. The sand on the inside would then be removed and work could start. Not so. The first attempt succeeded but after a severe storm the plating had loosened and was partly destroyed.

Doeksen's VOLHARDING - a shell dredger-tug-salvage vessel and ferry - seen here 23-7-1938. This may be a tourist trip to see the KARIMATA *photo: coll. Job van Eijk*



KARIMATA off Terschelling

A new tower – this time welded – was constructed. By 1935 a most of the wreck had been removed but nothing of value had been recovered. The project was ended, the top half of the tower removed but the bottom part refused to come and had to be abandoned.

In the wake of this at least four proposals had been made and rejected. Because a new project on an industrial scale was about to happen.

In **1938** the new tin-dredger *Karimata* was delivered to the owners, the **Billiton Maatschappij**. Intended for work in the Far east there was a certain weather window needed for a safe tow of the dredger. As long as this window was closed the *Karimata* was tasked to dredge the Lutine site and recover the remaining gold estimated at a value of 8 million Dutch Guilders minimum. Possibly even 18 million. *Karimata* arrived on site in June, 1938. The dredger had been fitted with heavier-than-usual anchor wires as they worked in open water. In all it was not a great success. Apart from pieces from the wreck, guns and even parts of the old Beckers tower some silver coins were found as well as a single gold bar. When the weather window for the tow to the Dutch East Indies opened up *Karimata* left the location.

In **1979** an underwater search was carried out by **Oretech** using the latest in underwater survey techniques. It was said that by tracing the debris that was located the trail of the *Lutine* was traced to her final resting place. The search was based on the possibility that *Lutine* might have ripped part of her bottom out leaving part of the bullion behind her on the sea floor which might explain why *Karimata* had been unable to find much.

The initiative came from the Australian businessman **Charles Mortimer** and the New Zealand diver **Kelly Tarlton** who was known from recovering diamonds from the wreck of *Tasmania* sunk in 1897 off Australia and the recovery of a large quantity of silver coins from the wreck of the *Elingamite* which had sunk off New Zealand in 1901.

For the recovery the supply vessel *Yak* was chartered. She was fitted with two jet-like tubes that could be lowered aft of the propeller re-directing the prop-was straight down. When activated holes up to a depth of 8 metres and 25 metre diameter could be blown in the bottom. Divers then went down to recover whatever they may find. A lot was found, however most of which from other shipwrecks and other junk deposited on the bottom. In 1980 they ran out of money and never returned to The Netherlands.

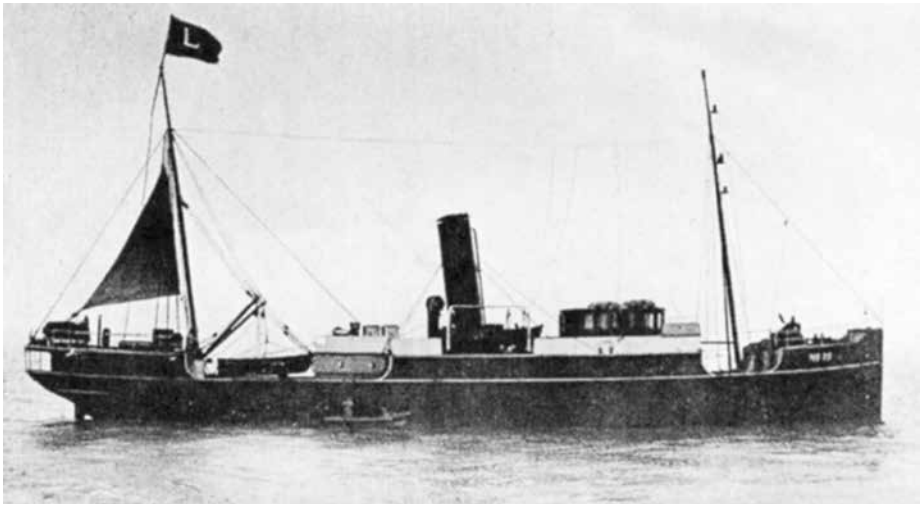
A problem has always been the exact quantities that were loaded on board *Lutine*. The published figures at the time of the disaster differ widely - for the type as well as the quantity and the value of the cargo. A problem is that Lloyds – the insurers – in 1838 lost its files when a big fire destroyed the Exchange where they had their offices. As insurers they would have correct figures. That will always remain the big question mark.

