

Lyttelton Icon

100 Years of the Steam Tug *Lyttelton*

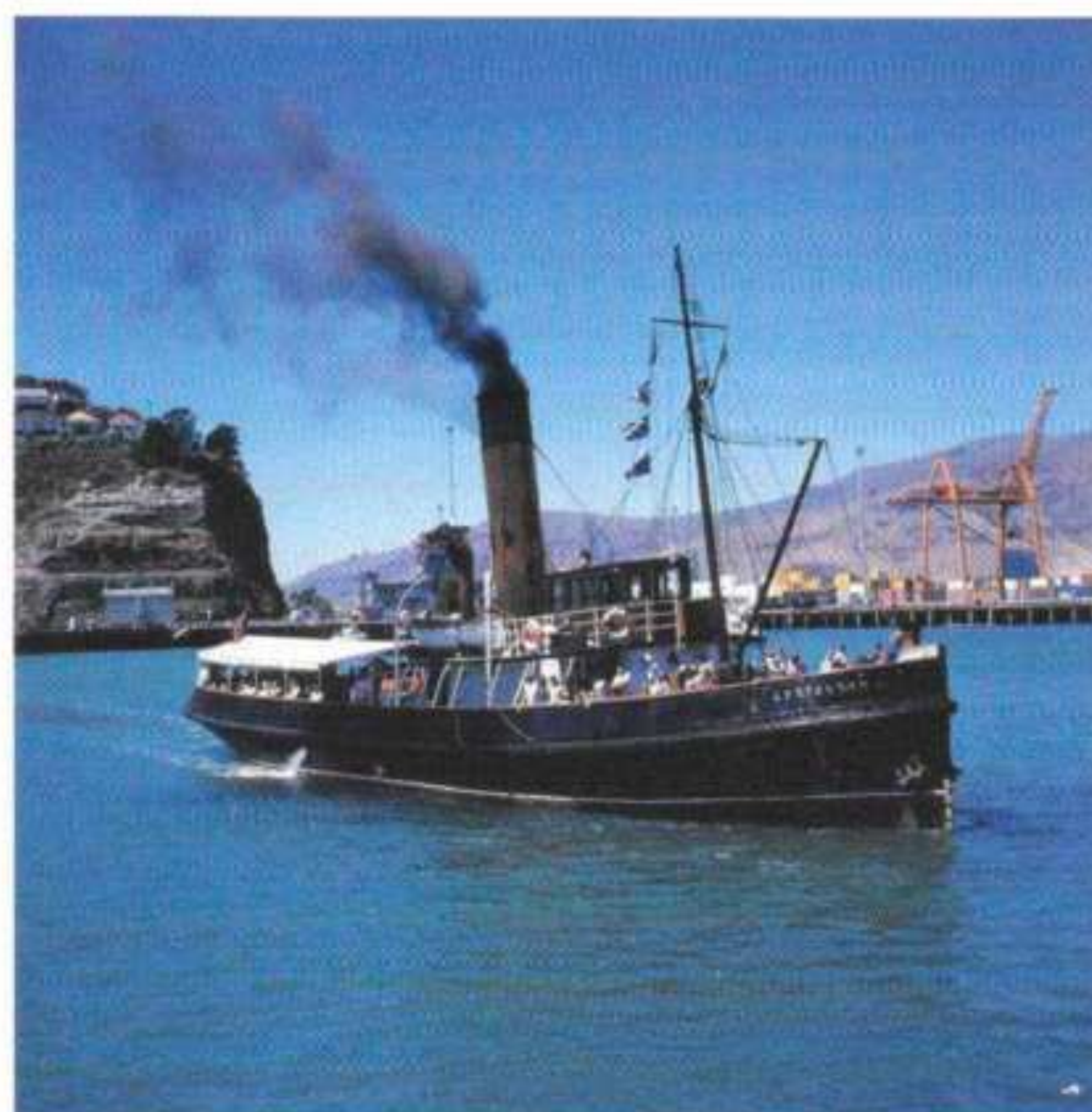


Nick Tolerton

Tug *Lyttelton* Preservation Society

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Steam Tug *Lyttelton*



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The Little Tug That Could – working two of her biggest charges, two New Zealand Shipping Co. liners. The *Lyttelton* is bringing the *Rangitiki* (1928/16,697gt) into Gladstone Pier in this pre-war view, above and she is dwarfed once again on the bow line of the *Rangitoto* (1949/21,809gt), bottom, in this 1950s shot. NICK TOLERTON COLLECTION





Introduction



THE MAGIC OF STEAM REVOLUTIONISED TRANSPORT IN THE 19TH century just as dramatically as the automobile and aviation were to in the 20th. Today the crafts and skills of the steamship fireman and engineer are almost forgotten, but they are preserved at Lyttelton through the classic tug *Lyttelton*, still in steam after 100 years and celebrating in September 2007 the centenary of her arrival at the port.

The *Lyttelton* handled great passenger liners and several generations of cargo liners, particularly ships of the four companies which dominated the Home trade – New Zealand Shipping, Shaw Savill & Albion, Port Line, and Blue Star. She was also there to escort ships bound for the frozen south during the heroic age of Antarctic exploration, and she worked mighty naval vessels, humble tankers, and sailing ships in the twilight of their era. She gave wartime service as a navy ship. Uniquely in Australasia – and possibly the world – her working life spanned the age of sail to the container era.

Her 100 years split fairly equally into three lives – firstly as the port's premier tug from 1907, secondly as the No.2 tug after the arrival of *Lyttelton II* in 1939, and finally her days operating as, officially, a passenger vessel for the Tug *Lyttelton* Preservation Society after being saved from the threat of demolition. It was something of a miracle that she was preserved when her contemporaries are long gone, and ironic that she celebrates her centenary the same year her younger running mate *Lyttelton II* was dismantled in Australia.

The fact that she is still afloat is a tribute to many thousands of hours of voluntary work by society members, to the generous support of companies and individuals who did not want to see this magnificent and historic ship go, and to the high standards of maintenance insisted upon in her Lyttelton Harbour Board days.

The story of a ship like the *Lyttelton* is also a story of people. The dry facts of her history will always be preserved in the Lyttelton Harbour Board files at Archives New Zealand, the Tug *Lyttelton* Preservation Society's records, and old newspaper clippings. Much more ephemeral are the memories of the seafarers who worked her, and I've endeavoured to tell their story, too, in this book.

From her classic counter stern to her teak deckhouse, towering funnel, plumb stem, and traditional livery, you won't find another ship like her in a Pacific harbour today. "Unique" is an overworked and misused word, but it emphatically applies to the *Lyttelton*. Hopefully she will be around for many years yet, to give people in the 21st century a realistic look at the type of ship and machinery that provided our industrial sinews when New Zealand was an infant nation, and remind them of the days when the lines of a well-found ship stirred the heart.





CERTIFICATE OF BRITISH REGISTRY. PARTICULARS OF SHIP.

Table with 5 columns: Official Number (76,079), Name of Ship (Lytellon CANTEBURY), No., Date, and Port of Registry (No 2 of 1907 Lytellon, N.S.), No., Date, and Port of previous Registry (first registry), Whether British or Foreign Built (British), Whether a Sailing or Steam Ship (Steam, twin screw), Where Built (Glasgow), When Built (1907), Name and Address of Builders (Ferguson Bldg Glasgow).

Table with 8 columns: No. of Engines (4), Description (Compound), Whether British or Foreign made (British), When made (1907), Name and Address of Makers (Ferguson Bldg, Clyde Shipbuilding and Engineering Co Limited Glasgow), No. of and Diameter of Cylinders (2. 20", 1. 40"), Length of Stroke (27"), N.H.P. (133), Speed of Ship (8.00).

Table with 4 columns: No. of Tons, Description, Deduction Allowed, No. of Tons. Includes Gross Tonnage (261.79) and Deduction Allowed (42.09) for propelling power.

I, the undersigned Registrar of Shipping at the Port of Lytellon N.S., hereby certify that the Ship, the Description of which is prefixed to this my Certificate, has been duly surveyed, and that the above description is true; that John Wilson Harris whose Certificate of Competency or Service is No. 5258 is the master of the said Ship; and that the Name, Residence, and Description of the Owner, and Number of Sixty-fourth Shares held by are as follows:-

Table with 2 columns: Name, Residence, and Occupation of the Owner (The Lytellon Harbour Board, 10 Charles and Williams, Christchurch, N.S.), Number of Sixty-fourth Shares (64 (Sixty four)).

Dated at Christchurch the 25th Day of October One thousand nine hundred and seven. Registrar of Shipping.

NOTE.—The only spaces above the Upper Deck not included in the cubical contents forming the Ship's registered tonnage are:—

NOTICE.—A Certificate of Registry is not a Document of Title. It does not necessarily contain notice of all changes of ownership, and in no case does it contain an official record of any mortgages affecting the ship. In case of any change of ownership it is important for the protection of the interests of all parties that the change should be registered according to law. Should the Vessel be lost, sold to Foreigners, or broken up, notice thereof, together with the Certificate of Registry, if in existence, should immediately be given to the Registrar of Shipping at the Port of Registry under a Penalty of £100 for default.



The Finest Tug In The Colony

IN 1907 THE EDWARDIAN ERA WAS AT ITS PEAK, AND SIR JOSEPH Ward and his Liberal Party governed. Christchurch was just over half a century old with a population of 68,000 and proud of having just hosted the International Exhibition in Hagley Park. You could buy a man's suit at the Farmers Co-op for 35 shillings, a villa in Merivale for 730 pounds, or a new house on a quarter acre section in Riccarton for 590 pounds. The young country's growth led to New Zealand receiving Dominion instead of colony status on September 26.

Aviation had been born less than four years earlier when the Wright brothers made the first teetering 12 second, 120ft flight. Christchurch's electric tramway had opened two years earlier. The North Island main truck rail line had not been completed, but a W B Leyland at the wheel of a Darracq became the first motorist to drive around the North Island. However, it would be another five years before the first driver's licence was issued, and if you wanted to travel to the West Coast, you still bumped uncomfortably through the river crossings and alpine tracks in a Cobb & Co stagecoach.

In the maritime world an order was placed in April with Harland & Wolff, Belfast, for the liner *Titanic* but it would not be until 1909 that construction started. Instead the spotlight in 1907 was on another ill-fated ship, Cunard's magnificent new four-funneled *Lusitania*, launched from John Brown's Clydebank yard on June 7 as the world's largest and fastest ship and the first liner to exceed 30,000gt. Early the next month and further down the Clyde a much more humble vessel set out on her maiden voyage, a passage around the world. The tug *Canterbury* was built as yard No.174 at the Ferguson Brothers shipyard at Port Glasgow, a yard set up only four years before. Among the hundreds of imposing passenger and cargo liners and naval ships built on the river, the hub of world shipbuilding, in that decade, this little vessel would have received little attention. She was probably launched without fanfare and without representatives of her owners in attendance. However, the *Canterbury* – renamed *Lyttelton* in 1911 – has survived, and keeps memories of the great age of steam at sea alive many decades after her illustrious contemporaries are recalled only in fading photographs and museum items.

In the first decade of last century, the port of Lyttelton was still being served by the Lyttelton Harbour Board's iron paddle tug *Lyttelton*, built in 1878 as its first tug the year after the board had been constituted. The inadequacies of the paddler for the larger steamers now using the port had been highlighted by the board's new engineer Cyrus Williams, in his first annual report, for the 1903 calendar year.

The towing hook of the *Lyttelton* was so far aft that she would not handle properly with a heavy load behind her, and the position of her machinery prevented that being altered. "She is unhandy and has not sufficient power," he told the board. "A twin-screw tug of stumpy build and twice the power of the *Lyttelton* is what is required. Such a vessel would cost about 12,000 pounds while probably the *Lyttelton* would not sell for more than 5000 pounds."

In his next annual report for the 1904 calendar year, the forthright engineer took up the issue again, while also reminding the board that while he had agreed to a new three-year contract at increased salary to commit himself full-time to the board, it had not benefited him pecuniarily, "necessitating as it did the abandonment of interesting and lucrative work elsewhere." Williams, who was to serve the board until 1927 as engineer and, from 1912 to 1927, secretary and treasurer too, reminded the board the *Lyttelton* had been kept in as efficient state as her inherent disabilities would allow, the disabilities being "insufficient power, inability to steer with a heavy tow behind her, and boilers requiring constant attention."

A new tug should be about 110 to 115ft between perpendiculars, about 23ft beam, with a towing hook amidships, twin screws, two sets of compound engines with cylinders 20in and 40in diameter, boiler pressure of about 90lbs, and 800 indicated horsepower, he said.

"As the water space of the inner harbour becomes encroached upon by wharf extensions, the necessity for the tug's assistance in berthing becomes each year more urgent, while an efficient tug will be absolutely necessary to assist large vessels in turning into the dredged channel just outside the moles," said Williams in the report. "As the board has the necessary funds, I think steps should be taken without further delay to acquire a vessel built specially to suit our purposes." He also noted the board had been working to make *Lyttelton* suitable as the last port of call for the largest ships visiting New Zealand by opening a channel to the sea with 28ft at low water or 32 at the high of neap tides, this channel to be open in two years.

The board acquiesced. Williams completed a 31 page specification in April 1906 for a "first class twin-screw towing steamer" to Lloyd's highest class 100 A1, of 122ft 6in length overall, 115ft BP, moulded breadth of 25ft and moulded depth of 14ft 3in, with 2ft droop of keel. Mean draft with 50 ton of coal in the bunkers was to be 11ft. The propelling machinery was to indicate not less than 800 horsepower and she was to have a Board of Trade certificate for boiler at 110lb per square inch working pressure. Also specified were a straight stem above water, to be well cut away below with the forefoot swept away, wide quarters to protect the propellers, the vessel to be protected all round by a heavy hardwood belting fender faced with an iron band 3/4in thick, with cork pudding fender aft and forward. In addition, "the bulwarks to tumble in all round so that the rail shall be well inside the side of the vessel and to tumble in 18in round the stern. Towing hook to be amidships, and there must be nothing to interfere with the sweep of the tow line from about 90deg to port to about 90deg to starboard." His plans also detailed an enclosed wheelhouse-char-troom amidships with a good all-round view, clear passage between the deckhouse and bulwarks, mast and derrick, a small forehold, a steam windlass to lift the anchors, haul in the tow rope, and lift cargo from the hold, and a powerful steam capstan with a vertical working drum on the after deck for hauling in the tow line.

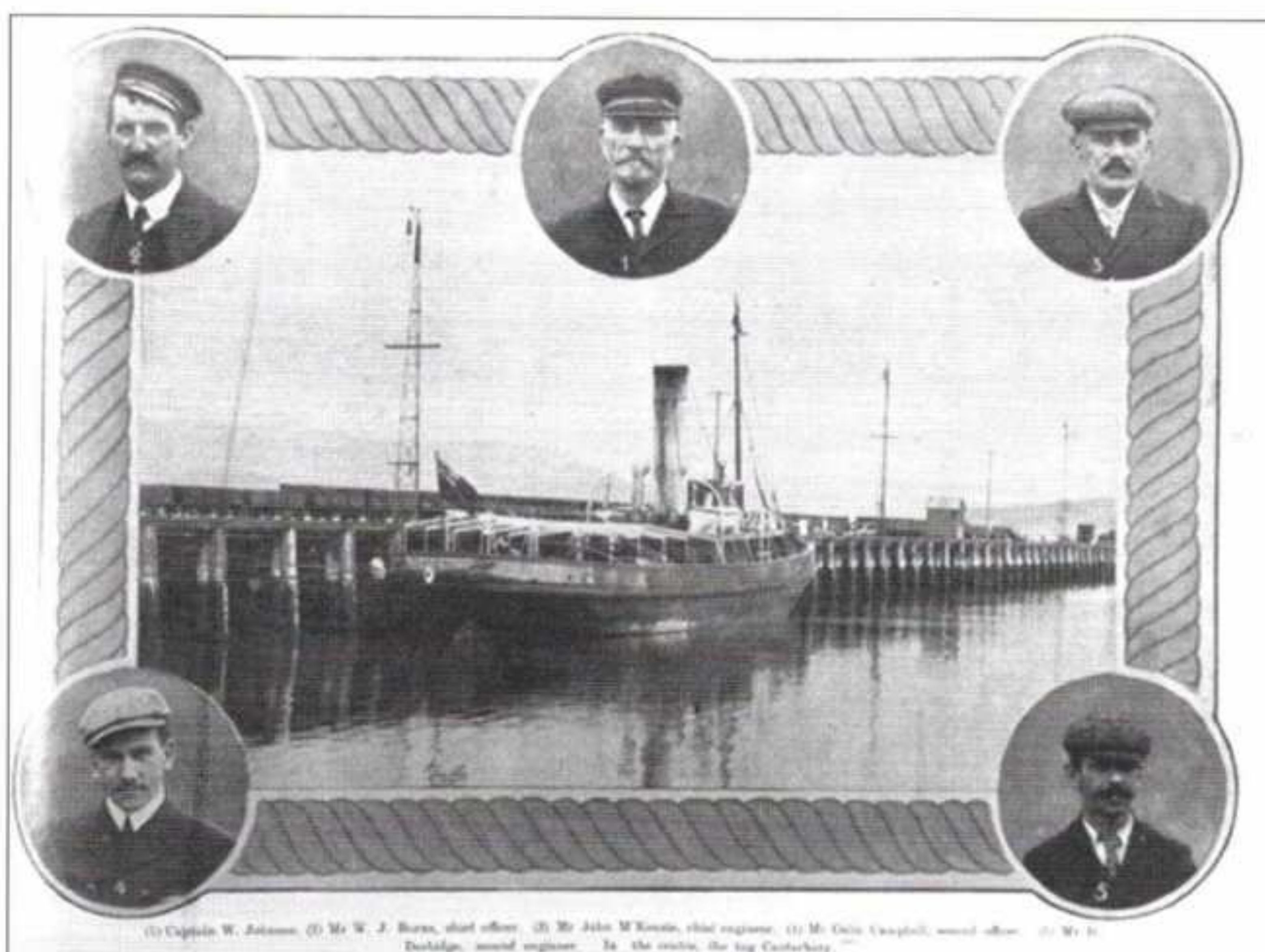


The tug was contracted to Fergusons for 14,126 pounds, 10 shillings. The board was billed for the first 25% installment, 3531 pounds, 12 shillings, and sixpence, on February 28, 1907, followed by another 25% in April. Further 12½% payments followed in May and July, the latter when the tug had had trials and sailed for New Zealand, with a fifth installment for 20% in September.

The 292gt tug was launched in May. On her trials at Gareloch on June 27 she recorded a top speed of 12.414 knots on the second of six runs. She left Port Glasgow on July 2, 1907. The master was Captain W Johnson, a Ferguson employee who had delivered many tugs and dredgers (including the dredger *Pioneer* to Melbourne) for the shipyard. She had 15 hands for the passage out – the master, two mates, three engineers, four deck hands, four firemen, and a Lascar cook. Two were Lyttelton men – the chief officer W J Burns had left Lyttelton seven years earlier, and the second engineer H Derbridge, who was the son of a Harbour Board foreman, three and a half years earlier.

