

With the Compliments
of the
Secretary to the
Ministry of Transport.



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THE MERCHANT SHIPPING ACT, 1894

REPORT OF COURT (No. 7956)

Steam Tug "Security" O.N. 118084

In the matter of a Formal Investigation held at The Institution of Civil Engineers and Church House Assembly Rooms, London, on the 10th, 11th, 12th, 13th, 14th, 17th, 18th and 21st days of January, 1949, before K. S. Carpmael, Esq., K.C., assisted by Captain J. P. Thomson, Lieut.-Commander C. V. Groves and E. F. Spanner, Esq., M.I.N.A., into the circumstances attending the loss of the steam tug "Security", of London, Official Number 118084, off Anvil Point in the English Channel while assisting in towing the tanker "Kelletia" on the 8th December, 1946.

The Court, having carefully inquired into the circumstances attending the above-mentioned shipping casualty, finds, for the reasons stated in the Annex hereto, that the "Security" was lost owing to becoming unmanageable in exceptionally heavy weather and acquiring a list for some reason which was not satisfactorily established, and in consequence, taking heavy water on board.

Dated this 3rd day of March, 1949.

KENNETH S. CARPMAEL, *Judge*

We concur in the above Report.

CHARLES V. GROVES }
E. F. SPANNER } *Assessors*
J. P. THOMSON }

QUESTIONS AND ANSWERS.

The Court's answers to the questions submitted by the Ministry of Transport are as follows:—

- Q. 1. By whom was the steam tug "Security" owned, and how long had she been so owned?
A. The Elliott Steam Tug Company, Limited, of 60 Fenchurch Street, London, E.C.3. Since 1927.
- Q. 2. When and where was the "Security" built?
A. 1904. South Shields.
- Q. 3. When did the "Security" leave the Thames for Falmouth to assist in towing the disabled motor tanker "Kelletia" from Falmouth to the Tyne?
A. 18th November, 1946.
- Q. 4. Did the "Security" take shelter at Dover, Newhaven and Portsmouth on the journey to Falmouth, because of stress of weather?
A. Yes.
- Q. 5. A short time before the "Security" sailed from Gravesend for Falmouth was a repair made to her stem by the welding on of a plate and the fitting of a cement box?
A. Yes.

- Q. 6. Was the "Security" seaworthy when she sailed from Gravesend for Falmouth?
A. No, for the reasons given in the Annex.
- Q. 7. Did the "Security" suffer damage to her wood belting whilst at Dover, and was this damage repaired before leaving Dover?
A. She suffered damage which was not repaired.
- Q. 8. Was the "Security" seaworthy when she left Dover?
A. No, for the reasons given in the Annex.
- Q. 9. Were further repairs to the "Security" carried out on arrival at Falmouth?
A. Minor repairs as specified in the Annex.
- Q. 10. Was the "Security" seaworthy when she commenced towing operations on the 7th December, 1946, at Falmouth?
A. No.
- Q. 11. At approximately 1.20 p.m. on the 7th December, 1946, did the "Security", in company with tugs "Contest" and "Watercock", commence to tow the motor tanker "Kelletia" from Falmouth to the Tyne?
A. Yes.
- Q. 12. Was the "Security" towing on the port bow?
A. Yes.
- Q. 13. Which tug master was in charge of the towing operations?
A. The master of the "Contest" was acting as the senior master of the three tugs. No arrangement had been made as to who was in charge of the towing operations.
- Q. 14. What were the conditions of wind, weather and sea when the tow commenced?
A. Fresh Westerly wind, rough sea and swell, and the South cone was hoisted. The weather conditions were unsettled.
- Q. 15. Did the conditions of wind, weather and sea deteriorate?
A. For a few hours the conditions became better but then again deteriorated.
- Q. 16. On the 8th December, 1946, did the tug "Watercock" break adrift from the tow? At about what time was this?
A. Yes, at about 4.0 p.m.
- Q. 17. Very shortly after the "Watercock" broke adrift, did the "Security" take a sharp list to port?