Research is still carried out every now and then by local dive teams, sports divers that dive for pleasure combining this with real research sometimes followed up by recovery of interesting objects. The law in The Netherlands has been adapted to accommodate that kind of archaeological diving although the artefacts become state-property and the state keeps an eye on who does what. Some of the shipwrecks now have a protected status.

"Loodsboot 19"

All the trouble listed for the *Lutine* does not apply to the second gold ship, the pilot boat *Loodsboot 19.*
As soon as Germany went to war a series of vessels were requisitioned by the Dutch Government. The Netherlands had declared itself neutral at the start of the conflict but needed to guard its waters. To this end a number of pilot boats, tugs and likewise vessels were placed under military command, if possible armed, and put on duty as guard ships. These included a number of pilot boats and ocean tugs.

One of those was *Loodsboot 19*, which was henceforth to be identified as *BV 19-A*. As the pilotage service was a division of the Navy the bigger pilot boats were constructed with fittings for guns. *BV 19-A* thus was fitted with two 3.7 guns. The vessel was delivered by



LOODSBOOT 19

the builders Boele Bolnes on 24 May, 1923. Dimensions were 46,50 x 7,75 m. Main engine was a triple-expansion with an output of 927 ihp. Her speed was 12,6 knots.

Other pilot boats that became guardships were *Loodsboot 4*, *Loodsboot 5*, *Loodsboot 7*, *Loodsboot 8*, *Loodsboot 9*, *Loodsboot 12*, *Loodsboot 16* and *Loodsboot 17*.

Hoek van Holland, 10 May, 1940

During the night Germany had invaded Holland, despite confirmations over and over of the neutrality agreements. Hoek van Holland, with its important entrance to the Rotterdam Waterway was an early target with planes dropping mines to try and block the Waterway. The Waterway itself was defended against enemy ships entering but as it was the mine-laying planes were the problem.

The Dutch Government had appealed to the British for help but this was not forthcoming in strength, although mine-sweeping planes were likely to be send. The reason was that no plans had been made by the Dutch Government prior to the war for the 'if, then' scenario. One thing the British did guarantee was that they would send demolition teams to deny the enemy the use of Dutch ports. Around midday the destroyer *Wild Swan* arrived at 'the Hook'. On board was a demolition party of 95 under Commander Hill. Next, the destroyer *Wyvern* arrived with a military mission. Having been informed of the situation the destroyer left again for Vlissingen. Nr. 3, the destroyer *Havelock* was requested to stay at sea and take aim at enemy planes dropping para's to the north of Hoek van Holland.

The fore part of the wreck *photo: Vlaardingen City Archives*

It was decided to transport the demolition team to Rotterdam using *BV 19-A*. The vessel obviously looked less threatening than the destroyer which in addition would be difficult to manoeuvre in the Waterway and on the Maas River. At 18.30 hr *Wild Swan* received an urgent coded message from the British Admiralty. It stated that an estimated 34 tons of gold was at Rotterdam and that it was essential to get this gold away that same night. Gold to be loaded in merchant ships or *Wild Swan*, as convenient. The commanding officer Younghusband and commander Hill then decided to use the pilot boat. 19.30 hr *BV 19-A* left Hoek van Holland for Rotterdam.