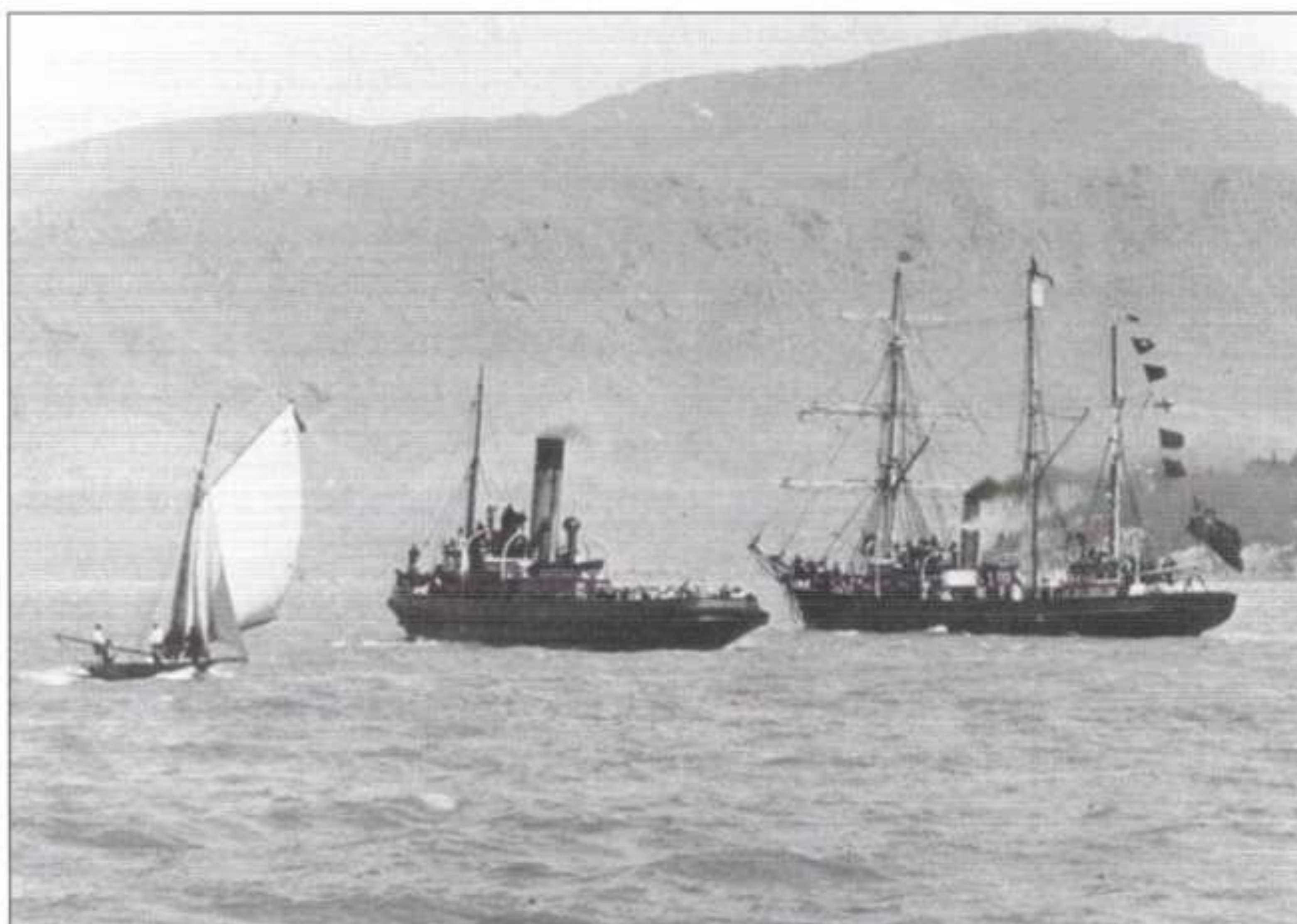
At 10.40am on September 10, the new tug arrived in the stream after a 69 and a half day passage via Suez, having stood off the harbour overnight. Averaging nine knots for the voyage, she'd left the Clyde crammed with more than 128 tons of coal, 50tn in the bunkers, 44tn 6cwt in the forehold, 13tn 14cwt in the aft peak, and 20tn 3cwt bagged on deck. However, she had to bunker frequently on her way out, spending six days 15 hours of the passage coaling in Algiers (sailed July 12), Port Said (July 19), Aden (July 26), Colombo (August 7), Fremantle (August 25), and Melbourne (September 2).

The day she arrived 'The Star' reported the old tug *Lyttelton* went out to meet "her supplanter" carrying the pilot Captain A Brown, with her namesake, Messrs Agar and Thomas's steam launch *Canterbury* following with the port Health Officer Dr Upham and custom officers. Granted pratique, she entered the moles at 11.25am and made fast at Gladstone Pier watched by "an interested throng of Lyttelton residents." Williams was among the party on the wharf, and he and Charles Hood Williams, who had been the board's secretary since its creation 30 years earlier (the two Williams were unrelated), and



The *Canterbury* newly arrived from Scotland at Gladstone Pier in September 1907. The faces are those of her delivery crew. The awning frame was probably fitted for the voyage out through the tropics or for functions aboard when she arrived. CANTERBURY TIMES/CANTERBURY MUSEUM.

Lyttelton escorts Sir Ernest Shackleton's *Nimrod* when she sailed on January 1, 1908, direct for the ice. Estimates of the crowd to see the little ship depart ranged from 20,000 to 50,000, and it was said to be the biggest crowd ever seen at the port. The tug was also on the scene for Scott's 1910-12 *Terra Nova* expeditions. CANTERBURY MUSEUM



Lyttelton mayor and board member S R Webb were among the visitors to board to inspect her.

The tug had met a good deal of heavy weather on her passage out, 'The Press' reported the next day. "But the little vessel proved herself a splendid sea boat, and came through the whole of her long passage without sustaining any damage whatsoever. Not the slightest trouble was experienced with the vessel's engines, which worked without a hitch throughout. The chief engineer remarked that he had served on board a number of new tugs, but the *Canterbury* was easily the best of them all."

It proudly reported that those who inspected her were satisfied the board now possessed the finest tug in the colony. In power she was second in Australasia only to the 1895-built Sydney tug *Champion*, which had visited *Lyttelton* the previous year during a search for a missing steamer, and no doubt been closely inspected by Williams.

The weekly 'Canterbury Times' said the appearance of the *Canterbury* "gives a decided impression of strength and power. Her strong steel hull has a hardwood belting all around, and she carries cork 'pudding' fenders fore and aft. Her bulwarks 'tumble in' as an additional safeguard against injury when going alongside vessels. The deck, deckhouse, and fittings are of teak, and ... the deckhouse contains the galley, lamp-room etc on the deck, and a small comfortably-fitted pilot room above."

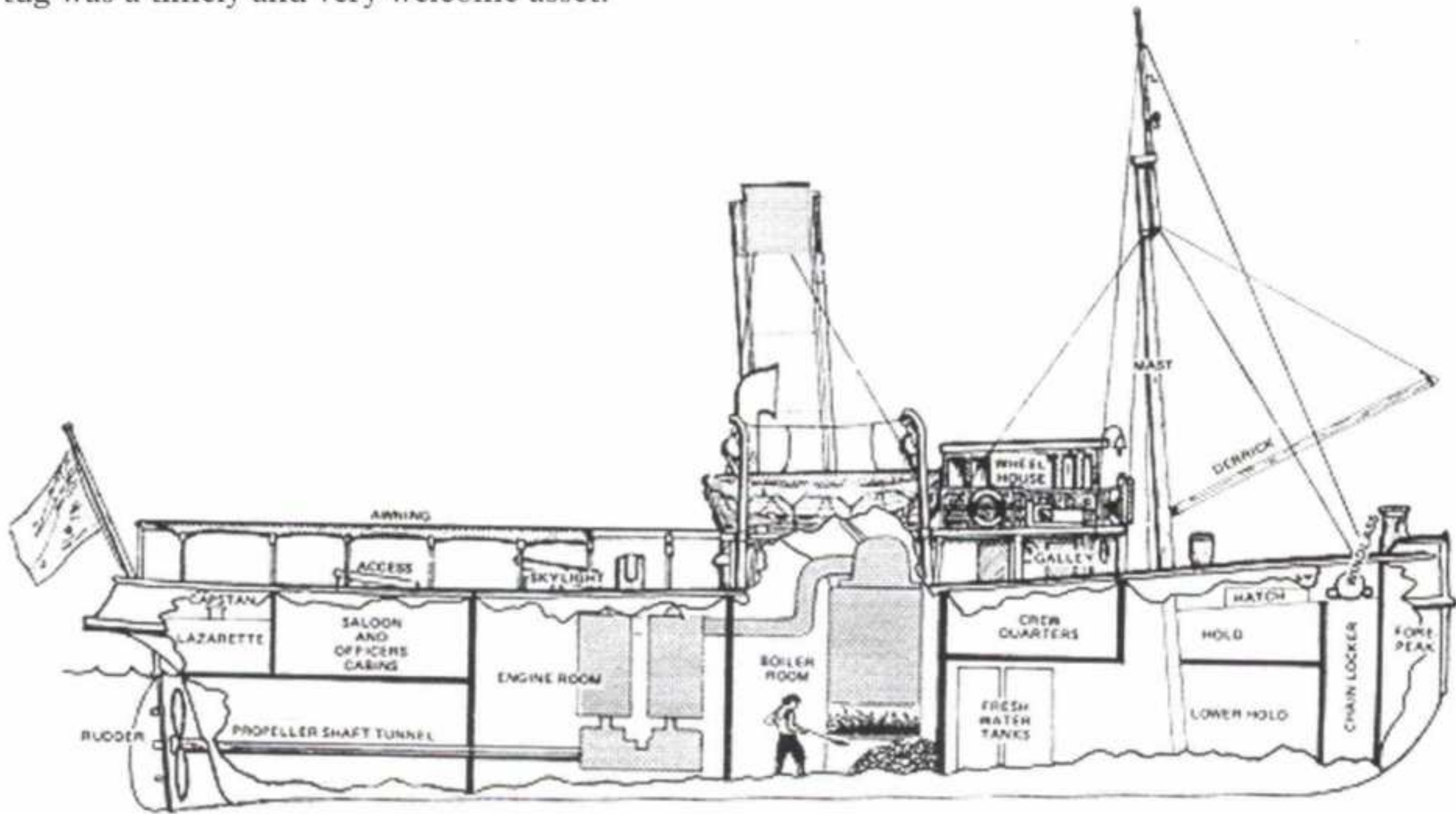
The *Canterbury* did not go into service immediately. Four days after her arrival, she was docked for cleaning and painting when the steamer *Warrimoo* vacated the dock, being floated out again on September 18 and ready for official handing over to the board. She was berthed at No.2 wharf, where she has been based for so much of her career since.

The next day members of the board's harbour improvement committee and other dignitaries including Williams, Hood Williams, and harbourmaster Captain JW Clark made a trip on the tug to Diamond Harbour (where they had lunch under an awning over the after deck) and Little Port Cooper. Captain John Harris, who was master of the *Lyttelton* for many years, had been appointed master of the new tug.

As one of her last jobs before sailing to new owners in Auckland

(where she lasted until the 1940s), the old paddler *Lyttelton* had berthed White Star's five-year-old 12,000gt steamer *Corinthic* that morning, and her master Captain Hugh David was one of the guests aboard. The board's acting chairman Albert Kaye told the luncheon that they needed a more powerful tug for steamers like the *Corinthic*, which they'd seen carrying the tug away instead of the tug carrying the *Corinthic* away.

It was an important era for the board, with the dredges *Canterbury* and *Tewhaka* to follow the tug into service very soon, much larger ships like the *Corinthic* calling, improvements to the wharves, robust debate over a port in Christchurch via a canal to the estuary, and the excitement of the Antarctic expeditions through Lyttelton. The new tug was a timely and very welcome asset.



Lyttelton and *Lyttelton II* at No.2 wharf, probably taken after the new tug's arrival in 1939 since she has no bow 'pudding' or fenders fitted.
CANTERBURY MUSEUM



Tug, Pilot Boat, Fireboat

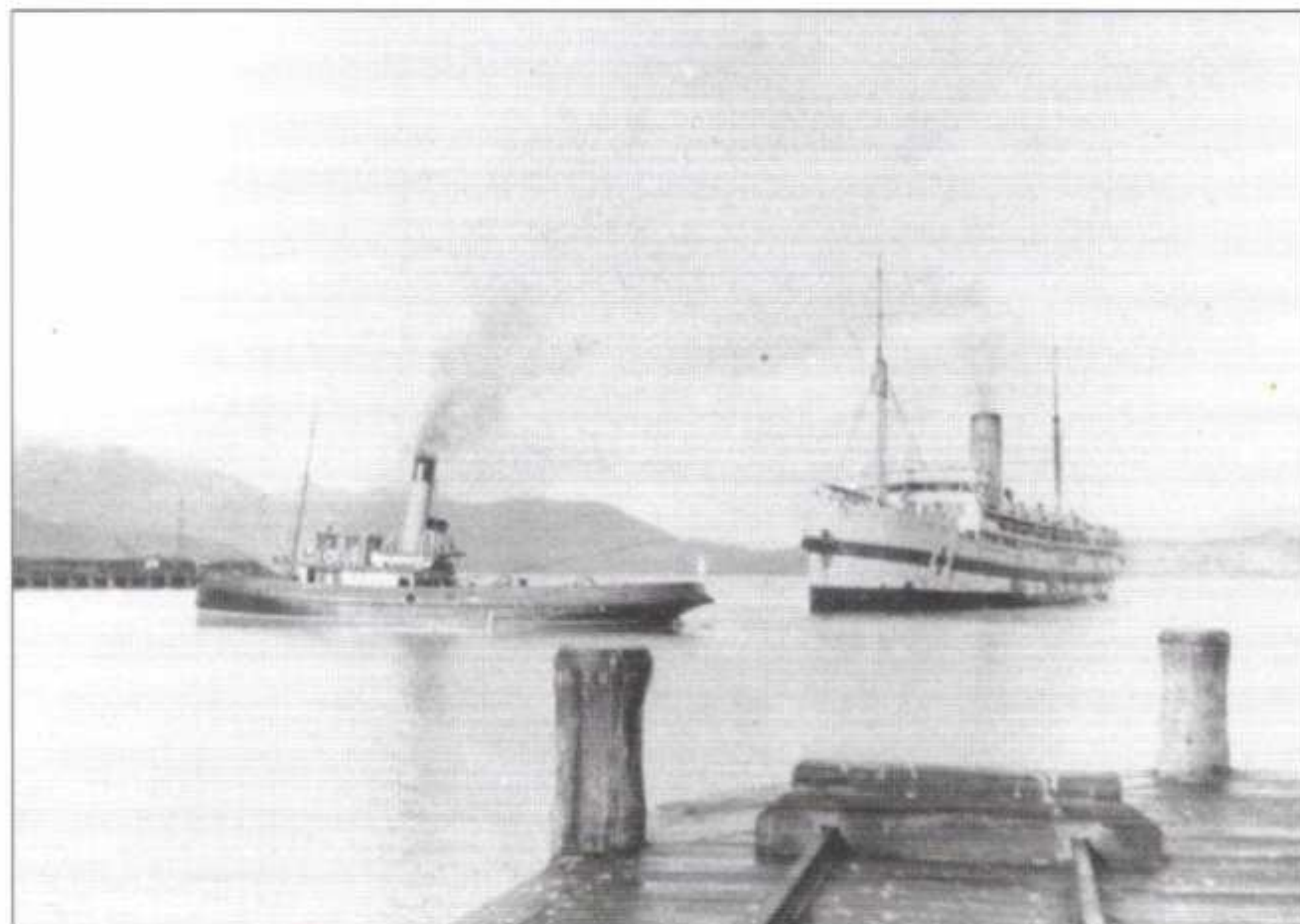
I AM DIRECTED TO INFORM YOU THAT THE **LYTTELTON HARBOUR** Board, at its meeting on the 2nd instant, appointed you Chief Engineer of the tugboat *Lyttelton* at a salary at the rate of two hundred and fifty pounds per annum.”

That was the board’s notification to Mr T Garlick in June 7, 1915, of his promotion – and an interesting indication of inflation in the past 90 or so years. Garlick replaced James Meikle, who as engineer of the old paddler *Lyttelton* had received a written warning from secretary Hood Williams in September 1905 after being spotted by the harbourmaster “under the influence of liquor” in the streets of Lyttelton. He had also been cautioned for insobriety earlier in the year. Meikle must have pulled his socks up, for he was Chief of the new tug when he died in March 1915.

Consent for the change of name from *Canterbury* to *Lyttelton* had been given in August 1911 by the Minister of Marine, with the board’s new suction dredge *Canterbury* being built in Scotland (she arrived in March 1912 after a 140-day voyage), as well as the Agar & Thomas launch *Canterbury* in service at the port. The tug was still the *Canterbury* in September 1911 when she visited a harbour at which she was to become a familiar visitor in her preservation society days. She carried a large party of guests to the opening of the Akaroa power station on the 9th, with the turning on of the new street lights being the occasion for banquet celebrations at the Oddfellows Hall (now Gaiety Theatre). In October 1911 she became the *Lyttelton* after only four years under her original name. One of the ships she handled shortly before the change was the *Terra Nova*, which had just completed a three-month government surveying charter. On October 30 she went into dock for her annual survey as the *Lyttelton*. The date of the change of name is often given incorrectly as 1912, probably on the assumption it occurred when the new dredge arrived.

She sailed again to Akaroa to tend the Union Co’s steamer *Maori* (which late in 1907 had gone into service as the first purpose-built ferry on the inter-island steamer express run) for its Anniversary Day excursion there on December 16, 1914, for a fee of 20 pounds.

When the board was considering a new tug in 1936, it listed the usual crew of the *Lyttelton* as master, mate, first and second engineers, two firemen, and three deckhands, and it is likely this was her usual complement during her working career. The deckhands and firemen had accommodation in the “forecastle” – with cramped bunks, table, stove, and gear lockers. More salubrious was the accommodation aft for the master, mate, and engineers – their own small cabins, the panelled saloon to eat in, and leather-upholstered seating around it. It is



The *Lyttelton* brings the hospital ship *Marama*, requisitioned from the Union Company in 1915, into port during World War One. CANTERBURY MUSEUM

believed that at one time the board held its meetings in the saloon.

The same 1936 report noted the crew's combined wages totalled 2787 pounds a year. They obviously earned their money. In December 1912 the board generously decreed that each member of the crew should have a day off once a fortnight, after five had applied for a day's leave per week. And the board received another supplication from five crew members in November 1920, asking for overtime or an allowance for work done before 8am or after 5pm. It followed the board agreeing earlier in the year to move the Union company's coal hulks at two pounds per removal day or night. "We never do less than eight hours per day and sometimes it is 15 or 16 hours," said the seamen. "Since we have had the hulk shifting we also have to get our meals at any hour. If we have to go out to a vessel at 5 or 6am we generally have two or three hulks to shift before breakfast, which is 10 or 11 o'clock. The same applies to after 5pm taking vessels out."

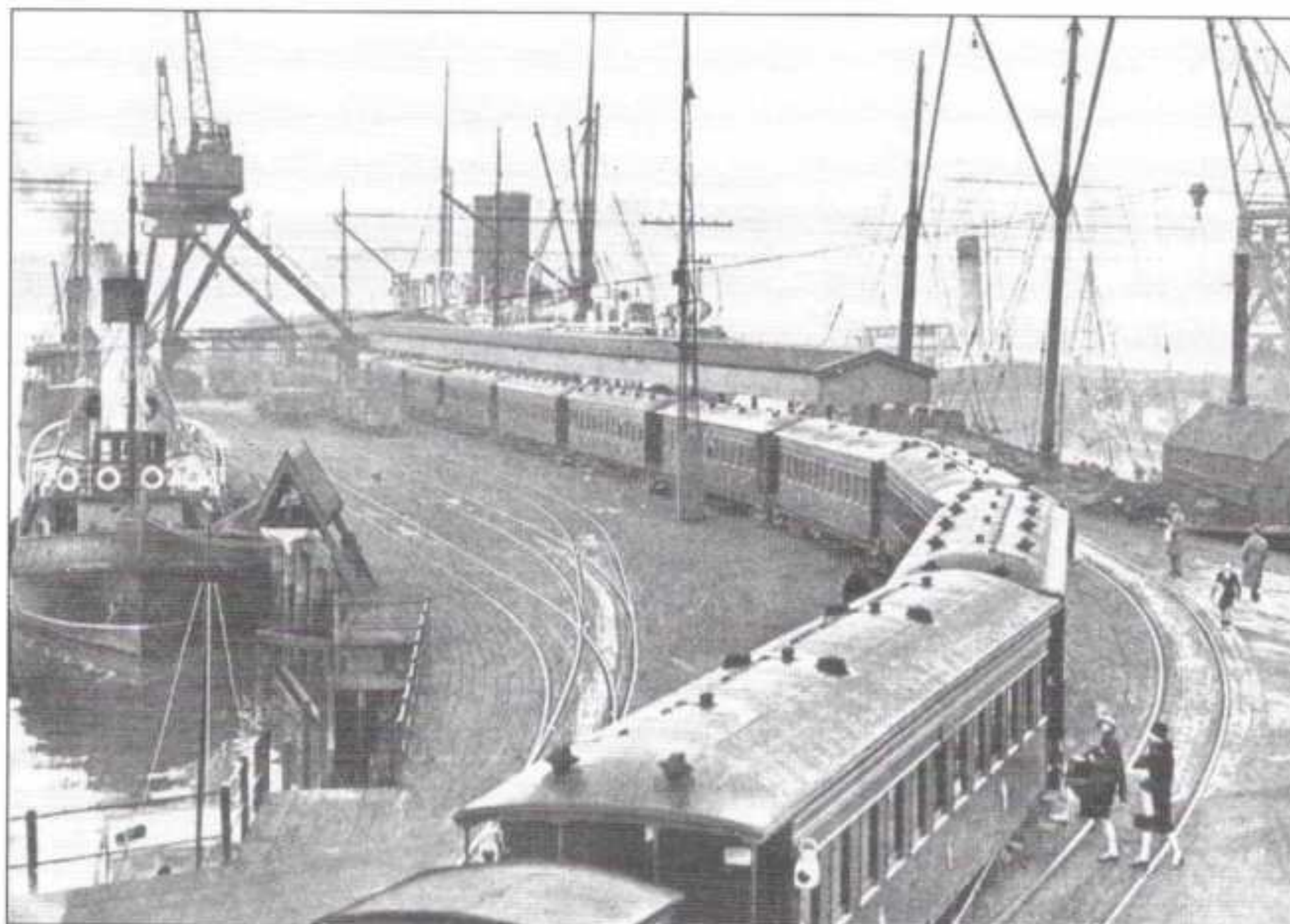
Among the bread and butter work of grimy cargo steamers came some occasionally more exciting assignments like the Antarctic expedition vessels. And in 1913 she assisted the largest ship to have visited Lyttelton, the battle cruiser *HMS New Zealand*, which drew many thousands of people to Lyttelton, and in 1920 the even larger *HMS Renown*, carrying Edward, Prince of Wales, called. In 1927 she guided in the *Lincoln Ellsworth*, the first tanker to berth at the port's new oil installation.