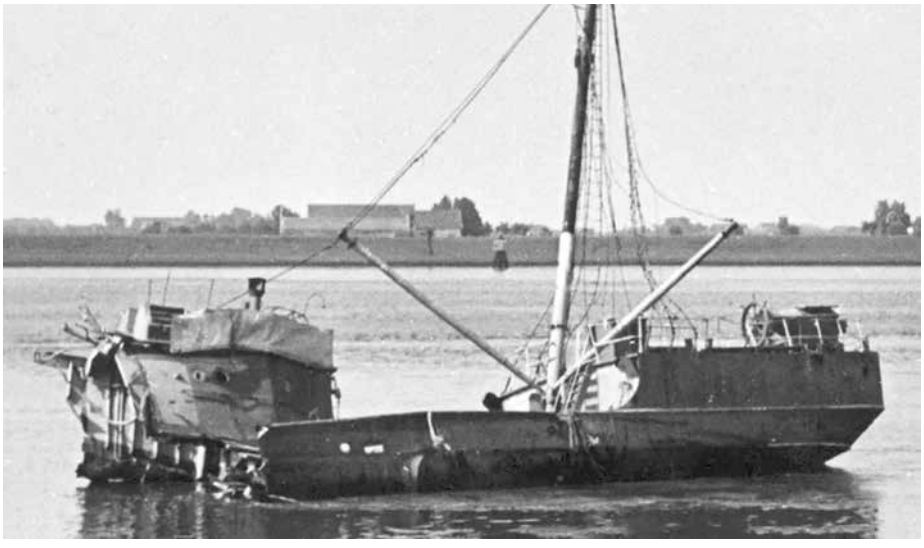
Dutch gold reserves

On 10 May the Amsterdam office of the DNB - the Dutch National Bank – had managed to ship gold to the value of 166 million (sources differ about the value transported – ed.) from IJmuiden to England. *Titus* and *Iris* belonging to the K.N.S.M. – the Royal Netherlands Shipping Co. - were used. This was a win-win situation since the K.N.S.M. was any way sending the ships out of reach of the enemy.

Prior to this, since 1939 smaller shipments of gold had secretly been shipped abroad.

In Rotterdam, however, another big chunk of gold - was stored. Unfortunately, that bank office was more or less in the front line as the Germans from across the river it was in plain sight. It was therefore impossible to moor in front of the bank so *BV 19-A* was diverted to the Lekhaven. From there the demolition crew walked to the Rederijkade and the backdoor of the bank. Around midnight four trucks with Dutch Marines arrived. In total 192 cases with 937 gold bars – a weight of some 11 tonnes – were loaded. The trucks safely reached the Lekhaven and started loading. The cargo was stacked on both sides of the wheelhouse and behind the funnel. Incidentally, a lot of gold - 103 tonnes (again figures differ – ed) - had to be left behind in the bank as it was necessary to leave pre-dawn. The demolition crew requisitioned the trucks and went back to Hoek van Holland. Commander Hill and two of his team decided to stay with the gold.

At 05.00 hr on 11 May the lines were cast off and course set for Hoek van Holland and *Wild Swan*. It is unclear whether



The aft part of the wreck *photo: Vlaardingen City Archives*

the Master had been warned about planes dropping a new load of mines in the river. As it was things seemed to be working out as by 05.30 hr *BV-19-A* had passed the city of Vlaardingen.

Then, in position near kmr 1013, she activated a magnetic mine. The mine exploded below the engine room and *BV 19-A* instantly broke her back. Six people out of the 22 on board survived, commander Hill was not one of them.

What happened next

All involved in the gold transport decided to not mention this to anyone - not about the British military on board or about the cargo - so the Germans could not take possession. When Holland capitulated on 15 May one of the issues raised was the clearance of wrecks blocking entrance to the ports. The matter of the *Loodsboot 19* / *BV 19-A* was raised by the Director of the Pilotage Service, division Rotterdam. The Pilotage Service was under pressure of family members of the dead still in the wreck to bring them ashore. Rijkswaterstaat, responsible for the waterways in Holland, wanted to clear the wreck. As *BV 19-A* technically was a Navy vessel they had to decide about what to do. But there was no longer a Dutch Navy in Holland. And obviously the Germans could not be asked to act. The DNB was only interested in the gold but probably under the circumstances was happy to leave it where it was.

Anyway, it was Rijkswaterstaat that decided. On 29 May they ordered the Rotterdam and Maassluis-based salvage company **Van den Tak** – a subsidiary of L. Smit & Co's International Towage Service – to investigate the wreck and report on how best the wreck could be removed, including a cost-estimate. On 31 May the diver survey stated that they found the forward and aft part of the ship were apart. The salvage plan included the use of three sheerlegs to lift the forward section and two for the aft section. Both sections were to be repositioned as close as possible to the north bank.

Van den Tak was contracted for the job. First priority apparently was the salvage of the gold. This was done under a cloud of secrecy. The daily haul was shipped to the (now remains – the building had been bombed) of the DNB Bank but the strong rooms below were intact. For safety reasons as usual a guard ship was on the location of a salvage operation. Sometimes the transport was by a police boat, a Rijkswaterstaat vessel – *Maassluis* – or by car. On 13 June three sheerlegs raised the fore part of the wreck. It was put aground near kmr 1016, east of Maassluis. On 17 June the aft part followed. What remained to be cleared were engine room parts.

The salvage had been carried out by Van den Tak's salvage vessels *Bruinvisch*, *Zeeleeuw*, *Schollevaar* and *Dolfijn* while the sheerlegs used were *Kolossus II*, *Heracles* and *Giraffe*. Of the gold bars a total of 750 out of the original 937 had been reported as recovered and returned to the DNB.

Rijkswaterstaat advised that immediate scrapping of the two wreck parts was a matter of some urgence as some of the gold may still be inside. This resulted in the recovery of another 10 bars found in the remains of the fore part. Rijkswaterstaat also indicated that more gold bars could have sunk into the mud and they advised a dredging operation near kmr 1013. The dredging company **Adriaan Volker** offered dredging to a depth of 13,5 m below N.A.P. over an area of 55.000 m^2. On 24 September the operation was started. They recovered a total of 40 bars, upping the total to 790.

When inspecting the remains put aground near Maassluis another 15 bars were recovered. To make a total of 816 (some sources mention 815) out of a total of 937, so 122 or 121 were still missing. Unfortunately the Germans ultimately discovered what had happened under their noses. The result was that all the

The salvage vessel ZEELEEUW seen here post-war was built in 1939 for account of W.A. van den Tak - Taksberging voor short. 160 bhp - 24,08 (oa) x 5,83 m. 1972 to the Bangladesh State Organisation for Salvage

postcard: issued by Taksberging - photo Jaap Heijliger

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recovered gold plus the gold still in the bank's strong rooms was confiscated and shipped out of Holland.

Post WW2

the story of the gold (and thus the missing bars) was more or less forgotten. Until June, 1946, that is . . . For the construction of an industrial area at Schiedam called 'Spaanse Polder' it was necessary to first raise the level of the ground. In order to 'make work with work' the required material had to be the result of deepening the river. For this work Adriaan Volker used the bucket dredger *Schelde* (built 1913 – bucket capacity 0,8 m3 each – dredging depth 14 m – extension to 22 m possible) for the deepening. The soil was dumped in barges and transported to the Merwehaven from where the barge-unloading reclamation dredger *Sliedrecht IX* (built 1929 – total power on the pumps 1.500 hp) pumped the material to the construction site.

When unloading a barge one day the suction pipe became clogged. When removing the object the dredge master also found a gold bar. He was aware of the story of *Loodsboot 19* so he knew what to do. He handed the bar to his owners who in turn handed them to the police. The story reached the press and gold fever erupted.

Following this first find more bars were recovered, most of them on the bottom of the barges. DNB was, of course, pleasantly surprised by the finds. It was only when Volker billed them for the cleaning of the barges they woke up to the fact that some form of reward for the dredging crews was necessary if they wanted to see more than the 10 bars.

Meanwhile Rijkswaterstaat on behalf of the DNB developed a plan for the recovery of more bars. A new contract was agreed and a bonus system for recovered bars was put in place by DNB. When the operation ended another 111 bars had been recovered, leaving 10 bars missing.

'Private Recoveries'

Immediately post war the situation for the people of The Netherlands was relatively grim. Wages were low and the war damage had to be restored. There was scarcity of almost everything. This obviously could be a breeding ground for dishonesty. Millions of guilders passed through the hands of the dredging crews. And while DNB had put inspectors on board 24/7 they were sometimes a bit slack fulfilling their duty. This created space for some of the crew to act.

At least 4 bars were recovered 'in private'. These four bars are the only ones for which it was proven they had been stolen. Those involved were prosecuted and ended up in jail. This played out around 1949. The remaining six bars never turned up, although many rumours were noted.