As well as her ship-handling duties, the tug also served as the pilot boat, and with the coal hulk movements as well she was obviously a busy ship. She also had a 600gal a minute fire pump fitted when she was built, which saw service on occasion. In February 1914, for instance, the tug was returning with the pilot from the *Star of India* when she helped fight a fire in pine trees at Purau Point, Diamond Harbour, providing "two strong jets of water." She also helped fight the fire at the Miller and Whitford boatyards near the graving dock on May 15, 1927.

After the Purau fire, the lack of electric lighting on the tug had been cited as a handicap – it must also have been a major liability on her voyage out from Scotland – and this was remedied in 1926 when J J Niven & Co of Colombo St installed electric lighting with a steam engine



The tug *Lyttelton* at her familiar No.2 east berth in 1929, with the boat train for the inter-island ferry. The old dredger *Canterbury* can be seen at No.3. THE STAR



generator at a cost of 368 pounds, seven shillings, and sixpence.

Such a hard working ship necessarily had some misadventures. In December 1918, the towline fouled a propeller in bad weather outside the heads while she was trying to put the pilot on a schooner at anchor. And while going astern she collided with the dredge *Tewhaka* in the inner harbour on August 16, 1918, the dredge sustaining considerable bow damage which brought the board an unwelcome bill for 560 pounds. There was also a brush with Shaw Savill's *Ionic* on July 19, 1925.

However, the worst accident came just outside the moles early in the morning of January 12, 1922, when the tug was slowly towing in the *Port Darwin* and the ferry steamer *Wahine* was arriving from Wellington. The ferry master assumed the other two ships were stationary and giving way to him, and when he realised the tug was still moving tried to pass between the two vessels as the tug and the Port liner both frantically tried to slacken the towline. The ferry's bow struck the *Lyttelton* near the stern on the starboard side. "The impact was so hard as to be heard a considerable distance away," reported 'The Sun' that day.

Captain R L Sproule, who had been master of the *Lyttelton* for three years, told the board in a handwritten report that he had swung the *Port Darwin* round in the channel and was proceeding towards the moles, when the *Wahine* which was overtaking them endeavoured to cross the tug's bow. Finding that there was not sufficient room to do so the ferry gave two blows on her steam whistle and put her helm to starboard and cut in between the tug and the *Port Darwin*. "As soon as I saw what he was going to do, I immediately ordered towline to be let go easing engines up at the same time," wrote Sproule. "The tow rope was immediately let go, I ordered full speed ahead on both engines, putting my helm Hard a Port at the same time endeavoured to get clear of her, but the speed of the *Wahine* which I gaged (sic) at about 12 knots was so great the tug failed to get clear of her. The *Wahine* struck the tug on the starboard quarter about 8 feet from the stern and cut a large hole through several plates, also blade stripped off starboard propeller. When accident occurred tug's bow was about 150 feet off entrance to moles."

The Union Company promptly notified the board it held it responsible for the damage to the *Wahine*, although probably the tug suffered worse. The ferry's stem had cut about four feet into her. The damage was assessed by local Lloyd's Register surveyor Caesar Colonna, and the tug went into the dry dock on January 23 for repairs and fitting of a new propeller, all four blades on the starboard propeller having been damaged. Later in the year the board ordered one new pair of steel propellers from Fergusons for 190 pounds.

Memories of the *Wahine* accident were not quickly forgotten. A later generation of engineers on the tug heard the story of the fright for the men down below with the tug's gunwale right under water. The engineroom ladder was apparently shifted so they could get out more easily if an event like that happened again.

A less grave issue concerning the tug in those days was the ongoing argument over its whistle, the source of regular complaints by the Lyttelton Borough Council and residents during the 1920s and 30s. Typical of several letters to the board from the Town Clerk were:

July 21, 1921: "On Wednesday morning last, the 13th instant, at six o'clock the whistle was blown unnecessarily long, and several residents became alarmed, thinking that something very serious had taken place."

August 7, 1923: "I am directed ... to draw the board's attention to the nuisance to the residents of Lyttelton caused by the blowing of the tug's whistle on many occasions in the early hours of the morning, and to ask if something can be done to minimise such nuisance."

January 14, 1925: "I am directed by the council to strongly protest against the excessive blowing of the tug's whistle in the early hours of the morning. On Sunday morning last, at 5.30am, the second blast was blown far too long and in the opinion of the council, out of all reason."

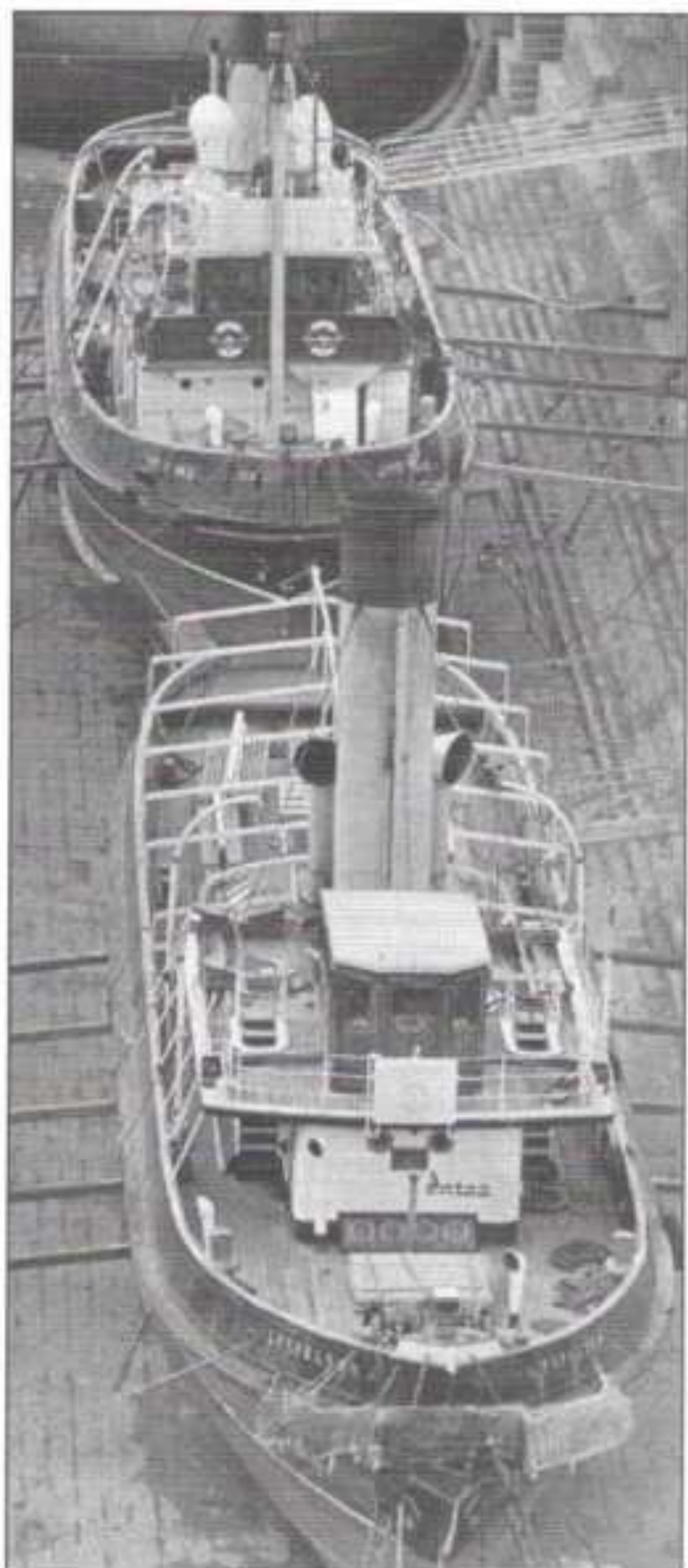
June 29, 1937: "I am directed ... to draw the board's attention to the blowing of the tug's whistle in the early hours of the morning, and causing the residents much annoyance, which in the opinion of the council is unnecessary and should be stopped."

Harassed of Lyttelton complained in a letter to 'The Press' of November 8, 1927: "For a considerable number of years it has been the practice to awaken the pilot and crew of the *Lyttelton* tug by producing two screeching blasts on the siren whenever a ship is to be piloted into the harbour. This invariably happens at from 5.30am to 6am (summer time), and to those who live in the east side of Lyttelton the blasting and unearthly din created at this early hour are not only a source of very great annoyance, but a real danger to the health and nerves of those unfortunates who are religiously awakened by it. The only apparent reason for blowing the tug's whistle at this hour is to awaken the pilot and crew, thus advising them that a ship is ready for pilotage. One wonders how long such a practice would be countenanced in Wellington or Auckland."

The writer said the fact a ship would be in the roadstead at a certain hour was always known to the Harbour Board officials the evening before, so the whistle advised the pilot and crew of something they already knew. Why then should the community at large be awoken almost daily by "these screeching, nerve-racking, and wholly unnecessary noises?" he asked. "Why should we not institute a system of siren blowing to awaken all those workers whose business or duty compels them to be at their post at various hours between midnight and 6am,



The tug's original name, changed after only four years, is preserved on the ship's bell. Captain Robbie Edwards is pictured with it in this 1987 shot. THE STAR



Lyttelton was relegated to second tug with the arrival of *Lyttelton II* from Scotland in 1939. Here the two share the dock for refits in 1975.

THE STAR

and thus create a medley of noises, which in time may charm the ear instead of, as at present, disorganising the mind?"

Harbourmaster Captain T M Hunter could only point out to the board in a memo in August 1923 that the whistle was never used unnecessarily, and there were noises equally as loud such as railway engine whistles during shunting which went on till late at night, and the time-whistle blown eight times a day, and much louder and longer than the tug's.

The only alternative was to have the crew and relieving engineers all connected by telephone or electric bell, which would mean a big expense, he warned. It would also be a hardship to them – "as it is they are tied to Lyttelton night and day, but can manage to get out in the evenings knowing if anything is wanted they will hear the whistle, but if they are to be connected by wire, and no whistle blown, they will be compelled to stay always in touch with telephone."

Final word deserves to go to Waterfront, in a letter to 'The Times' of January 15, 1924: "Perhaps Councillor Toy (evidently the most recent complainant) and his adherents have overlooked the fact that Lyttelton is primarily a shipping port, and the needs of shipping are necessarily of paramount importance." Waterfront's view would no doubt have been echoed by many Harbour Board and Port Co managers of later decades when issues arose with residents.

As the world recovered from the Depression and moved into the 1930s and larger and more powerful ships, particularly motor ships, were being ordered, the board had to consider whether it needed a new tug. The board received several enquiries from shipbrokers in 1933 to 1935 about the possible sale of the *Lyttelton*. In 1935 the New Zealand Shipping Co urged the board to look at fitting a Kort nozzle to the tug (the British Empire rights to this were held by NZSCo's associate Green and Silley Weir, of London). However, harbourmaster Captain J F Crawford told the board the *Lyttelton* had "ample power" for the chief requirement, ship-handling.

By 1938 the board decided it needed a new tug, and secretary Charles Clibborn told harbourmaster Captain James Plowman in a memo that there had been reproaches of inefficiency "in shipping and Harbour Board circles" concerning the tug. Enquiry by a special committee for the new tug into the working of the *Lyttelton* had shown only about 450 of the tug's i.h.p. was used under service conditions, whereas the builder's contract stipulated she should develop not less than 800hp on her present bore, stroke, and boiler pressure. Clibborn directed the harbourmaster to ensure that the full capacity of the tug was developed and used. To do this the board's tow ropes were to be used and towing charges increased by 10 shillings to cover the hire of the ropes.

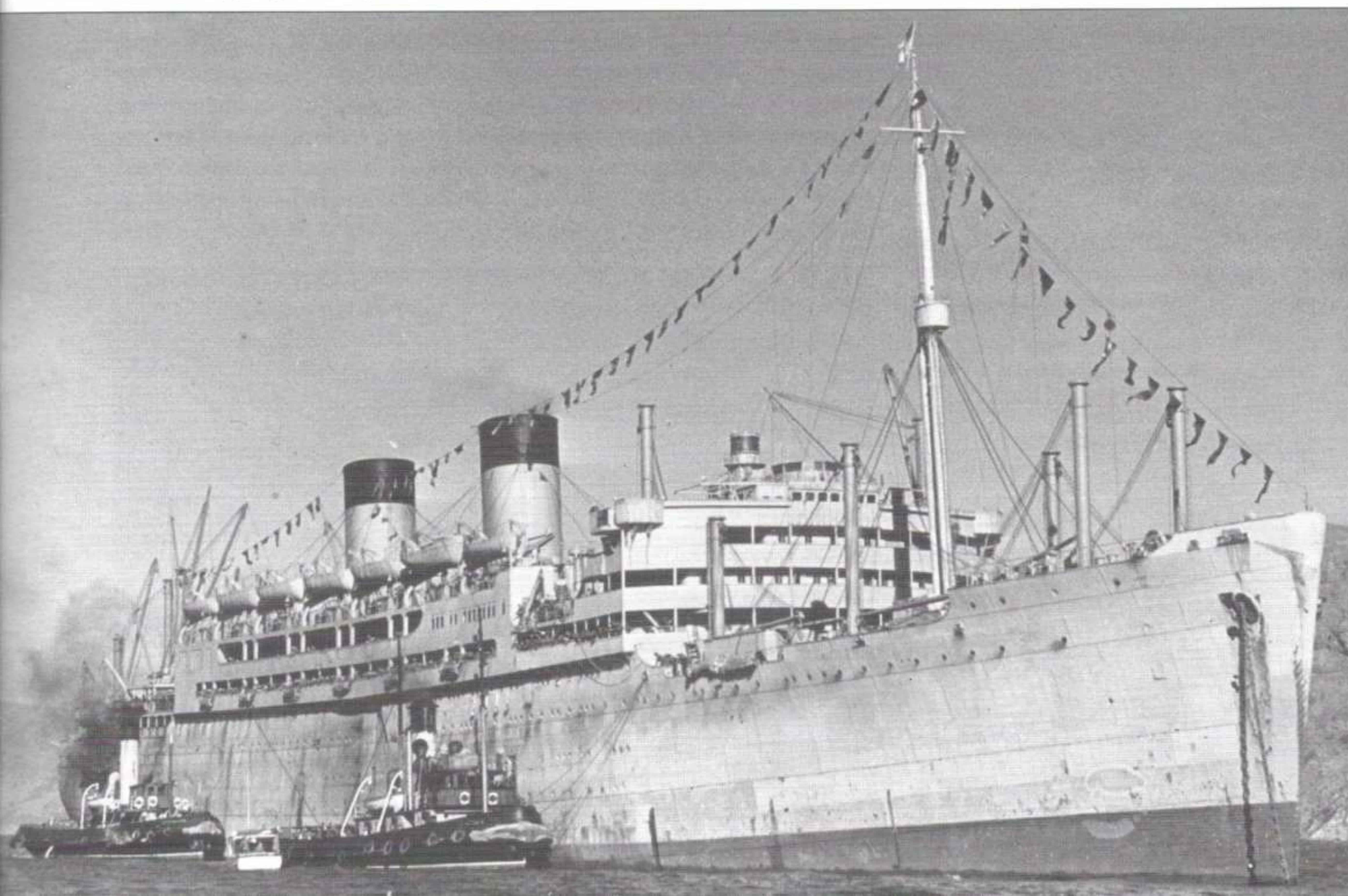
Clibborn noted that written evidence from the tug's master and chief engineer indicated that the estimated strength of ships' tow lines had in the past governed the power exerted by the tug. "There appeared to exist an unwritten understanding between the bridge and the engine room of the tug that 'full power' has been and is to be represented by only 750hp. The board's by-laws have been amended to provide for the towing charges to cover the use of the tug's tow ropes, so that there can be no question of the strength of the tow ropes limiting the power exerted by the tug."

However, the *Lyttelton* was going to be superseded, in spite of this tinkering. In June 1939 the new tug *Lyttelton II*, built by Lobnitz &

Co, Renfrew, arrived at the port after an 84 day passage. With twin triple expansion engines, she was a much more powerful tug than her predecessor, although still coal-fired – possibly the last coal-burning steamer ordered by a New Zealand owner. Her two masts and shorter cowed funnel were an immediate point of difference from the *Lyttelton*, although she retained the classic varnished teak wheelhouse. As an indication of the extra power of the new tug, she had 11.5 tons bollard pull whereas the *Lyttelton* had about eight. The board's first motor tug, the *Canterbury* of 1971, had about 20, while the bollard pull of today's Lyttelton Port of Christchurch tugs is 37 for the *Purau* and 62 for the *Blackadder*. And the *Blackadder* and *Purau* normally have a crew of only two (master, engineer) and three (master, engineer, hand) respectively.



Dominion Monarch (1939/26,463gt) was the largest ship *Lyttelton* handled regularly. Here she belches black smoke onto the liner's after decks as she and *Lyttelton II* bring in the Shaw Savill liner, probably still on troopship service, in January 1946. NICK TOLERTON COLLECTION





War Service



THE LYTTTELTON MAY NO LONGER HAVE BEEN THE LYTTTELTON HARBOUR Board's flagship after the arrival of the new tug, but she had many years of useful service still to contribute to the port. Her service in World War Two provides a notable part of her story.

It was not long before she was involved in a dramatic rescue that had nothing to do with the hostilities, which saw the *Holmwood* sunk by the German raider *Komet* in November 1940 on passage from the Chathams to Lyttelton, and the *Adjutant*, a captured whale catcher, lay mines off Godley and Adderley Heads in June 1941 – fortunately harmlessly. The inter-island ferry *Rangatira*, well off-course for Lyttelton, ran aground in dense fog in Pigeon Bay early on December 29, 1940. Only about two hours after the grounding the *Lyttelton* and the Union Co's *Waimarino* found the ferry in the fog (none of the three vessels had radar). The *Waimarino* took off the 750 passengers, and the tug and another Union ship, the *Karitane*, helped the ferry float free on the flood tide later in the day. The board – it could never be accused of not being thrifty – billed the Union Co 120 pounds for its assistance.

Tug society members think the *Lyttelton* was also used to assist the floating crane *Rapaki* to Wellington in 1941 (she was employed by American forces at Pacific bases), after her enormous jib left her just turning in circles when she set off under her own steam.

The tug's war service has particularly poignant memories for the preservation society's Marine Superintendent and senior master, Malcolm Pearson. Pearson went to sea as a 16-year-old on Richardson's *Kopara* in 1946 and sailed for more than two years on the four-masted barque *Pamir* including a voyage around Cape Horn, then served on a variety



Escorting in the cruiser *HMS Leander* when war clouds were looming. *Leander* survived being holed by a Japanese torpedo in the Battle of Kula Gulf in 1943. LHB COLLECTION, ARCHIVES NZ





Another lucky ship
 – *Lyttelton* guides the
 Anglo-American oil tanker
Seminole (1936/10,389gt)
 through the moles just after
 the war. The German-built
 tanker survived being mined
 in 1941 and being torpedoed
 twice in one night in 1943.
 NICK TOLERTON COLLECTION

of ships around the world before coming ashore. He later went back to sea as mate and master on the coastal cement ships. His father Ralph Pearson, who had been at sea since 1894, was a naval reserve lieutenant and examination officer. He was fatally crushed at the heads when he fell between the launch *Wairangi*, which was one of two examination vessels and at the end of the decade to become the board's pilot cutter, and an inbound Russian cargo ship on December 5, 1941 – two days before Pearl Harbour.

“He'd examined the papers. There was quite a big swell, and as he was stepping back down on to the *Wairangi* the ships parted and he fell in between them. They came together again, and he was seen floating in the water,” says Malcolm Pearson. “And the cook, Griff Jones, jumped in and supported him until they got him on board the *Wairangi*. The *Wairangi* couldn't leave its station, so they had to transfer him on to the tug. But he died on the tug before the doctor got to him.” Jones was awarded a Royal Humane Society medal for his attempted rescue.

In April 1942 the Navy office at Lyttelton notified the Harbour Board that the war cabinet had approved requisitioning the *Lyttelton* as an examination vessel at the port. On the 24th the Treasury secretary telegraphed the board to direct it to make the tug available immediately “on basis no hire charge being payable by government.” The tug would be made available to the board on occasions as required, without hire charge, and the amount of compensation should the ship be lost in naval service would be settled by agreement or arbitration.

Anticipating requisition, the board had told Treasury in March that it would waive any charge for hire “as a gesture to aid the war effort.” But when the Marine Department and the board put quite different estimates on the tug's value, surveyor J Fenwick Taylor was brought in later in the year as arbitrator between the board and the Treasury. In October he decreed the tug's market value before the outbreak of war to have been 17,500 pounds, with war conditions adding 20% to that value. In 1936 her book value had been 6810 pounds.

Meanwhile the navy wasted no time preparing *HMNZS Lyttelton* for her new role, and before the end of April it had listed all the al-



terations necessary to convert her as an examination vessel. These included fitting the following:

- An 8ft long yard to her mast with bands to take halyards, two in numbers sets, on each side.
- A stay from the top of the funnel to the mast and halyards to take three examination lights.
- Bren gun stands in both bridge wings, and ready-use lockers for ammunition.
- Degaussing.
- Portable depth charge chutes.
- Modifying the pilot house for a wireless office.
- Hammock hooks in the for'ard mess deck.
- 300 gallon fresh water tank under the port and starboard boats, with piping to washplace and galley.

HMNZS Lyttelton appears to have had an uneventful career on navy duty, and in September 1944 the Navy office notified the board she had been withdrawn from naval service. She was docked from November 10 to 23, after which the board's engineer reported that the hull was in "quite fair condition."

The navy service of the *Lyttelton* included one occasion the Senior Service would be keen to forget. In January 1943 she towed the former government steamer *Hinemoa*, built in 1876 and for some years used to carry parliamentarians to and from Wellington at the beginning and end of sessions, from Bluff to Lyttelton. It had been intended to convert her at Lyttelton into a lighter to take contaminated oil from tankers and ships at Auckland or Wellington. After some work had been done on her the plan fell through, and in June 1944 the navy decided to sink the *Hinemoa*, which was taking up valuable space in port, in a gunnery exercise in Pegasus Bay for three minesweepers from its Wellington-based flotilla and two from Lyttelton. The *Lyttelton* towed the *Hinemoa* into the designated area on August 5, 1944. It was not one of the navy's illustrious occasions. The five minesweepers fired 89 shells for two hits, none below the waterline. A depth charge had been placed in the shaft tunnel of the *Hinemoa*, and the tug went alongside her. The depth charge was set for 50ft, and four demolition charges placed. What the naval guns had failed to do, the combined explosives did.





“On The Whistle”



MEMORIES OF WORKING ON THE LYTTELTON DURING HER Harbour Board days are still alive for a few seafarers, notably two former Union Co shipmates, engineer Bill Le Warne, 83 the month before the tug’s centenary, and fireman Bert Thurlow, 85 the same month.

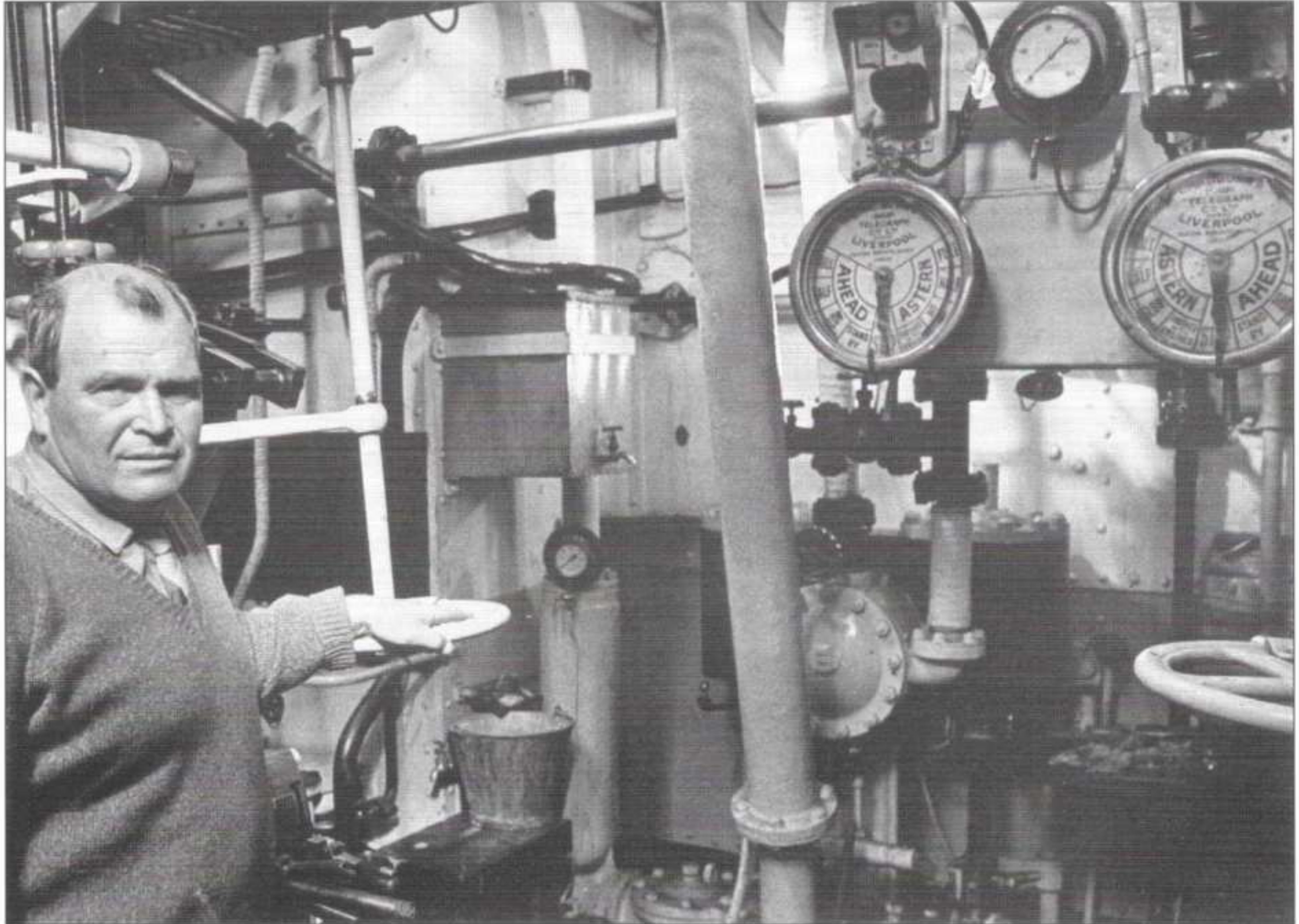
Le Warne (both he and his son Bill junior have been closely involved in the tug preservation society), joined the Harbour Board about 1954 from being Chief Engineer of the *Waitaki*, running between the South Island and Melbourne. He’d gone to sea on the *Clan Colquhoun* from Lyttelton in 1944 after an apprenticeship at Andersons Engineering, and when he came home after the war he joined the Union company on the ferries. He retired from the Harbour Board in 1988, and during his service was a respected mentor for younger engineers and closely involved with all its steam vessels, but particularly the floating crane *Rapaki* and the *Lyttelton*.

Inevitably the *Lyttelton* and *Lyttelton II* were more handily known by port employees as Tug One and Tug Two. While the *Lyttelton II* was the working tug, when two tugs were required Le Warne would be Chief on Tug One, which would take the bow line. “We were the first one to pick it up (an inbound ship) in the channel with the bow line, and then would swing into the basin to help its coming in,” he remembers. When the *Lyttelton II* was in dock, *Tewhaka* was drafted in as the second “tug.” Peter Chrisp, Fred Dawson, and Ron Ings were most closely associated with the old tug as the masters in Le Warne’s time.

While the *Lyttelton* lacked the power of newer generations of tugs, its masters and the pilots made up for that with knowledge and the angles they worked to manoeuvre ships, says Le Warne. The biggest ship the two tugs handled regularly was Shaw Savill’s 26,463gt motorship *Dominion Monarch*. Tug Two would be tied alongside with Tug One on the bow line, and Captain Roy Champion, harbour-master from 1950 to 1967 and like Cyrus Williams one of the most influential personalities in the board’s history, always presiding as chief pilot.

Tug One was “a good sea boat,” says Le Warne. “The bloke who brought her out, he’d delivered a lot of tugs, and he said it was the best one he’d been on. And her engines are just as good, just the same, today. They’ve never had anything done, the bearings, never had anything done in 100 years you might say.” A tribute to Scottish engineering? Le Warne is quick to point out it might be part of the reason, but that the Harbour Board never penny-pinched on maintenance, so that vessels like the *Lyttelton* and *Tewhaka* lasted for years,





Bill Le Warne, a Chief Engineer in her Harbour Boards days and later active in the tug society, takes a nostalgic look around the engineroom early in 1973 when the tug's future was still in doubt. The engines have always been prone to sticking, and the two boxes above the telegraphs are "wrong way alarms" installed by LHB principal cranes foreman Jimmy Carr in the 50s after the tug was damaged when she reversed into the breastwork.

THE STAR

while *Lyttelton II* deteriorated only when she went to Australia. And skilled engineers had maintained those standards with the preservation society.

Fireman-greaser Bert Thurlow joined the Harbour Board after war service in the Navy. He's also worked on the ferries among other jobs, and was a voluntary ambulance driver at Lyttelton. He's always been a keen yachtsman, too, and nowadays he's the oldest racing sailor in Canterbury. Cracking three ribs helping launch a trailer yacht at Pigeon Bay early in 2007 didn't slow him down.

He worked in both tugs. "When I first joined the tugs we were on the whistle, they used to blow the whistle for us," he recalls. "You couldn't leave the port. You had to be there all the time. They blew the whistle for us and down we'd go and get her ready, and away she'd go. And after that, every second night, the firemen, we slept aboard. Just two of us." That could be bad when the pub crowd poured out — he remembers parties on the foredeck with a piano accordion, cards, and "singing and boozing all night long." The deckhands were rostered for only one night a week aboard.

Thurlow's partner in the stokehold for many years was Geordie Bush. They used to get a tin of bully beef and some biscuits for breakfast with a cup of tea when they went out in the morning, and they'd eat while they shovelled coal into the furnaces. They'd go home for lunch, and if they were needed back in a hurry the tug would blow the whistle.

The board issued the firemen two pairs of trousers and two black singlets. "To get the trousers we'd go to The Farmers and get semi-widebottomed trousers and go and get them made up for us. We used to make our hats out of old flour bags and we all had a sweat rag each.

And dry the gear on the fiddley. We always had a line in on top of the fiddley and you could dry your clothes. We used to get water every Friday and we'd fill the tank, and we'd scrub our working gear, all up on the deck, and then hang it out on the fiddley to dry."

To bunker the tug, three trucks would line up on the wharf every fortnight and a wharf crane with a grab would discharge it on the deck. It meant nearly a day's work for the firemen. "Lots of guys dig into the top of the coal and it's hard work. If you dig in from down the bottom and take a shovelful as it comes, you soon get rid of it."

Another task was having the engineroom polished and cleaned for inspection by 10am Fridays, if there were no ship movements then. "We got the piston tops all shining, all the nuts and bolts shining. We used to do it with a bit of emery paper and the top of a Brasso tin, put it on a bolt, and give each one a swirl around. Hand rails the same." He recalls when new board engineer John Cashin, appointed from the UK, had his first look at the engineroom, he said he'd never seen anything more spotless. "It was something we done," says Thurlow. "You wouldn't do that if you went to sea in a ship – there'd be a riot in the bloody crew!"

Thurlow shovelled too much coal in his days on the tugs to get involved when she was preserved. The first time he was out in her after that, he was told they had trouble keeping the fire bars. "We never used to have much trouble with keeping fire bars in. Anyway, I went down and had a look and they had all the ashes built up to the fire bars on the bottom, and also up on the top. So they were burning the things through." He was also surprised to find the stokers using long-handled shovels. In his day they used smaller square-mouthed shovels.

The stoker's craft is a vanishing one. "Every fire burns different," says Thurlow. "You either spread it over the back or build it up in the front. Or lots of times we'd hold her up in the front to keep a bit of weight in the front of her and spread a little bit over the back. Just flick it over the back and it would flare up. Wouldn't burn a lot of smoke then, and way she'd go and keep your steam up."

At the end of the working day the firemen would blanket the fires down for the night. It did not take much to get them going again. "Tug Two was forced draft, she had a fan and you'd just walk along the side, and if there wasn't enough fan on you could get the engineers to put a little bit of fan on for you. But the other one, she was natural draft, and all the draft comes up through the fires naturally."

Tug One was quite often called out to fix problems with the dock gate. Tug Two had a turbo pump but couldn't lift the water from the bottom of the gate. The old tug could – "old steam up-and-downer, she could suck the water up no trouble" – and so they'd be at the dock all night pumping.

Thurlow was in the crew when the *Lyttelton* did a salvage job. On April 19, 1950, an air force Harvard crashed into the sea off Birdlings Flat, killing both men aboard. It was the first fatal training accident since the war, although there were to be two more fatal crashes by Harvards from Wigram in the Lake Ellesmere-Birdlings Flat area during the decade. After several days searching, a Harbour Board diver working from the tug found wreckage. The engine and a wing were recovered by the tug on April 30 and unloaded at Lyttelton the next day. Thurlow recalls that they returned at the end of the week and lifted the rest of the plane, using the derrick, and carried the wreckage back on the foredeck.



Bert Thurlow.



A reunion aboard the tug in 1973 for Captain Roy Champion (centre) and LHB marine engineers, from left, Stan Buchanan, Jackie Voyce, Jim Carr, and Frank Barratt, who all had a long association with her.

BILL LE WARNE



He also has vivid memories of a near disaster for the *Lyttelton* bringing in a French ship with a load of ingots from Noumea. When the tug nudged the ship it rolled inboard and started to roll the tug over. Water poured in the engineroom door.

There were less serious incidents. They were given new white nylon ropes off the *Huntingdon* to try out. "These lines were going to be the be-all and end-all. So this night we went out, it would be about half past nine, dark, and all of a sudden, bang. Didn't hurt anybody, but they went with a hell of a bang." Some of the line found a use – Thurlow still has pieces in his shed he uses for tying up the tomato plants.

The most indispensable men on a coal burner, the stokers. An everyday occasion in the age of steam is preserved today by tug society members. From top to bottom the stokers are Noel Pierson, John Kelly and Bruce Gillanders.

KEN BAKER





“No-one Wants An Old Ship”



AN AMAZING WORKING CAREER OF MORE THAN 60 YEARS CAME TO an end when the *Lyttelton* was retired in 1971. That year the Harbour Board's first motor tug, the *Canterbury*, a 245gt vessel built by Whangarei Engineering, went into service. It looked to be the end of the line for the old steam veteran.

A feature by Bruce Scott in the 'Christchurch Star' on April 28, 1973, described the *Lyttelton* at her lowest ebb:

“No one wants an old ship. Not unless she is glamorous like the *Cutty Sark* or the *Victory*. So the *Lyttelton*, the oldest tug in New Zealand and probably the oldest ship in working order, just swings gently at her moorings waiting for her end.

“Her paintwork is peeling. Rust is coming through in places. Her teak decks get greyer and greyer and her brasswork duller and duller. A dead seagull lies in the scuppers among the broken glass and dirty overalls.

“If she were a 1907 car it would be different. She would be snapped up eagerly and restored. But she's a ship, 125ft long. And her preservation would present problems.”

Which it certainly did. Credit for the Herculean achievement of saving her goes in particular to two people, the late Dick Musson and John Goldsworthy, who is now the preservation society's patron. Bruce Carr, later president of the society and for many years overseer of all her maintenance, worked for the Marine Department then, and had to survey the tug in dock in 1971. He'd worked on the tug himself as an engineer, and was dismayed to find serious corrosion in the stokehold, with the stringers and frames badly deteriorated. He reported the damage to the board's engineers:

“They said, ‘Look, we've got to think about this,’ and they came back to us a couple of days later and said ‘We've decided at a meeting not to do the repairs. We'll dispose of her. It's highly likely she'll be scrapped.’”

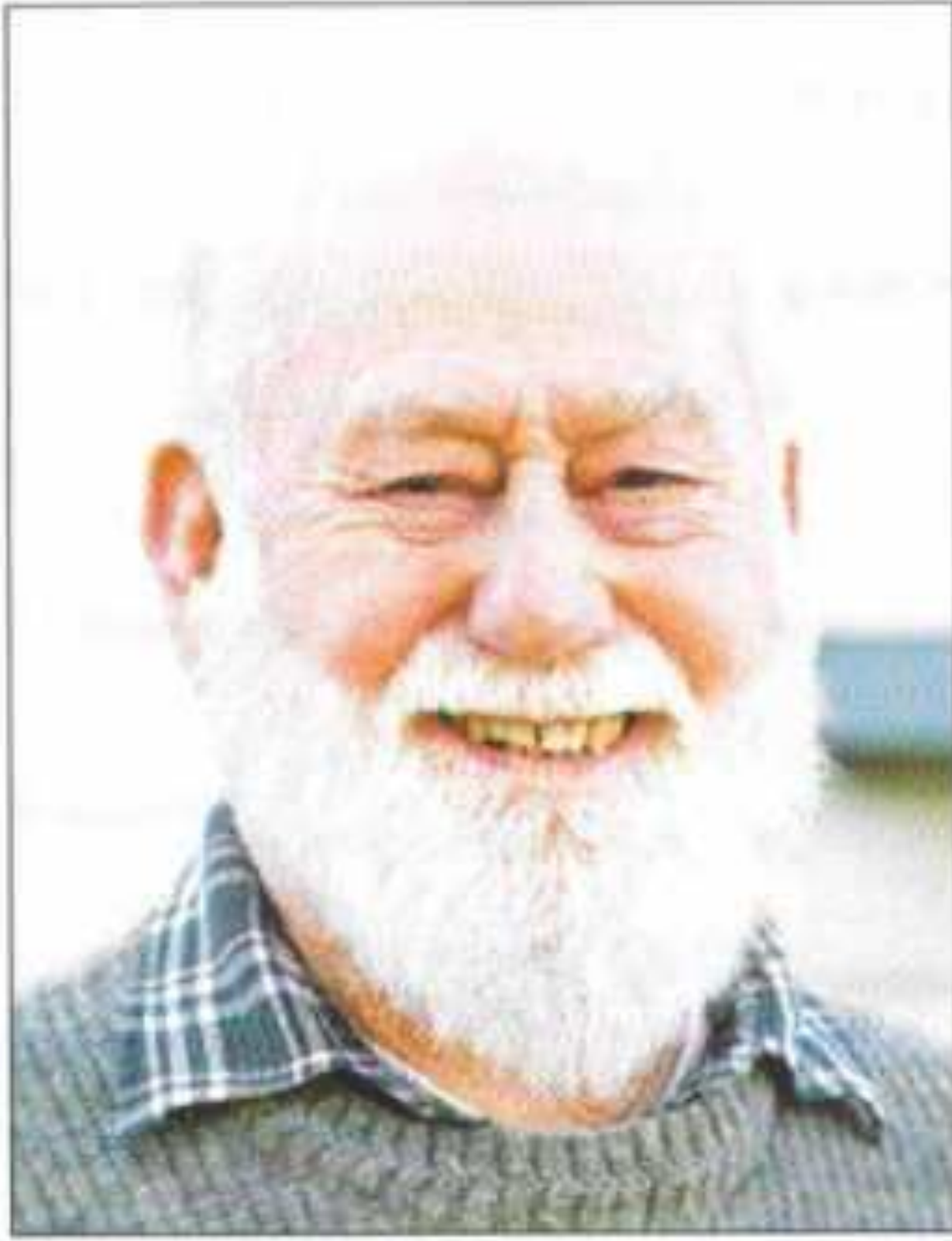
“I went back to the office that day and I was very brassed off, because those engines were in beautiful condition, the boiler was also excellent, and I knew the hull was repairable.”

Musson, a close friend who had also been Carr's best man, was back working at the Marine Department in the MLC Building at the time after a spell working for Lyttelton Engineering, and listened to Carr's story.

“He was sitting opposite me in the office and I said, ‘What a shame, poor old Tug One, it looks as though she's going to be scrapped.’ I said, ‘You know, it's not right, something should be done about it,’ and

Dick Musson.





John Goldsworthy

he said, 'I don't like the idea of that. I think we should do something. I'll see if I can find out what can be done.' And from that moment the seed was sewn. And he and John Goldsworthy got together."