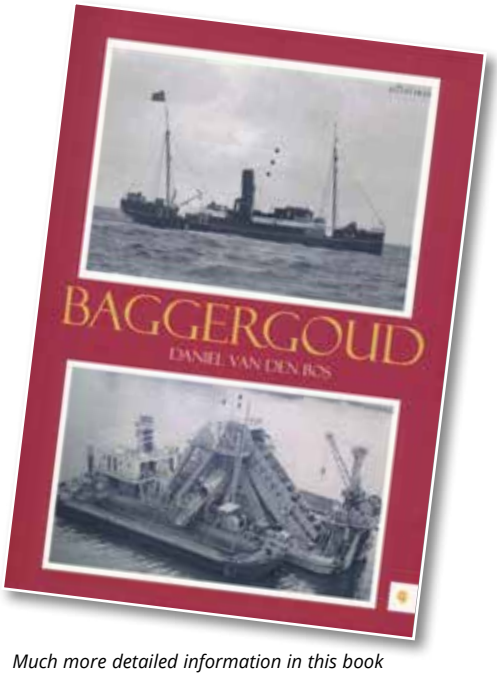
A third but questionable gold ship was "Tubantia", a liner torpedoed in 1916.

The 14.053 grt liner owned by Koninklijke Hollandsche Lloyd sank 15 March, 1916, 4 nm from Noord-Hinder light vessel following an explosion.. All passengers and crew were saved. Proof was found of what could only be a German torpedo.

Rumours about a load of valuable German securities on board, about gold being illegally shipped, etc popped up. as a possible reason for Germany wanting to sink the vessel. The Germans, however, paid a compensation much higher than the lost value of the ship and this fired the rumours.

Among the salvors showing up over the wreck were Major Vincent Sippé and Count Landi. Capt. Wilson as well as Captain Damant dived on the wreck. Nothing was found but rumours continue to this day.

Sources: Lost Treasure Ships of the Twentieth Century – published 1999 – author: Nigel Pickford; De Lutine 1799-1999 – published 1999 – editors: Bert Huiskes, Geraldt de Weerd; Goud in de Golven, de ware geschiedenis van de Lutine – author: S.J. van der Molen; Baggergoud – published 2011 – author Daniel van den Bos; Wikipedia on the subject of Lutine; Rijkswaterstaat wreck maps; archive Job van Eijk; Oorlog rond Hoek van Holland – published 2000 – authors: Hans Onderwater, Dick Ruis, Piet van Noort, Rpland Blok; Willem Hendrik ter Meulen in zijne werkzaamheid voor de Lutine – published 1907 – author: F.P. ter Meulen; Hoek van Holland zoals het was – published 2022 – authors: Dirk Ruis, Gerben Visser, Ria van Baalen, Henk van der Lugt; Smit 150 – published 1992 – author:: Gerrit J. de Boer;



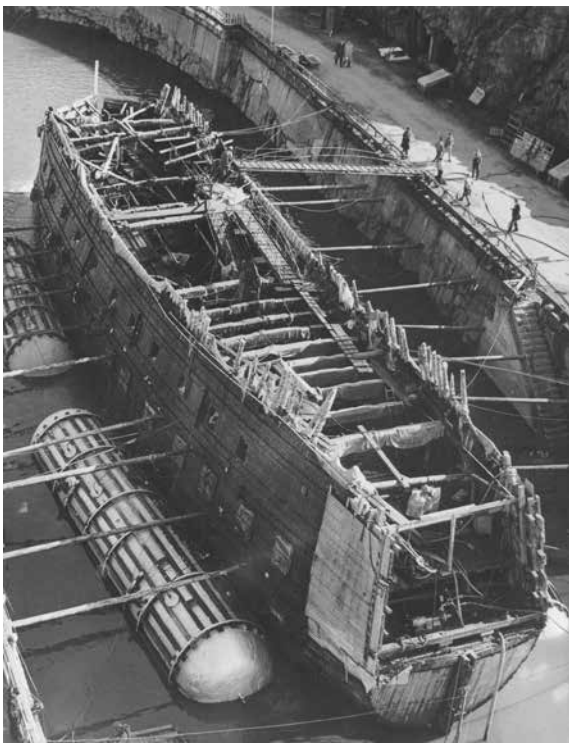
Much more detailed information in this book

Like ZEELEEUW, SCHOLLEVAAR was also employed in the 1940 wreck removal / gold salvage operation. Built 1940 - 60 bhp - 20,01 x 5,50 m. 1943 NT 45 for Kriegsmarine. 1944 BS 41 (Bergungsschiff Verband). 1945 aagain Taksberging. 1969 sold for scrap *photo: postcard issued by W.A. van den Tak*

Wreck Recovery

Wreck Recovery – as opposed to Wreck Removal aims at bringing a ship(wreck) to the surface in one piece. This is done mostly for restoration or archaeological reason for wrecks with historic significance.

by TDI Tugboat Publications



VASA at her final destination in dry dock

photo: newspaper Daily Telegraph May 1961

One such operation was that of the (now) well-known **Swedish warship *Vasa***. From the builders she had been under sail for less than one (1) nm when she capsized and disappeared beneath the surface. Lost to memory for 333 years. Several would-be salvors appeared on the spot but non found the wreck. But one **Anders Franzén** had developed a taste for lost galleons and their probable content. By 1945 he was using the summers to actively search the archipelago where Vasa had foundered, although not for that specific vessel. He gradually learnt that the wooden hulls did not suffer much in the brackish waters he surveyed which was a good thing. As an amateur archaeologist he began to develop a particular desire to locate *Vasa*.

In 1956 he discovered the clue in a letter send to the King two days after the event. And in August 1956 using his core sampler discovered a wreck in the approximate location. Diver Edvin Falting of the Naval Diving School reached bottom next to the hull of a wreck which he after his reconnaissance declared to be the long lost *Vasa*.
As a prime example of naval architecture of the day – when ship construction happened on sight and mainly without drawings – and fairly intact she was priceless. In 1957 the **Vasa Committee** was formed and plans developed for the future of the ship and ,manners to get her up. That is where **Neptun Bolaget** came into play. By mid-1959 the wreck had been cleared of much of the debris and made ready for the lifting operation. However, exposing her to air would be disastrous so further plans and solutions were needed.

The salvage itself was carried out under the command of **Captain Axel Hedberg**, his last job before retirement. We have met Capt Hedberg before in this issue, when he searched for the *Egypt* on behalf of **Alain Terme**. (See back page for the salvage fleet prior to bringing *Vasa* to the surface).

The "Great Britain" case

This ship was a technical innovation incorporating many firsts when she was constructed in 1843 / 1844 to a design by Isambard Kingdom Brunel. The first oceangoing ship built of iron, he first large vessel with a screw propeller, double bottom and watertight bulkheads. Main dimensions were approximately 100 x 15,20 m, displacement 3.270 tons 600 hp main engine, speed 12,5 knots. In 1876 she was sold and reconstructed as a sailing vessel. In 1886 she had a fir on board and sought refuse in the Falkland Islands. Declared CTL she was sold locally as a floating storage facility. In 1933 she was retired , partly stripped and put aground in Sparrow Cove, some 4 nm North of Point Stanley.

By 1970 interest in *Great Britain* had been renewed and proposals made to bring the iconic vessel back to the U.K. for preservation and restoration. **Risdon Beazley** was approached to carry out a diver survey. After consideration they were also hired for the salvage job. As the hull was too damaged to survive the long tow home she was to be transported on pontoon. Beazley associate **Ulrich Harms Bergung**. The tug / salvage vessel *Varius 2* and the pontoon *Mulus 3* were mobilised to Sparrow Point.

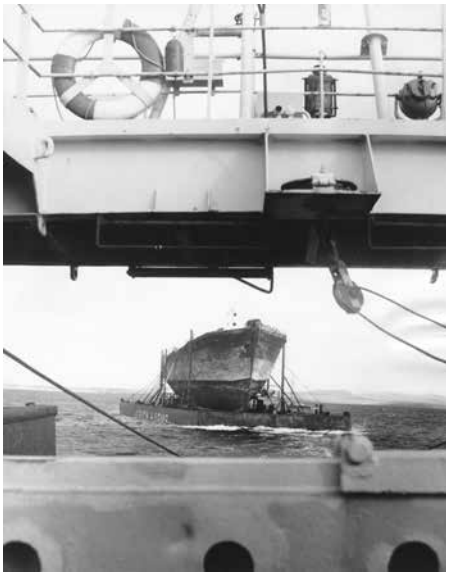
Anders Fränzen who discovered the wreck of VASA

photo: coll. Job van Eijk

Capt. Anders Hedberg led the actual salvage of VASA

photo: coll. Job van Eijk

Salvage of GREAT BRITAIN under way in the Falklands at Sparrow Point *photo: coll. Job van Eijk*