Musson has left notes on what happened next: "(I) made moves in the direction of forming a society for the restoration, preservation, and operation of the vessel in harbour limits and perhaps beyond, carrying passengers on harbour cruises, to provide finance for preservation etc. I was ably assisted in this direction by John Goldsworthy, and the Tug *Lyttelton* Preservation Society Inc was formed. The first meeting was held in June 1973, costing of refit to survey standards was carried out, and I presented the Lyttelton Harbour Board with these, along with the society's aims and objects, and, subsequent to the board's approval, the vessel was docked on June 22, 1973. Our ambition had materialised."

It's a very modest summary of what happened. In fact, saving the tug and getting the society established was a titanic challenge, and its success leaves anyone in Canterbury today with a nautical bent or a sense of history profoundly in debt to them.

They had a good friend in Captain Champion, by now a board member and later to be board chairman. He had suggested placing the *Lyttelton* at Ferrymead museum, but this was not feasible, and he did all he could to facilitate the preservation project.

The inaugural meeting at which the Tug *Lyttelton* Preservation Society was formed was held at the Hornby scout hall on June 12, 1973. Musson was elected president and Goldsworthy secretary, both unopposed. Musson gave a resume of events so far which had taken place for the preservation of the tug, and said the Harbour Board had intimated it would prefer the tug to go to Ferrymead, but Ferrymead was unable to accept the tug.

The *Lyttelton* was undocked on July 20, 1973. Machinery and upper deck survey work continued, and she had her inaugural sailing with society patron and local MP Tom McGuigan and board members on October 14.

John Goldsworthy, Musson's lieutenant in the battle to save the tug, had been in the Royal NZ Navy for 13 years, starting as a stoker on the coal-burning minesweeper *Sanda* and finishing up as Chief Engineroom Artificer. Most of his ships were "old recipis" (reciprocating engines) like the tug.

He heard about plans to scrap the tug over a drink with Musson: "And I thought, 'Hell no, surely...?' So he said, 'What say we preserve it?' And I said, 'I think we could.' So he did all the work, he gathered up a gang of people, they had a meeting, we formed a society, and we put the proposition to the board. And they sort of said, 'All right.' Their estimate for doing the survey was 17,000 pounds, I think, and they said if we could do the survey, they'd let us have the tug. So we did. They tried to find how much the survey cost as well, and we didn't tell them!"

Goldsworthy, who became the society's first secretary-treasurer, was an engineer surveyor for Royal Insurance at the time. He still remembers with amazement the support they got. As well as Captain Champion, other members of the board were sympathetic. "To be perfectly honest, I think they moved heaven and earth to help us. Or put it this way, they didn't put any obstructions in our path." Board employees also gave them terrific support, as did many firms, particularly Lyttelton Engineering (who have always carried out the



hull and engineroom repairs) and Stark Bros (who provide free labour for docking and carry out repairs on any woodwork like the decking). Without the generous support of these two companies, the tug would not be afloat today. "We were known as the bludgers of Christchurch," says Goldsworthy, who recalled they even got scrap metal from a local firm that had put in a tender to scrap the tug.

When the tug was in dock for the first time, someone, probably Bruce Carr, put his chipping hammer right through the tug's side under the engineroom. Musson scrounged the boiler plate he needed from one engineering firm. Another company heard about it and offered to roll it for them. "The people that supported us was amazing," says Goldsworthy. "In fact we had one bloke, he came to us one day. He said, had he offended us? We said, 'No.' And he said, 'You haven't been around bludging for a while.'"

When they were getting their first survey certificate, the Marine Department stipulated they had to have so many children's life jackets, which they couldn't get from anywhere. In desperation Goldsworthy wrote to the Union company's stores officer. Not having heard anything back, he tracked the stores officer down when he went to Wellington for a conference. As well as promising to send them down on the *Rangatira*, the stores officer asked what else they needed. "I thought, well, there were a couple of things we didn't actually need but could do with, and I mentioned one or two of these things," recalls Goldsworthy. Back home a couple of weeks went by, and "I thought, you know, promises, promises." Then on a Saturday morning when he and other society members were having a smoko on the upper deck of the tug, a truck came down the wharf with a huge crate on the back, and a forklift took it off. It was, says Goldsworthy, "like Aladdin's cave. There was all these life jackets, there was a Red Ensign, even a lead line. We had a tatty old ensign and here was a brand new one!"



June 1973 – members of the newly-formed tug society remove the starboard prop for the shaft to be drawn. Bill Le Warne junior (top right), Bill Le Warne senior (lower right), and Bill White (top left). THE STAR

Lyttelton at the dock in 1979, with *Godley* and the pilot launch *Wairangi* in attendance. THE STAR



The support they got from the public could also be surprising. "I remember one time, Radio Avon when they were in their heyday, they had a promotion for some breakfast food. They hired the tug. They had special invited guests, and there were two old ladies, they'd be in their 80s I think, and they'd never been to Lyttelton. They'd been in Christchurch all their lives."

Lyttelton made her first cruise for the public on November 4, 1973, and set the pattern for future operations with regular cruises until April 28, carrying about 3500 passengers over the season and raising enough revenue to pay for the survey. It was a providential boost that Christchurch hosted the Commonwealth Games that summer, and with cruise ships and the Royal Yacht *Britannia* in port, Lyttelton was in the spotlight. Except for three days the tug ran harbour cruises right through the games, carrying many competitors, officials, and visitors and also advertising the tug's reincarnation to Christchurch people.

The Games provided a couple of funny memories for Goldsworthy. One day during them he got a panic call at work that the tug was set to sail with the passengers, but didn't have an engineer. Goldsworthy told his boss he had to rush out of town, and bolted for Lyttelton and donned his overalls. Looking out of the engineroom hatch he saw three faces, one of the individuals giving him a friendly wave. Later he waved them down to the engineroom to have a look around – and found himself face to face with his general manager from Wellington.

With all the charters some of the crew stayed aboard overnight, and one evening when a little party was taking place on the quarterdeck, an English visitor (not a royal personage) from *Britannia* passed out. They put him under an ensign on a hatch cover on top of four ashes drums. Two girls on the jetty asked what had happened, and "I said 'Bloke here died this afternoon, we're having a wake for him.'" "One girl said, 'I've never seen a dead body.' So I said 'Come and have a look – he won't mind.' So she came on board and lifted one corner of the ensign up to see – and he snored!"

LEFT: Selwyn Whitford (left) and Ray Inwood supervise removal of the port propellor during the 1988 survey. An engineer who also had his commercial launchmaster certificate, Inwood uniquely served on the tug as both Chief Engineer and master – and on some days when there were two sailings went out as master on one and Chief on the other. THE STAR

RIGHT: Society president Peter Sinclair supervises Les Price and Joe Roosing clearing rope from the prop in 1991. THE STAR





A New Career At 66



ON NOVEMBER 16, 1973, THE HARBOUR BOARD AND THE TUG *Lyttelton* Preservation Society signed a deed for the tug to be hired to the society for one year backdated from October 1 "in order that the tug may be restored and preserved as a vessel of historic value and public interest." The board charged a token berthage fee of \$2 a year, and the deed provided for the hiring to continue beyond the 12 months, terminable by either party giving six months notice in writing. The arrangement meant docking was not a charge on the society.

On this basis the society operated the tug for 15 years, but aware of changes pending for local authorities like the Harbour Board, the society's solicitors wrote to the board on December 2, 1988, asking, in case the board was dissolved, for an extension of hire for a further 10 years. The solicitors pointed out that over the 15 years an "immense amount of voluntary restoration work" had been done to the tug, and it was now an accepted tourist feature of both Christchurch and Lyttelton. The board was generous in its response. It wrote on February 17, 1989, offering to gift the tug to the society.

The Harbour Board, soon to be replaced by the Lyttelton Port Company, transferred the tug to the Tug *Lyttelton* Preservation Society on June 2, 1989 – the transaction being for the traditional 64 shares of ship ownership. This bill of sale was entered by the Ministry of Transport's registrar of ships, Lyttelton, on August 9 at 1335 hours.

Behind those statistics which cover the transformation of the old tug from a candidate for breaking up to her restoration and operation as a living part of Canterbury's history is of course a story of untold hours of voluntary work by dozens of society members over the years. The contribution of some of the key personalities is looked at in other chapters of this book.

At the risk of omitting some dedicated workers for the society, the contributions of several people need to be noted. President Barbara Hayden has been involved for about 30 years. Her late husband Lloyd Hayden was second engineer and a great worker for the tug, and Barbara joined on the "if you can't beat 'em, join 'em" basis. President since 1996, she was also secretary for several years, and you'll often find her as purser on cruises, too. Ted van der Bel, secretary-treasurer since 1994, has also been a tireless worker, both as a leading hand on cruises and more importantly looking after the society's purse strings and organising the funding applications which are so crucial for the society's survival when it can face costs of more than \$80,000 for the annual survey. Former board member Stuart Beswick also made a valuable contribution in this area particularly during the expensive

Bill of Sale entered this 9th day of August 1989 at 1335 hours.



MOT 5594A

BILL OF SALE (Body Corporate)

Name of Ship	Official Number	No. Year and Port of Registry	Whether a Sailing, Steam or Motor Ship	
LYTTELTON	76079	NO. 2 OF 1907 - LYTTELTON, NZ	STEAM, TWIN SCREW	
Register Dimensions		No. of Tons		Combined Power of Engines (if any)
Metres		Gross	Net	Brake Indicated
Length ...		292.15	-	800 h.p.
Breadth ...				
Depth ...				

as described in more detail in the Register Book.

We, (a) LYTTELTON HARBOUR BOARD, NORWICH QUAY, LYTTELTON

having our principal place of business in LYTTELTON (hereinafter called "the transferor/s") the receipt

in consideration of the sum of NIL paid to us by (b)

THE TUG LYTTELTON PRESERVATION SOCIETY (INC.),
P O BOX 19659, CHRISTCHURCH

(hereinafter called "the transferee/s") the receipt whereof is hereby acknowledged, transfer

SIXTY-FOUR shares in the ship above particularly described, and in her boats and other equipments to the said

transferee/s. Further, we, the said transferors for ourselves and our successors covenant with the said transferee/s and (c)

ITS assigns, that we have power to transfer in manner aforesaid the premises hereinbefore expressed to be

transferred, and that the same are free from encumbrances (d)

In witness whereof we have hereunto affixed our common seal on the 2ND day of JUNE 1989

The Common Seal of the transferors was affixed hereunto in the presence of

[Signature] : CHAIRMAN

[Signature] : MEMBER

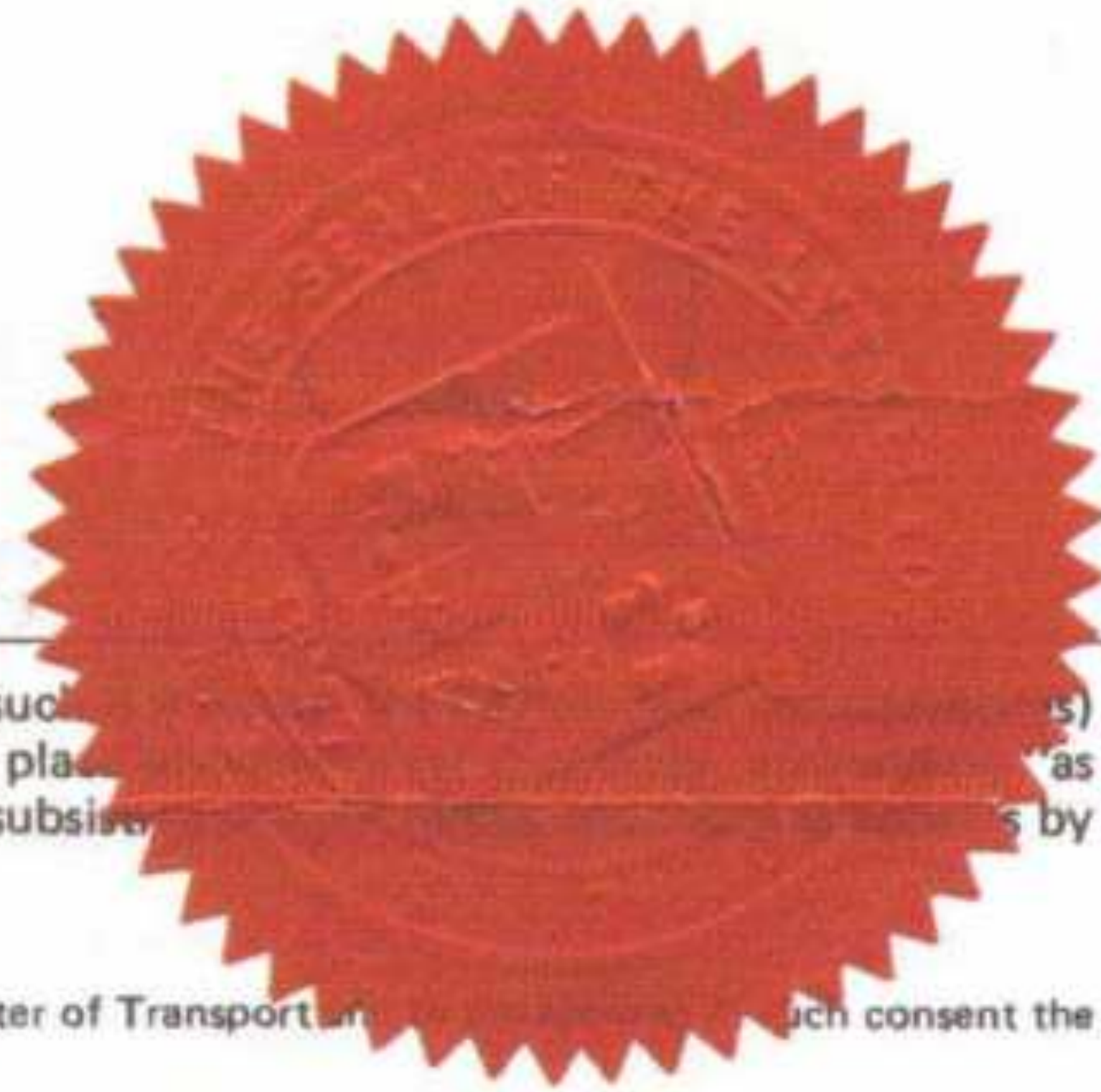
[Signature] : SECRETARY

(Signatures and description of witnesses; Directors, Secretary, etc., as the case may be)

(a) Full name and address of the Body Corporate and adding "as joint owners" where such of transferee(s) adding in the case of a Body Corporate the country of the principal place of joint purchasers" where such is the case. (c) "his", "her", "their" or "its". (d) If any subsidiary by the registry of the said ship".

NOTES:

- (i) The sale of a registered ship, or share therein, may require the prior consent of the Minister of Transport and such consent the transaction shall be void and the ship liable to forfeiture.
- (ii) A purchaser of a registered New Zealand vessel does not obtain a complete title until the Bill of Sale has been recorded at the Port of Registry of the ship, and neglect of this precaution may entail serious consequences.
- (iii) Registered owners are reminded of the importance of informing the Registrar of Ships of any change of address.



Certificate of Sale to the society.



Barbara Hayden.



Ted van der Bel.



David Scott.

crisis refit of 1994. Lawyer David Scott, the society's vice-president, also makes a notable contribution. Neill Cooper spent 20 years as head stoker and rostering the black gang until ill health forced him to hand over to Alf Wilson in 2006.

On the engineering side, Bas Howell, a former Union Co engineer who has a second class steam certificate, has been engineer superintendent since 1994. He's been indispensable for many shipboard tasks including electrical work and fitting sound systems, and he also worked on the installation of the diesel generator and wiring. Nat O'Brien, Dick Schneider, Joe Archer, Jack Tanner, Ray Sullivan (at 80, still to be found in charge of the engine room on some Sunday cruises), and Dave Campbell, and the late Russell Lawrence and Ken Sellars have also given notable service as chief engineers. Doug King prepared the training manual for operating the main engines and boiler. As well as being Chief in her Harbour Board days, Bill Le Warne senior has been a staunch supporter of the society from the start and a source of sound advice to the engineers over many years.

After moving to Christchurch in 2002, Englishman Ted Shaw became a valuable recruit as Chief Engineer as well as more recently a society board member. He has both his steam and motor Chief's tickets, and was at sea with P&O (including spells on the passenger liners *Carthage* and *Canberra*) and Port Line before coming ashore to industrial engineering jobs in New Zealand.

Gerald Anderson has been an enthusiastic worker for many years as second engineer as well as assisting on deck sometimes, and during the big 1994 survey and most surveys in dock since then, he's assisted with hull thickness testing. He also gives valuable service on the board. Nat O'Brien, a former New Zealand Shipping Co, Salen UK, and MacAndrews engineer who has first class steam and motor certificates, has been a Chief on the tug for many years, including the passages to Akaroa and return, and been to the fore during surveys of the main engines. Another engineer who has been a huge asset to the society is Don McPherson, who sails as second engineer and is able to carry out mechanical repairs at his own workshop.

Prominent masters over the years have included Jimmy Graham, Robbie Edwards, Doug Brown (now all deceased), Tony Lester, Tim Phipps, Malcolm Browne, Lew Andrews, and Euan Crawford. As well as deck superintendent Malcolm Pearson, the present line up of masters for the tug is Ray Kenny (also a marriage celebrant who has conducted several weddings on board), Ken Johns, Chris Baugh,

Geoff Swallow, and Malcolm Browne.

Among the deck hands, leading hand James Murray has had a particularly long association, while, encapsulating the spirit that keeps the society going, Vince Rowe, who lives in Wellington, sometimes comes down to work on deck. His fancy ropework also provides items for the onboard shop. There is a long list of stalwarts who turn to regularly for the Thursday work days – Ken Johns, Gerald Anderson, Larry Wells, Peter Heald, Chris Baugh, Geoff Swallow, Steve Lowes, Arthur Henderson, Cliff Rumph, Alf Wilson, and Bruce Gillanders, while Lew Andrews and Bill Thomas were also tireless workers for many years, as well as members who have now “crossed the bar,” notably Lloyd Hayden, Hilton Cook, Lester Hooker (who was marine superintendent), Stan Barnett, Warwick Earl, and Robbie Edwards. As a passenger ship now certified to carry up to 150 passengers within harbour limits (roughly Sumner to Baleine Point) and 110 to extended limits (from south of the Waimakariri mouth to Long Lookout), the tug has a rather larger complement than in her working days. The usual crew is master, two engineers, leading hand (a qualified AB), about six deckhands, two stokers, purser, and galley hand. They used to have a greaser but now the engineers do the oiling up. For some charters up to 19 crew are required.

Sunday afternoon harbour cruises are the tug’s bread-and-butter work, and for several years the season has started in January because poor weather and people’s pre-Christmas commitments affected bookings when they operated cruises earlier in the summer. However, charter sailings start long before Christmas. Up to 130 people at a time enjoy these – usually three hour trips to Little Port Cooper, and occasionally further afield to Port Levy or New Brighton – on Friday or Saturday nights.

The tug quite frequently hosts weddings (four were held on board in the 2006-07 summer) or wedding functions – although the society has avoided full sit-down functions aboard since the legendary occasion when the chef, catering for 40 guests, was seasick and the bar attendants plied him with wine in what turned out to be a very erroneous belief it might improve his equilibrium. One of the weddings on

When the going gets tough, the tough get going. It’s a bitter winter morning in July 2007, but the Thursday work gang are all set to start their chores.

Back row from left: Malcolm Pearson, Ted Shaw, Nat O’Brien, Gerald Anderson, Jimmy Murray, Bruce Gillanders, Dick Schneider, and Arthur Henderson. Front, from left: Larry Wells, Ken Johns, Geoff Swallow.

NICK TOLERTON



the tug was that of a skipper, Ken Johns. Another was that of Helen Shaw, daughter of chief engineer Ted Shaw. Several Japanese weddings have been held on the tug, too. On one wedding cruise, a ship was anchored outside the heads. "So we got everybody out of sight below decks, put the bride and groom on top of the deckhouse, and steamed around the ship," remembers John Goldsworthy. "All they could see was a bride and groom in their finery on top of the deckhouse, and not a soul on the ship! They were running from side to side to see what was happening." Onboard dance parties are also popular – there's no risk of gate crashers in the middle of the harbour.

The cruises out of Akaroa were memorable for members involved. Originally invited over by Akaroa businesses who saw the tug as another summer holiday attraction, *Lyttelton* first sailed out of Akaroa in the 1985-86 summer. The tug would usually sail on Boxing Day having loaded enough coal for her cruises at Akaroa and the return trip. Malcolm Browne was generally skipper. The Akaroa cruises were not a big earner for the society but great fun for members, who camped over there and swapped beer for cod with a fishing boat. However, the tug might have come to grief there – one night a couple of the crew sleeping on board came to just in time when a hoon had cast off the lines. The local Akaroa harbour cruises company was less enthusiastic about the presence of the *Lyttelton* than the shopkeepers had been, and when she sailed from Akaroa on January 4, 1993, it marked the end of her last season there.

Although the tug was saved from drifting to possible disaster at Akaroa, she's had one major mishap during her preservation society days. On a Saturday night charter cruise on October 26, 1991, she went aground several hundred metres offshore on a sandbank off the Christchurch estuary bar. Trying to get off, sand was taken in through the intakes into the condensers and choked them up. The stranding happened about an hour after high water, and the Sumner lifeboat took the 82 passengers ashore. At high tide early the next morning, the tug *Purau* pulled her free. The inquiry found the grounding was a result of misadventure rather than negligence, after the master Captain Tony Lester told it he had taken the tug into the area on previous sailings without incident. It also recommended that if she was to continue carrying passengers during the hours of darkness, the society should give serious consideration to installing a small radar so her position could be fixed accurately. As a result a Furuno set was fitted.

Members who had put so much work into the tug could only be grateful the grounding did not have worse consequences. Malcolm Pearson, now marine superintendent, had done his first "learner trip" on the tug earlier that day, and when he heard on the news that night she was aground "I thought, that's my job gone!"

Engineer Bruce Carr, who did many surveys of the tug and became active in the society after retiring in 1988, won't forget that night. Like Pearson, he'd been out on her earlier in the day to Little Port Cooper for a Japanese wedding, before handing over to Ray Inwood for the night cruise. Hearing what had happened, he rushed to Sumner to watch from the lifeboat station. When they pulled her off he went up to the Sumner Road to look out for her. "It took ages for her to come up to the harbour – I was thinking the worst! However, the *Purau* eventually berthed her about six or seven in the morning. I was waiting on the wharf for her, you know. Everyone was very, very sombre."



Cruising at Akaroa.

TUG LYTTELTON PRESERVATION SOCIETY

The grounding damaged a starboard propeller blade and when she was being pulled off a small split opened below the waterline between two portside hull plates for'ard in way of the hold. The leak was shored up and Stark Bros loaned pumps to put aboard as soon as she arrived back. Carr and another member slept aboard the next two nights to keep an eye on the pumps. After this the little-used fire pump, the biggest pump on the ship, was modified so that now in an emergency a hose can be put onto the suction chest to reach into the shaft tunnel, stokehold, and engine room.

Modifications like that and radar and an echo sounder were not the only improvements looked at for the tug. The society also installed VHF. Early in 1988 the society asked the Harbour Board for an opinion on introducing oil burning as an alternative. However, the board's mechanical engineer W G Croll warned against it for many reasons. He cited the risk of blowback if it was for subsidiary firing without modification to the present furnace, uneven expansion in the fire tubes with a significant reduction in the life of the boiler as a result, and rapid deterioration of the brickwork in the back ends of the furnace.

Every Thursday the society's hard core members have a work day on the tug. You'll find them painting, chipping, and sanding the varnish. When she is docked each year, it's even more full-on. "Last year we stripped out the port bunkers," says Malcolm Pearson. "The coal was transferred into drums on deck and the wooden sparring removed. This was done to enable plate repair work to be carried out and to eliminate any possibility of fire. The sulphur in the coal has a corrosive effect on the steel, as well as the sea water on the outside. The hull is partially protected by 25 sacrificial anodes which are bolted to the outside plating.

"Each year there is a lot of work cleaning out under the boilers and stokehold plates, areas which tend to accumulate ash and coal dust. All areas of the ship are subject to periodic or annual inspections and survey requirements."

Most of the Thursday workers are over 70 and a bit stiff in the joints now to be scrambling around the scaffolding in the dry dock, and in the last couple of years that work has been contracted out. Even so, they are kept busy in many other areas. Working in the dry dock during winter can be grim. Members painting the bottom plating reckon they're unique – they've witnessed snow falling below sea level.

Engineer Bruce Carr sees off the old funnel when it was replaced in the early 90s. BRUCE CARR COLLECTION





View From The Bridge

MARINE SUPERINTENDENT AND SENIOR MASTER MALCOLM Pearson and his twin brother Maurice well remember going aboard the tug during the late 1930s while on visits to their shipmaster father's vessels like the Anchor Co's 421gt *Totara* in Lyttelton, and his family have a unique bond with her.

He shows understandable pride and affection when he looks around the wheelhouse of the *Lyttelton*. There have been a few additions over the years such as radio, radar, and echo sounder, but the basic bridge equipment is original, including the splendid brassbound teak steering wheel and the Chadburn engineroom telegraphs – a delight for connoisseurs of old maritime equipment.

He knows her little quirks. "Normally she steers very well under way," he says. "But there's about a half turn slack on the wheel before the 100-year-old steam steering engine is activated. New hands are made aware of this and know that nothing will happen to the ship's head until the engine kicks into life. The engine turns a drum which winds in and pays out chain that leads from the bridge down either side to the main deck and aft via rods and sheaves to a large quadrant which is secured to the rudder post. Big springs take up any shock in a seaway, absorbing, for example, the impact if something strikes the rudder. The rods incorporate big turnbuckles and these can be adjusted to take up any slack.

"Being twin screw, the use of the engines is vital when coming alongside the wharf. One of the idiosyncrasies she has is that when the engines stop for more than a minute they tend to lose the vacuum making it difficult for the engineers to restart, especially while gliding in towards the berth when an astern movement is required. However, just having the engines flopping over in the ahead position and not too much way on, our skilled engineers give the captain the required engine movements in sufficient time."

At dead low water spring tides, a small mud bank is almost exposed in the area where the bow lays at the tug's berth at No.2 wharf. "Consequently she tends to 'smell the bottom' and the bow will fall away from the wharf, necessitating the use of the mooring lines to pull her back alongside," says Pearson. Sometimes things will go wrong – like a port Open Day when Pearson was approaching the berth with a full load of passengers, and the stern got into the thrust from a Port Co tug berthed alongside. "The stern was pushed out and the bow swung towards the wharf lined with people waiting for the next trip," he recalls. "The telegraphs were rung for Full Astern but the engines were a bit slow in responding and consequently the shoulder hit the wharf with a bit of a bang. Rather





Senior master Malcolm Pearson and helmsman Chris Baugh take out the tug. KEN BAKER

embarrassing with a cast of one and an audience of hundreds!”

About 10 years ago Pearson had her big towing hook removed (it was given to the Lyttelton Museum) for space for liferaft lockers, and also the towing hawsers. The horses or towing arches on the after deck, which kept the lines clear of tangling with deck fittings, had been removed earlier. He also had two of the six square boiler-feed water tanks in the hold right under the crew quarters removed. The capacity was not needed, and taking them out made access to the area, which was very prone to corrosion, much easier. The two tanks were stored by the overbridge down to No.2 wharf but mysteriously disappeared, and are no doubt holding tanks for someones’s garden now.

In 2001 Pearson decided to take off the topmast and land it ashore. The Port Co provided a crane, and after all the stays were unshipped Pearson went aloft in a bosun’s chair to slack off the hounds bands and put a sling around the topmast. However, the topmast did not separate from the lower mast and the whole lot shot out from the mast step. It was decided to lay it all onto the wharf to be resteped later. Their hopes of finding the traditional gold sovereign were dashed – they found only 10 very flattened pennies.

A discovery of a different sort was made on a charter cruise when they anchored one night on the south side of the heads to get out of the roll, and it started to blow south-west. When they lifted the anchor it had fouled the long-forgotten telegraph cable that ran to the old Adderley Head signal station.

With the tug close to rocks, Ken Johns went over the side in the bosun’s chair with a hacksaw to cut it free. Johns had to be reassured it was not live. “Even so, the crew were hoping they would not see any sparks fly out of Ken’s ears,” says Pearson. The cable had been down for more than 100 years and was one of the first undersea cables in New Zealand. Pearson phoned the harbourmaster, Captain



The tug's arrival was re-enacted in September 1982 to mark the 75th jubilee. Dressed for the part are society members Peter and Brenda Sinclair. THE STAR


Bill Oliver, the following morning to report the incident, expecting a rebuke for anchoring near a clearly charted cable, but was pleased to be told they had been looking for the cable for years. He regrets time and the conditions did not allow for a sample to be cut off for the local museum.

Early this year Pearson and the old tug hands got a taste of what the tug was like in her early days when she was wound up to about 10 knots for the benefit of a television crew. "I was a bit worried," admits Pearson. "The old girl was jumping along. I thought, are those plates all right around the stern!"

Down below were engineers Bruce Carr, Ted Shaw, and Don McPherson. "She did 120 revs per minute on her trials," says Carr. "Normally we run her at about 65, and 70 sometimes. Anyhow this day with the film unit we wound her up. I took the starboard engine and Don McPherson followed me on the port engine, and we just wound her up and kept on counting the revolutions of the cranks with our watches, and I got up to 100, and 101! Left it at that! I've never seen her running at 100 before, but we did it. Because I thought it's the one and only chance of seeing those engines running a little bit closer to what she was running when she was a new ship. Also to enable everyone to see it on film. It was a great occasion for all of us on board. The stokers Alf Wilson and Bruce Gillanders did a great job keeping the steam up in the boiler. We will never forget that steady beat of the main engines under full power."



“She Could Almost Go To Antarctica...”



IF THERE'S A SECRET TO WHAT KEEPS THE LYTTELTON KEEPING ON, you'll find it in the files of former society president Bruce Carr, a retired surveyor and Chief Engineer, who directs her programme of maintenance. “Retired” is probably an inappropriate word for Carr, who still makes occasional delivery voyages as the engineer, as well as his work for the society. Carr has both steam and diesel first class tickets, and went to sea after he finished a five year apprenticeship with Sinclair Melbourne at Lyttelton in October 1951. He started as seventh engineer on the *Rangatira* and served on many Union ships including the trans-Pacific steamer *Waihemo* as second engineer and later with the Port Line, MacAndrews, then Union again, returning to New Zealand on the delivery voyage of the *Waikare*, and then as Chief on the *Katui*, *Kaimai*, and *Kanna* before joining the Harbour Board. He served as an engineer on most of its ships including the *Lyttelton* before joining the Marine Department in Christchurch. His 28 years as a surveyor for the department included annual trips to the Chathams starting during the 1960s crayfish boom when there were about 300 boats to survey. He also worked at both McMurdo and South Pole stations. And, as mentioned earlier, his 1971 survey of the *Lyttelton* nearly meant her death sentence. He joined the society as a Chief a little before he retired from the department, where he was Principal Surveyor for Christchurch, in 1988.

Bruce Carr (left) and Chris Baugh ready for another survey. THE STAR





Anxiety in December 1984, as fire engines attend a fortunately minor fire in the coal in the port bunker.

THE STAR

For many years he has directed maintenance of the tug for the society, and crucial to that for keeping her 100-year-old hull seaworthy is a chart he has made which "maps" the whole hull. Carr electronically thickness-tested every square metre of the hull on the underwater surfaces and around the waterline, assisted by second engineer Gerald Anderson, and the chart records every plate and its condition. This allows programmed maintenance year by year when she is docked and surveyed by the SGS/M&I surveyor.

The incentive for Carr keeping that chart came in 1994, a critical year for the tug. "I took her around to Akaroa a few times as Chief Engineer, and sometimes I used to worry about her pounding into the easterly swells coming back. And one trip I went into the hold and had a look around with my torch where the tanks are, and I could actually see the hull plating panting a wee bit with the force of the waves." Carr thickness tested the problem plating and found it had wasted to 5.5mm. Originally the plates were 9.5mm thick, and there is a tolerance for 30% wastage, to 6.65mm.

They first sandblasted the hull in 1994. "It was a sunny day and I went down the hold to get something, and it was quite dark down in the hold," recalls Carr. "I looked on the port side and below the waterline, I wondered, 'What are all those little lights?' Stars! So I went over to the side of the ship and saw pinholes. That's what the sandblasting did. This was when we first found all these problems, and especially in the hold, under the water tanks. What a job that was. When I first saw that I put my hammer through everywhere, it was so thin. The only thing holding the old girl together in places was the shale, the bits of steel with corrosion that were left."

That survey, they seriously wondered whether the tug would go another year. It cost \$38,000. She had to be virtually cut in half from the bridge for'ard. "If we'd put another couple of cuts somewhere, she'd have been in two pieces," recalls Carr. "It was a horrible sight. She was in such bad condition."

Although the tug is of riveted construction, she's a steel vessel, and new plate can be welded to the old. Says Carr: "When it has to be





Clockwise from top left:
Typical survey surgery – a sheather plate in the bow sections. BRUCE CARR

Thickness test readings chalked onto the plating.
BRUCE CARR

Where do you start? Some of the corrosion that had to be fixed in the major 1994 overhaul. BRUCE CARR

Ready for major plate replacement in the underwater sections during the 1994 survey.

repaired you either crop or cut the plate out, and put a new plate in and weld it up to the thicker plate again, or, if it's only a smaller area, we put a doubler plate or sheather plate over it. I've been doing the doubler plates lately because they're a lot cheaper, and still keep their strength because the frames internally are in very good condition. There's no wastage in the frames, so you've got a good solid base for that plate to weld on to the hull plate. The doubler/sheather plate is welded right around and then it has plug welds across it to keep the centre part of the plate held into the hull, and it's painted in between. She has quite a lot of those, but she also has a lot of new plate, especially under the boilers."

The doubler is effectively a steel patch on the outside of the hull. The doublers are 6mm thick, and Carr jokes "the poor old girl, she's getting that way she could almost go down to Antarctica, she's got ice-strengthening."

While Carr's data on his plating chart certainly streamlines hull

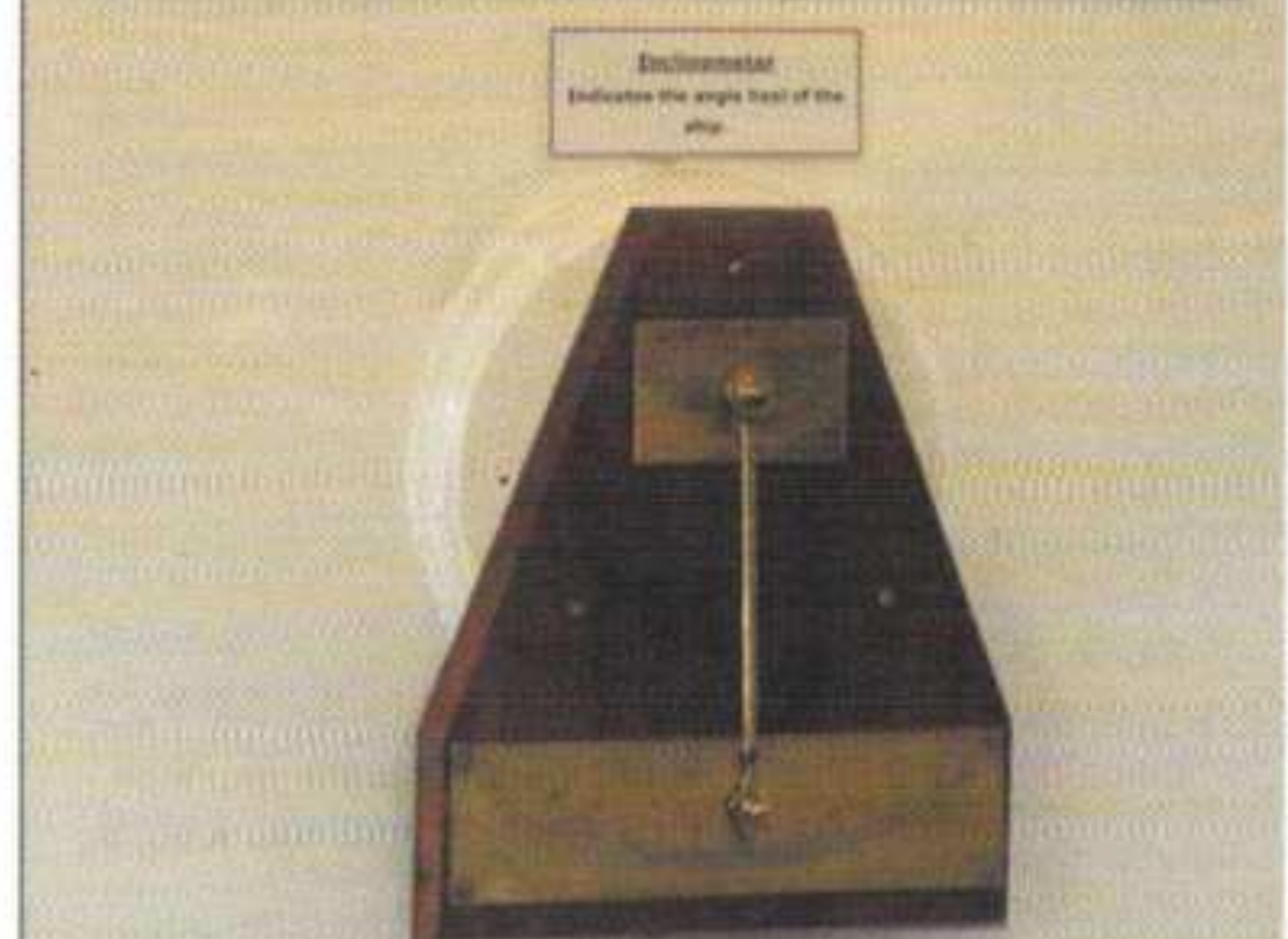
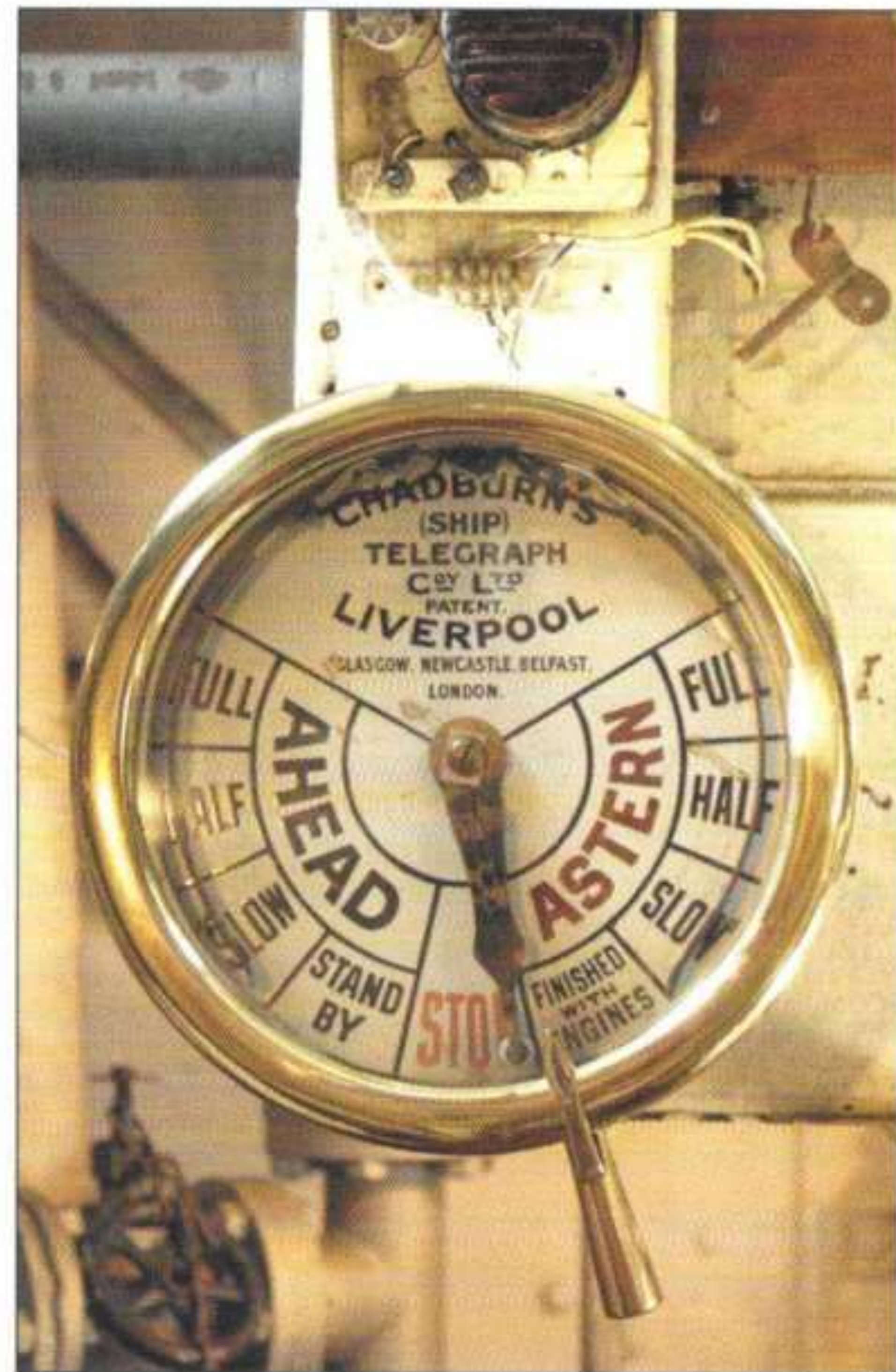
maintenance, every annual survey can bring its surprises. "Sometimes when they're waterblasting they'll uncover an area of pock marks that looks suspicious. So I go up there with my hammer and sure enough I put my hammer through. And you go in on the inside, and last time the accommodation for'ard in way of a frame just by the for'ard port bollard, you could see on the inside where rainwater had been running down from the bollard, going through the deck, down into the frame, and running down the side of the frame behind the angle, so you couldn't see it. Over the years it dug its own gutter, creating grooving. That grooving made the plate thin, and that's when you started to get pitting and pinholes. Anyway, that happened just last year. So we cropped out the affected plate, and put the new plate in, and welded a sheather over the top of that as well, to make a job of it. Anything like that or if I'm not sure, I put a sheather over it, and that keeps it going."