GREAT BRITAIN riding piggy-back on the pontoon MULUS 3 en route the U.K. as seen from VARIUS II *photo: coll. Job van Eijk*

Prior to loading the hull had to be patched and a beginning split repaired. Next temporary lashings were put in place for the short tow to Port Stanley where all sea fastenings were to be fitted. The transport reached Bristol on 19 July, 1970. The next phase of restoration is, however, beyond the scope of this article.
A detailed account of this salvage operation can be found in 'Risdon Beazley, Marine Salvor, edition March, 2011.

The ocean tug "Ebro"
Delivered in 1931 she was the last oceangoing steam tug built for account of L. Smit & Co's International Towage Co., Rotterdam. The basic design had been used and developed by many Dutch tug operators since before 1900..

On 11 January, 1958, the tug was moored at Vlissingen (Flushing) sheltering with her tow due to the forecast bad weather. At approx. 1700 hrs a radio call from the Dutch freighter *Lindekerk* (7.000 tons) alerted the crew. The freighter had run aground . *Ebro* immediately left port but at 2020 hrs she hit bottom on the tail end of the Banjaards Bank. Unable to free herself the lifeboat was called in and the crew abandoned ship. Over the months the wreck slowly settled in the sand and disappeared from view.

In 1986 she was found by sports diver **Jan Plat**. The tugs was lying in upright position on the bottom and looked well preserved although the superstructure was gone. Having no knowledge of tugs he contacted Smit International, the Dutch National Towage Museum and Lekko International Tug Enthusiasts Society **Jaap Heijliger**. The thought was that this could perhaps become a monument for Dutch towage. Nothing much happened until one day Jaap Heijliger met **Capt. Van Slooten** of the lifting vessel *Taklift 4*. Van Slooten got interested so **Klaas Reinigert**, Director of Smit-Tak was approached. He send the salvage vessel *Dolfijn* on location for a diver survey. Based on this the project was given the blessing of Smit-Tak with orders to proceed. On 27 September, 1986, the lifting vessel arrived on location. Just in time, because the sands were shifting so this had to be cleared from the bow section first. On 2 October *Ebro* was raised. Amongst the spectators was **Capt Jan Bruins** who stepped aboard the vessel he had last seen from the lifeboat in 1958.

The flotilla set course for Flushing where the **Schelde Yard** had prepared a bed ashore for the Schelde. Here she rested to await further developments. A group of volunteers emptied the vessel of sand, got some of the machinery out which was restored by various technical schools, and mapped and labelled the content of the hull. The plating in most parts was still good and preservation tests were carried out.

The salvage was unique in that it was all carried out for free, port authorities included as was the yard. Permits necessary and paperwork needed was done with a handshake instead of offers and payments. In the end the project could not be finished due to lack of money but a lot of exhibits showing the gear of the time were preserved. The totally destroyed propeller was repaired free of charge by the original manufacturers and is now on display at the National Towage Museum.

Capt Bruins (centre) back on the ship he last saw from a lifeboat *photo: Job van Eijk*

EBRO in the slings of TAKLIFT 4 *photo: Job van Eijk*

On 10 August, 1628, the latest addition to the Swedish Navy - the 64-gun VASA - had completed storing and was ready to start her maiden voyage. The 1.400 tons displacement vessel carried a crew of 133. Additional some 300 soldiers were on board. She warped her way to open water and when off Sodermalm the anchor used for the warping was stored on board. Sails were hoisted but there was only a light breeze to push her through the water. According to reports a sudden squall happened when VASA had sailed for between a half and one nm. She took on a list to port and then rolled over. The flagship of the Swedish Navy went down in 30 metres of water. There she remained until raised in 1961. The photograph shows the entire salvage fleet on 24 April, 1961, with the Kastellholmen island in the backgound. The VASA hangs between the two Neptunbolaget lifting craft ODEN and FRIGG. To the right is the Navy tug BELOS. To the left (from r to l) Neptun's lifting vessel SLEIPNER, the salvage tug ATLAS and the tug AJAX

photo: Wasa Foto