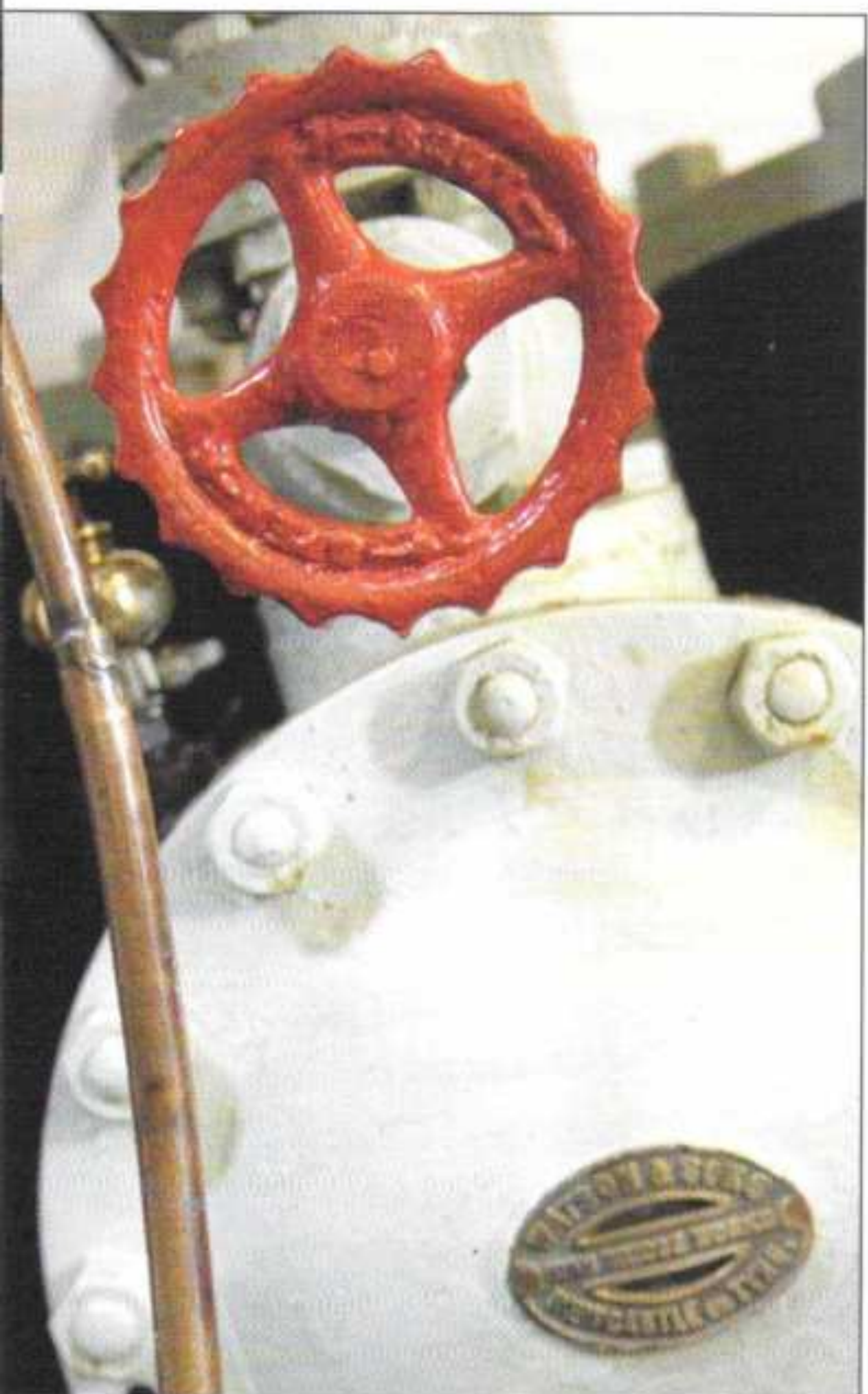
Every year the tug's hull, boiler, machinery, and safety equipment are surveyed by the SGS/M&I surveyor in accordance with the Safe Ship Management requirements. To carry passengers, the tug has to have a current NZ Safe Ship Management Certificate at all times. In 1979 the boiler had expensive repairs when 90 new tubes had to be brought out from the UK. During the survey the hull is always waterblasted and cleaned, the hull plating washed down, all the sacrificial anodes removed and checked by crew members, and the sea injection valves opened up for cleaning and inspection. The valve opening gratings are removed and cleaned. Two plugs in the hull are removed to drain the hull so she can be washed out, especially in the engine-room area, and then the hull plating is inspected for pitting and wastage, and thickness tested with the thickness meter, and the figures recorded on Carr's chart. "If it's down to 6.7mm, I don't worry about it, just look at it again later." As described earlier, any plating below the allowable is either cropped out and renewed or sheathed, depending on the size of the affected area. The rivet heads are inspected and then the rudder pintle clearances and rudder area checked, and the tail shafts for wear allowance on each shaft. "You're allowed up to quarter of an inch wear-down on the shafting. It's coming up to it, it's about three-sixteenths of an inch, but it's got a bit to go yet before it reaches the limit. Otherwise your shafting would get out of line – you have to be careful about that."

Every four years, and sometimes more frequently, both anchors are lowered to the dock floor and the chains ranged for inspection. And every four years the overboard discharge valves are opened up, the steering chains cleaned and inspected, and the steering gear pulleys checked by the surveyor.

The tail shafts are drawn for crack testing and inspection every five years, and wear-down is checked on the stern bearings every five years. "It's a big job taking the shafts out, especially the two together, so we get Lyttelton Engineering to do it now," says Carr. "One time the society used to do it themselves. The steel shafts with bronze sleeves over them weigh about five tonnes each. It takes two or three sets of chain blocks to slide them out and lift them down. They don't rely on the lugs that are welded to the side of the ship. They use proper strops wrapped around the ship to drop them down onto the stagings."

All the spaces inside the hull are examined in rotation over five years. The coal bunker, from which of course any coal has to be emp-





KEN BAKER

tied, gets particularly careful attention. "That's one of the worst places on the ship for corrosion because of the sulphur and dampness," says Carr. "The forepeak, the hold, under the boiler, under the stokehold plates are bad, because you get a lot of soot and ash causing corrosion down there. A lot of those areas have been replaced. The stokehold area frames were badly corroded when I surveyed her before the Harbour Board decided to dispose of her." The bunkers are painted every five years to keep the rust at bay. Under the engineroom is not such a problem, because it is concreted. The shaft tunnels and the after peak also get five-yearly inspections.

Carr still surveys the machinery, the steam engines, and pumps. Every component of the main engines is checked on a five year cycle, too – pistons, rings, cylinders, top and bottom ends, main bearings, thrusts, engineroom pumps, auxiliaries, fire pump, general service pump, feed pump, generators, and more. The steering engine, capstan, and anchor windlass are also done every five years. Preparation for the survey is carried out by the tug's engineers.

Getting ready for her centenary celebrations, the *Lyttelton* went into the graving dock on June 12, 2007, and came out again on June 27. It was a fairly typical survey. Six sheather plates of various sizes had to be fitted, two unused portholes were blocked off with welded disks, the portside for'ard bollard was strengthened, the frame and flap for a freeing port portside aft was replaced, the bilges cleaned out, the funnel repainted, some deck plating aft under the tiller quadrant repaired, an aft hatchway coaming repaired, the lining stripped from the saloon to examine the hull plating behind it and this plating was thickness tested and cleaned and painted, the hull anodes taken off and checked and replaced, the starboard anchor chain dropped and checked, wear-down checks made on both shafts near the propellers, and the valve gear and bearings of the starboard main engine received some repairs and slack bearings were taken up. In addition some random hull thickness tests were made as usual, and just before she went into dock, some of the wooden decking was renewed by Stark Bros. Surveying the hull was the main job, and the annual survey of the boiler was made. "She's never been better, overall!" declares Carr as the tug prepared to sail into her second century. "A lot of areas we've been suspicious of have been sheathed or cropped out by Lyttelton Engineering."

Carr points out that twin compound engines like the *Lyttelton* has were very popular for tug propulsion when she was built because they were short, whereas more powerful triple expansion engines like the *Lyttelton II* had required a longer engineroom. It was compound engines that powered the first steamships across the Atlantic, and development of them had reached its zenith about the time the *Lyttelton* was built. She would have been the "Rolls Royce" of them and still runs as if she is today thanks to skilled and dedicated care by engineers over the last 100 years, says Carr.



Tug master Tony Lester in the saloon when it was being refurbished in 1979. THE STAR



The Magic Of Steam

THINK OF GOING SOMEWHERE, AND FOR MOST OF US IT'S JUST A matter of putting a key in the car's ignition and turning it. An old steam ship like the *Lyttelton* is rather more complicated – getting set to sail entails at least two days of preparation.

The boiler heated by four furnaces is probably the biggest Scotch marine boiler left in the southern hemisphere. And the society's engineers reckon it's in better condition now than it ever was because of the feedwater treatment they've been giving it.

For a Saturday night or Sunday cruise, firing it up usually starts on the previous Thursday morning. "The longer it takes, the better for the boiler, because a Scotch marine boiler is riveted," says Bruce Carr. "It has thick plate because it's a large diameter boiler, and the bigger the diameter of the boiler, the heavier the material they build it with because of the pressure." Firing starts on Thursday with a slow wood fire warming it through and slowly building up to coal firing, one furnace at a time. A wood fire is particularly important after survey – it hasn't got the same heat as a coal fire and brings the warmth gently into the plates. The boiler has a Hotchkiss circulator, a big dome on top of the boiler, which brings the cold water from the bottom of the boiler into the top. "You can feel the bottom of the boiler – you know it's circulating if it's getting hot at the bottom of the boiler, you know you've got good circulation," says Carr. "If the boiler bottom is cold and at the top the boiler is hot and you've got a bit of steam, you've got bad circulation. So you've



Ted Shaw adjusting the port and starboard engines.

KEN BAKER



Engineer Gary Clarke.
KEN BAKER

Two grand old ladies of the sea – Lyttelton and Cunard’s longest-lived ship *Queen Elizabeth II* at Cashin Quay in 2007. KEN BAKER



Ted Shaw at the engineroom telegraph. KEN BAKER



got to watch that.” In the early days of the society, they circulated the water with the general service pump. However, that risked putting a shot of salt water in which would do the boiler no good, and with sometimes inexperienced steam enthusiasts working on the tug there was a risk of a mistake.

The fires are built up gradually so that by Saturday morning the tug has some steam on and the pressure can be brought up. The boiler operates normally at about 90lbs per square inch, and supplies steam via the main steam pipe and a distribution pipe to each of the two engines, where it goes into the engine’s high pressure slide valve chest. The slide valve distributes steam to either the top or bottom of the cylinder. It’s operated by two eccentrics on the shaft – one for ahead and one astern. To begin the engine’s working cycle, steam passes through the steam inlet ports in the valve chest and goes into the top of the high pressure cylinder just before the piston gets to the top of the stroke to cushion it a little, and blows onto the top of the piston and pushes the piston down. When it gets near the bottom, beneath the piston the steam is exhausted into the other port, while the exhaust port also acts as a steam inlet and then pushes the piston back up again to continue the cycle. The exhaust steam meanwhile is passed through the exhaust port to the low pressure cylinder to be used again for a similar cycle with the piston, then exhausted into the condenser. When the engine is working, an air pump sucks out the

air from the condenser so there is no back pressure and this makes the engine run easily. They operate on about 25in of vacuum. "A perfect vacuum is 30in and a turbine works on 30in, but you can't have a steam engine working on 30 because the extra cold water going through the condenser makes the condensate too cold to pump back into the boiler," says Carr. "But by having it at 24, 25, the water condensate to the bottom of the condenser is still quite hot, and it is pumped by feed pumps back through filters into the check valve, into the boiler. So you get a cycle that steam is produced in the boiler, passes through the engines, the engine cylinders exhausting one into the other, then into a condenser, the steam is condensed back into water again, and the water is then pumped by a feed pump back into the boiler." Although pressure in the low pressure cylinder is considerably less than in the high pressure cylinder, the horsepower of the cylinders should be the same due to the expansion of steam.

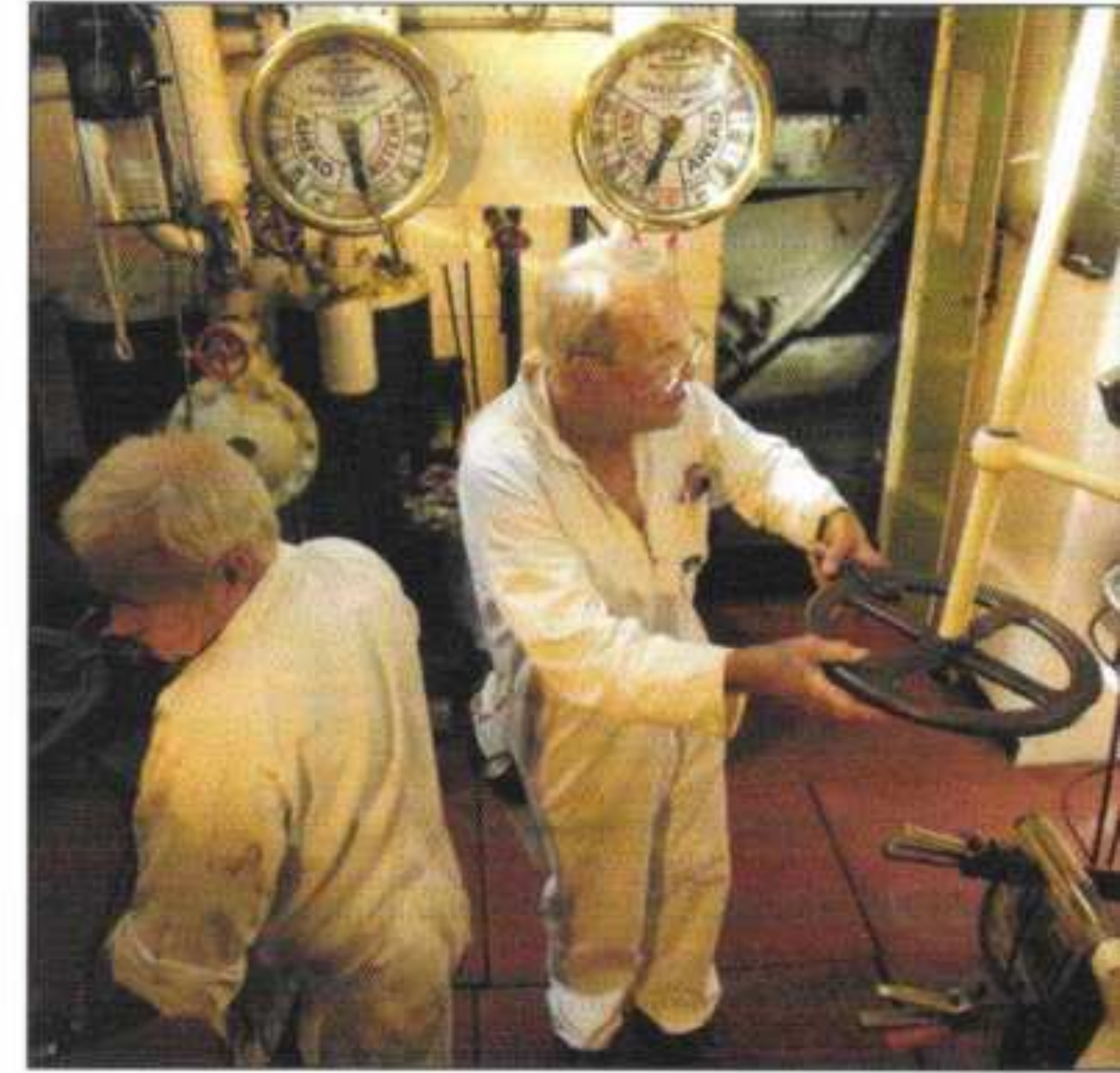
Carr recalls in his days as a young engineer with triple expansion engines that "if we wanted to get home in a hurry, we'd open up the high pressure valve gear linkage without the Chief knowing and get more steam through the whole engine. Open that up a bit, and it gave you another couple of revs."

And of course it's not just a case of turning off the ignition when the tug berths. When the bridge telegraphs "Finished with Engines" the engineers shut the steam off the main engines and the stop valve on the top of the boiler, open the steam drains on the engines to eject all the water out of the lines and the engines, then shut off all the sea suction valves. If they were left open and a flange leaked inside, you'd have water in the ship.

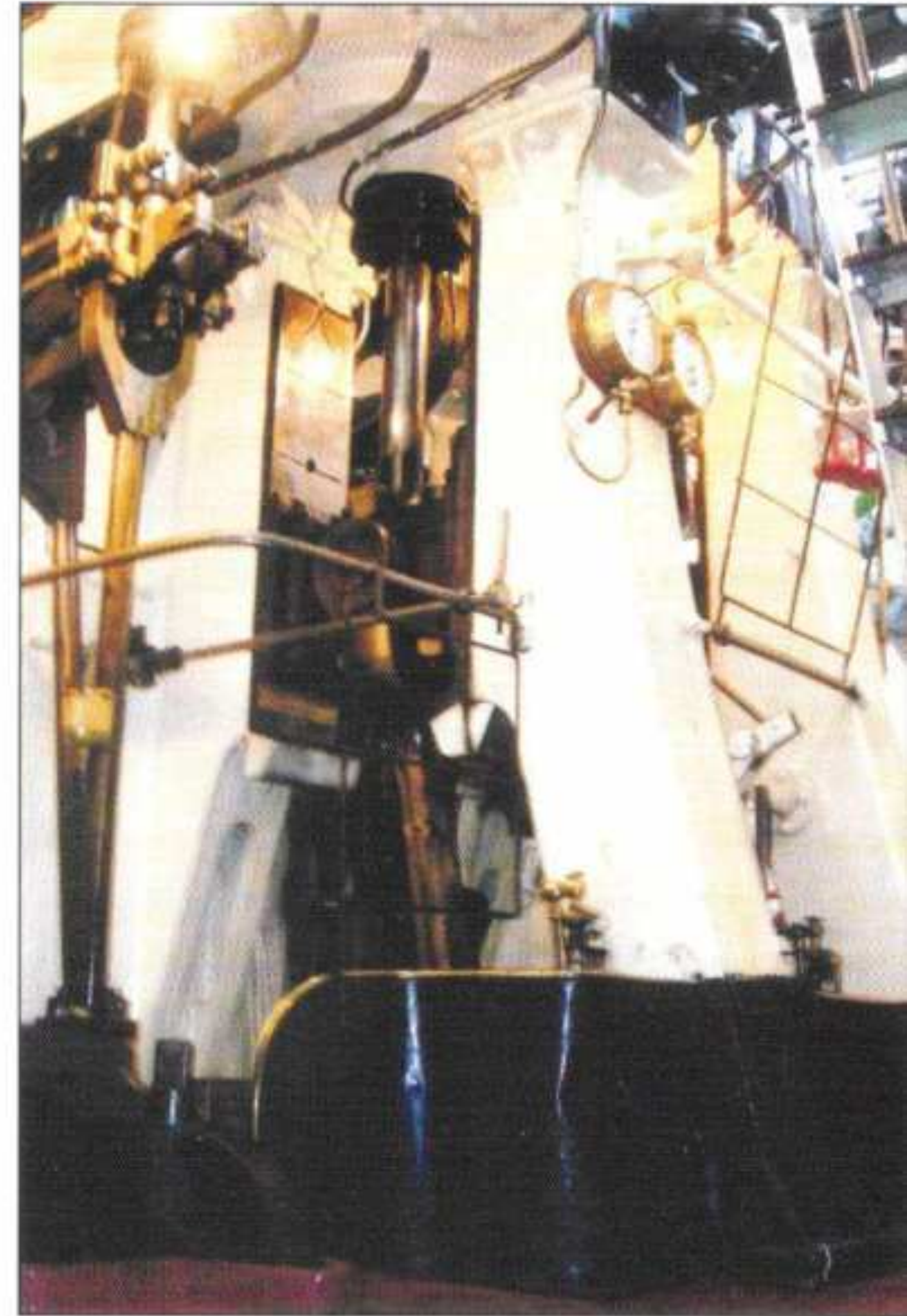
The general service pump is kept running on the condenser for a while to cool the condensers down, circulating seawater through the condenser where it's been hot with steam from the engine exhausting into it. "We just let things slow down quietly and shut off the steam stop valves for the steering gear, windlass, and the capstan, and eventually when we've finished cooling everything off, the condensers are cooled and the pump is not needed any more, so we shut that off." The auxiliary stop for steam for the auxiliary pumps also has to be shut. "During this time the boiler is shut down, too. You've got to draw the fires and clean the ash pits out, make sure everything is clean and ready for the next bloke coming along." The engineer always has to make sure water is pumped back into the boiler to bring it to the top of the glass, to replace what has been lost with evaporation.

The engineroom check list both before and after a sailing might make even a Boeing jet pilot think his workload is not too bad, although unlike the pilot, of course, the only reward for the crew of the *Lyttelton* is the joy of still working with steam as their predecessors have done in this engineroom for 100 years.

The tug's furnaces, incidentally, are fired with Spring Creek premium steaming coal from the Rapahoe mine in Westland. She uses about 100 tonnes a year, and about one-third of a tonne on a one and a half hour harbour cruise, bunkering four to six times a season. And even an old coal-burner can be environmentally friendly. The ashes used to be dumped at sea but nowadays are put in drums for disposal ashore. And the stokers rake through the ash to recover the coke for reuse.



Engineers Ted Shaw and Gary Clarke. KEN BAKER




The port engine. BRUCE CARR





The Next 100 Years?




AFTER 100 YEARS, WHAT IS THE FUTURE OF THE LYTTELTON? SHE looks set to sail on the harbour she has graced for a century for some years yet, but in spite of meticulous maintenance the inevitable wear on a ship that has lived three or four times as long as most do, the burden of fundraising for the large sums needed to keep her going, the difficulty of finding qualified crew (particularly steam engineers), and redevelopment of the working port all put question marks against her future.

Probably most preservation society members feel that if the day comes when she can no longer sail, she should at least be maintained as a static exhibit so future generations can admire what is now a unique vessel. Suggestions include preserving her machinery in working order ashore, as has happened with the engine from the old steam dredger *Mawhera* at Westport (there are plans to do the same with the engines from the *Lyttelton II* in Victoria), and dismantling the hull and rebuilding and displaying it at Ferrymead.

The chief engineer of the *Lyttelton* must have at least a Category Five steam qualification (the equivalent of the old third class marine certificate), and at present the society is blessed with a qualified team of Chiefs, even though marine steam engineers are a vanishing breed. Apart from the *Lyttelton*, the preserved Auckland tug *William C Daldy* of 1935 (a very similar ship to the *Lyttelton II*, and also from the Lobnitz yard) and the *Earnslaw* of 1911 at Lake Wakatipu are New Zealand's last steamers. The second engineer does not need to be qualified, and the society has been fortunate to have adequate numbers of practical people keen to train for this job. "Sooner or later as the third marine engineers fade away and retire it's going to be pretty difficult to get chief engineers, and that's the hardest part for the tug," says Carr. "Therefore it is a high priority for us to keep looking out for qualified marine engineers. Just recently we have obtained limited services from one more qualified engineer, which is very promising for the immediate future."

Chief Engineer Ted Shaw points out that the steam ticket is still essential to be in charge of the boiler at places like freezing works, food factories, and acid plants. That gives a recruitment pool if these engineers can be persuaded to become interested in the tug.

Whatever the future holds, the society will be always be grateful and proud it has been able to keep the *Lyttelton* steaming safely to reach her second century. It will be a tragedy for more than just the society if and when the order "Finished with engines" rings down for the last time, and the familiar plume of coal smoke no longer wafts across the harbour.





Appendices



Appendix I

MEMBERS PRESENT AT THE INAUGURAL MEETING OF THE TUG LYTTTELTON PRESERVATION Society on June 12, 1973, were:

Bob McClellan, Ray Coburn, Dick Newton, Steve Blenkinsop, David Evans, John Gilmore, Des Sinclair, Bill White, Ray Neill, Ken Sellars, Ernie Taylor, E L Day, D Clifford, Gordon Running, Lindsay Morton, John Goldsworthy, Dick Musson, Peter Sheldon, Barrie Meikle. Elected as the first committee were Musson (president), Goldsworthy (secretary), Coburn, Meikle, Sellars, Newton, and Running.



Appendix II

LIFE MEMBERS OF THE SOCIETY ARE:

Lester & Georgina Hooker, Dick Musson, John Goldsworthy, Neil Pollock, Russell Lawrence, Neill Cooper, Doug King, John Hayston, Bill Le Warne, Dave Campbell, Tony Lester, Hilton Cook, Bill Thomas, Stan Barnett, Bruce Carr, Malcolm Pearson, Lew Andrews, John Tanner, Lloyd and Barbara Hayden, Warwick Earl, Ray Sullivan, Ted van der Bel.



Appendix III

MEMBERS OF THE SOCIETY FOR THE 2006-07 YEAR WERE:

Alexander Hugh, Alexander Ron, Anderson Bren & Gerald, Anderson Donella, Andrews Lewis (Lew), Bailey Dave, Baugh Chris & Trish, Baugh Christopher & Debbie, Baugh John & Jane, Beets Bart, Begg Ray, Bellam Bruce, Berry D J, Beswick Stuart, Bower Hugh, Brasell Alan, Bright Bernard & Darilyn, Brine Barry, Browne Malcolm & Julie, Browne B H, Buerki Stephen & Mandy, Burgess Peter, Burke Daniel, Burns Brian D, Butterfield Lindsay, Caldwell Maryanne, Campbell Dave & Lynn, Carey Kevin Joseph, Carlisle Roy, Carr Bruce, Chant Robert, Clapp Ross, Clarke Bruce, Clarke Gary & Bev, Collier Tom, Cooper Neill, Cowlshaw Ian & Leonie, Crabb Don, Creighton Ron, Crespin Andy, Dibben Mark, Donald Lance & Virginia, Donaldson Timothy, Earl Julia, Edwards Margaret, Fairbrass Brian, Fenn Seddon (Snow) James Carey, Ferguson Betty, Gardner Brent, Giles Jack, Gillanders Bruce & Nita, Goldsworthy John G, Goldsworthy Mike, Gooch David, Gordon J A, Gorman Tony, Hager John, Hardwicke H, Hardy Rex, Harvey Florence Elizabeth, Hayden Barbara, Hayston John R, Heald Peter J, Henderson Arthur & Jennifer, Hermans Lance, Hill Ian, Hooker Georgina, Horton Roger, Howat Colin J, Howell Bas & Jennifer, Jackson Bruce, Jackson Rosalind, Jacobs Warren, Jeffery, Ronald L, Johns Ken, Johnson Ian, Kavanagh Cecile, Kelly John, Kenny Ray & Fay, King Doug & Audrey, Le Warne W M (Bill), Lester Anthony (Tony), Lewis Tye, Lowes Stephen & Mary, Mainwaring John & Pat, McCallum Robert L (Bob), McGuinness Michael & Louise, McKane Peter & Dot, McLellan Bob



& Diana, McPherson Donald, McSherry Bruce, Meherne Doug C, Meredith Peter, Murray David S, Murray James, Musson Mrs F, Newton Bill & Brenda, Nicol Murray & Kay, O'Brien Nat, Parry Kerry J, Parsons James (Jim) & Diana, Pearson Malcolm & Dawn, Pearson Maurice & Christine, Pierson Noel & Dee, Pollock David, Pollock Neil, Quartermain Patricia, Rathgen Royce & Maisie, Roberts Michael & Gale, Robertson Duncan, Roland-Powell Madeleine, Rouse Sharon Myna, Rowe Andrew, Rowe Vincent, Rumph Cliff, Sanders Lisa & Derek, Schneider Eric Richard (Dick), Scott David, Shackleton Jonathan, Sharp Julian, Shaw Edward, Shaw Andrew, Shearman Murray, Sinclair Peter & Brenda, Smith Gerald (Gerry), Smith Joel & Janet, Spargo Alan, Sparrow Liza & Ed, Squire Laurie, Squire Mark, Stahl Alfred, Stark Ralph, Strang Lindsay John, Sullivan Michael & Elaine, Sullivan Ray & Patricia, Swallow Geoffrey & Vivienne, Tanner Jack, Thomas Beverley, Thomas Bill, Thomas Brian, Underwood Robert K, van der Bel Jeremy, van der Bel Ted & Connie, Warman Craig, Watson Kathie, Webb Max, Wells Larry, Wells Robin M & Margret W, Whitford Selwyne, Williams David, Wilson Alfred & Colleen, Wilson Hilary.



Appendix IV

THE LYTTTELTON HARBOUR BOARD AND ITS SUCCESSOR THE LYTTTELTON PORT Company/Lyttelton Port of Christchurch have owned seven tugs. They are:

Lyttelton (1878) steam paddle tug, 193gt, 38m, from Laird Bros, Birkenhead. Sold 1907 to Devonport Steam Ferry Co.

Canterbury (1907, renamed *Lyttelton* 1911) twin-screw steam tug, 292gt, 38m, from Ferguson Bros, Port Glasgow.

Lyttelton II (1939) twin-screw steam tug, 303gt, 37m, from Lobnitz & Co, Renfrew. Sold 1981 to a Sydney preservation group.

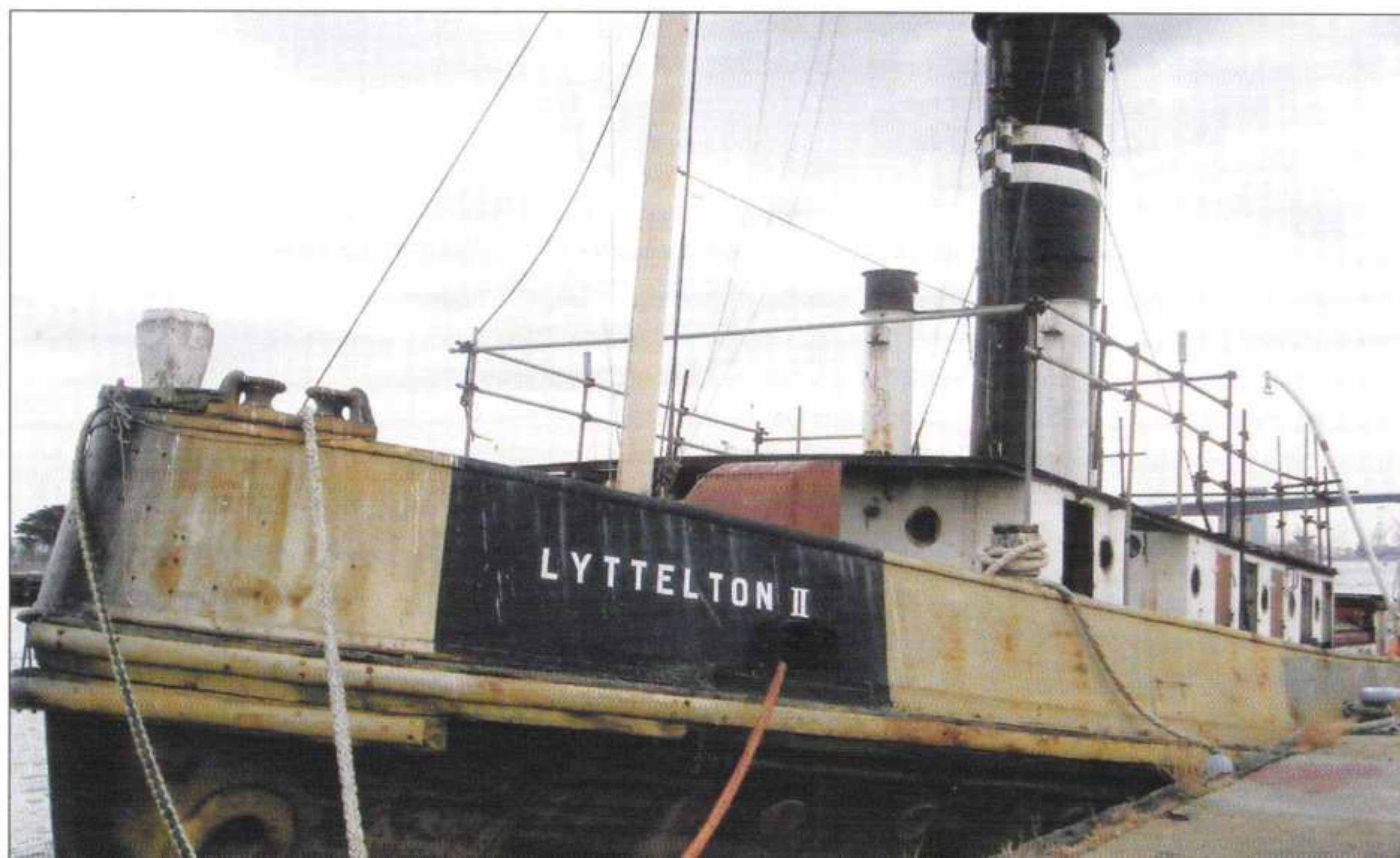
Canterbury (1971) motor tug, 245gt, 32m, from Whangarei Engineering. Sold 1987 to a March Construction subsidiary. Sold and renamed *Hokie Maru 1* (Panamanian), 1999.

Godley (1977) twin-screw motor tug, 255gt, 28m, from Sims Engineering, Dunedin. Sold 2003 to Tasmanian owners, without change of name.

Purau (1986) twin-screw motor tug, 247gt, 31m, from Nagasaki Zosen.

Blackadder (2002) twin-screw motor tug, 160gt, 23m, from Titan Marine Engineering, Auckland.

The fate the *Lyttelton* avoided: Her younger running mate *Lyttelton II* in Melbourne in November 2006 with the wheelhouse already removed. The following month she was towed to Geelong for demolition. BRUCE CARR





Acknowledgements



I'M GRATEFUL TO MANY PEOPLE FOR THEIR ASSISTANCE IN PREPARING this book to mark the tug's centenary, in particular Bruce Carr, Malcolm Pearson, and Barbara Hayden, who have been endlessly generous with their time for interviews and with their patience with my follow-ups for further information and checks. The contributions of Bill Le Warne, Bert Thurlow, John Goldsworthy, Ted Shaw, and Ted van der Bel are also much appreciated.

Special thanks also go to photographer Ken Baker for his atmospheric pictures. Apart from Tug *Lyttelton* Preservation Society personnel, thanks for assistance are owed to Erin Jamieson, David Cuthbert, Angus Davis, the Lyttelton Port of Christchurch marine services staff, Mason Tolerton, Captain Michael Pryce, Rosemary Radujko, Geoff Sloan, Tony Lester, and the team at Willson Scott Publishing – Bob Anderson, Tristan Brehaut, Leesa Ellis and Rachel Gunn. As usual the Willson Scott crew have gone above and beyond to make a publication special.

The Lyttelton Harbour Board archive at Archives New Zealand in Christchurch and the newspaper collection of the Christchurch Library were indispensable for this book, and the always unstinting assistance of their staffs is most appreciated. I am also grateful to the Canterbury Museum.

The following books were consulted during research for this book: *A History of Port Lyttelton*, by W H Scotter, *Below the Timeball - 150 Years of the Port of Lyttelton*, by Nick Tolerton, *Lyttelton Pride - A History of Lyttelton Engineering Ltd & its Forerunners*, by Colin Amodeo, *Song of the Clyde - A History of Clyde Shipbuilding*, by Fred M Walker, *Steam Coasters and Short Sea Traders*, by Charles V. Waine, *Union Fleet*, by Ian Farquhar, and *Lloyd's Register of Ships* (various vols.).

Also invaluable were *Marine News* (the quarterly journal of the New Zealand Ship & Marine Society), the research and notes of the late Dick Musson, and various newspapers particularly *The Star*, *The Sun*, *The Press*, and the *Lyttelton Times*.

The Tug Lyttelton Preservation Society gratefully acknowledges the financial assistance of Lyttelton Port of Christchurch, the Christchurch City Council–Lyttelton Mt Herbert Community Board, and the Creative Arts Council in the production of this book.



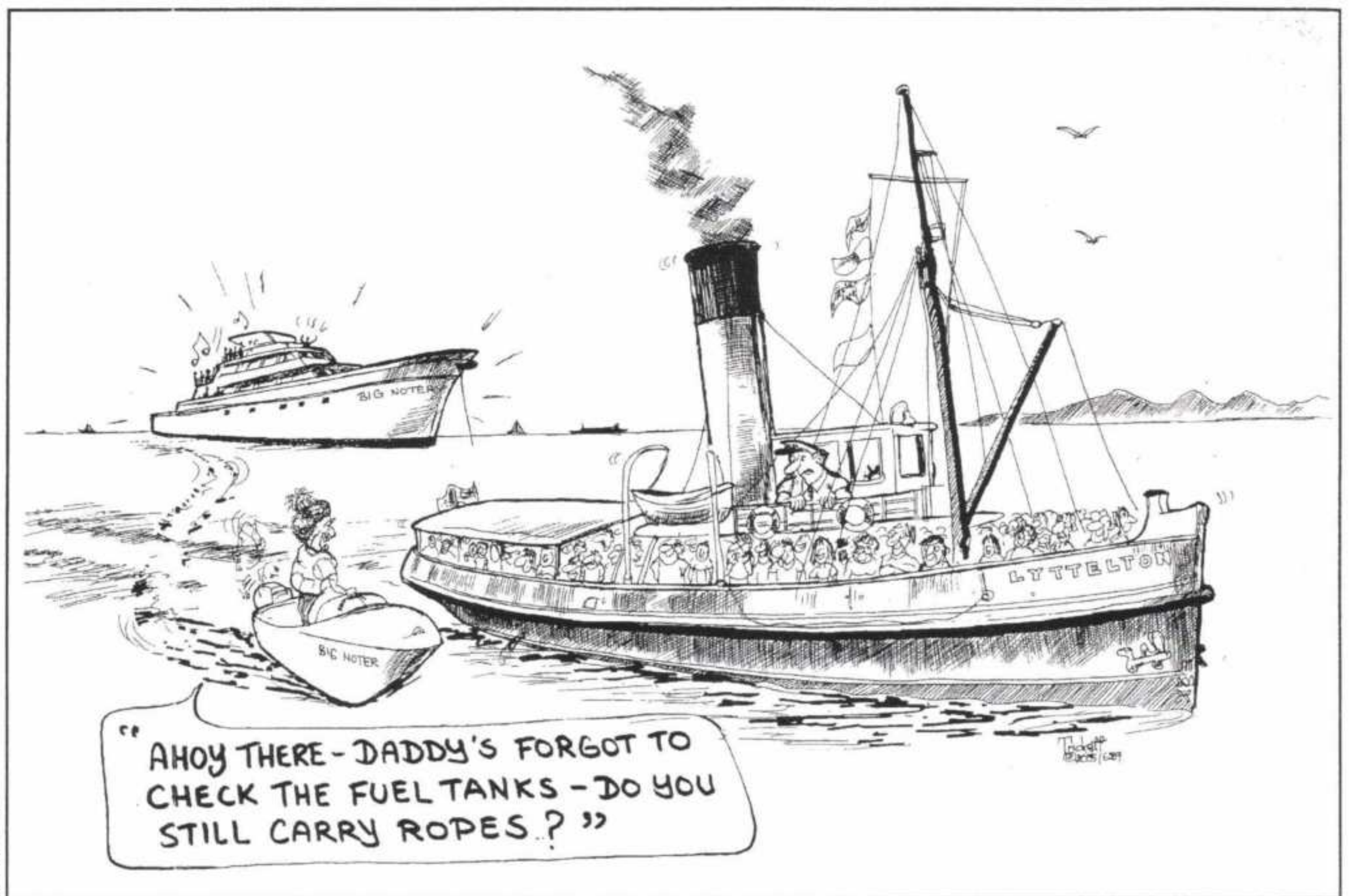
The steam tug *Lyttelton* does cruises on Lyttelton harbour every Sunday afternoon from Christmas until the end of summer, sailing from No.2 wharf, Lyttelton, at 2.30pm and returning at 4pm.

The tug is also available for private charter cruises during this and other times of the year.

Further information can be obtained by phoning Christchurch 322-8911, emailing info@tuglyttelton.co.nz, or writing to the Tug *Lyttelton* Preservation Society, PO Box 19659, Woolston, Christchurch.

Lyttelton Icon

100 Years of the
Steam Tug *Lyttelton*



Tug *Lyttelton*
Preservation Society



Lyttelton Icon



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