- A. Yes—after the tow-rope of the "Security" was slipped.
- Q. 18. Did the "Security" right herself or remain listed to port?
- A. The "Security" took a list shortly after her tow-rope was slipped. She did not recover from this list.
- Q. 19. Was the towing hook of the "Security" slipped as a result of the serious list?
- A. No.
- Q. 20. Did the "Security" turn over and sink very shortly after the towing hook was slipped?
- A. She took a list as described in the Answer to Question 18, and after a few rolls and while on a roll to port she disappeared.
- Q. 21. Were five members of the crew of the "Security" picked out of the water by the tug "Watercock"?
- A. Yes.
- Q. 22. Were the other four members of the crew of the "Security", including the master, lost?
- A. Yes.
- Q. 23. Was the "Security" sunk because of water entering through the port fiddley door when she heeled over?
- A. This was a contributory cause.
- Q. 24. What was the cause of the "Security" taking a severe list to port and not righting herself just before the tow hook was slipped?
- A. The list (which occurred after the slipping) was due to a variety of causes including loose water, as discussed in the Annex.
- Q. 25. Was it an error of judgment that the fiddley doors had not been closed in the weather conditions then obtaining?
- A. It would have been better from the point of view of safety if the doors had been closed.
- Q. 26. Was the "Security" usually employed as a river tug?
- A. Yes.
- Q. 27. Was the "Security" a suitable tug to engage in towing the "Kelletia" from Falmouth to the Tyne in conjunction with the tugs "Contest" and "Watercock" in December, taking the size and age of the "Security" into account?
- A. If the "Security" had not been unseaworthy in the respects detailed in the Annex she would have been a suitable tug for the purpose indicated.
- Q. 28. What was the cause of the loss of the tug "Security"?
- A. See Answer to Question 24.
- Q. 29. Was the loss of the "Security" caused or contributed to by the wrongful act or default of the owners, or the registered manager of the "Security"?
- A. No.
- Q. 30. Was the loss of the "Security" caused or contributed to by the wrongful act or default of any person other than those mentioned in Question 29?
- A. For the reasons given in the Annex, the Court finds that it has not been established that the loss of the "Security" was caused or contributed to by the wrongful act or default of anyone.

ANNEX TO THE REPORT.

Mr. J. B. Hewson (instructed by the Treasury Solicitor, Ministry of Transport Branch) appeared for the Minister of Transport.

Mr. Peter Bucknill (instructed by Messrs. Thomas Cooper & Company, Bunge House, St. Mary Axe, E.C.3) appeared for the owners of the tug "Security",

the Elliott Steam Tug Company, Limited, of 60, Fenchurch Street, E.C.3 and her registered manager Mr. John Page of the same address, both the owners and the manager being parties to the Inquiry.

Watching briefs were held by Mr. R. F. Hayward, K.C. (instructed by Messrs. Walton & Company, of 101, Leadenhall Street, E.C.3) on behalf of the owners of the motor ship "Kelletia", the Anglo-Saxon Petroleum Company, and by Mr. Waldo Porges (instructed by Messrs. Middleton, Lewis & Clarke, of 53, Leadenhall Street, E.C.3) on behalf of the owners of the tug "Watercock", the Ocean Salvage Company.

The "Security" was a steel, single deck, single screw, steam towing and salvage vessel. She had open floors throughout and had a bar keel.

The "Security" was built in 1904 by J. P. Rennoldson & Sons, South Shields; that firm is now out of business.

The "Security" at the time of her loss was owned by Elliott Steam Tug Company, of 60, Fenchurch Street, London, E.C.3. She was built as "Kingfisher", and was later acquired by the Admiralty and renamed "Diligence". In 1927 she was acquired by Elliott Steam Tug Company and renamed "Security". During the 1939-45 war she was on charter to the Government and was renamed "Stoke". She was returned to the owners in August, 1944, and in 1946 was renamed "Security".

The designated manager of the "Security" was John Page, of 60, Fenchurch Street, London, E.C.3.

The registered dimensions of the "Security" were 102 feet/23.1 feet/12.0 feet.

The builders' dimensions were:—

Length between perpendiculars ..	102 feet
Breadth moulded	23 feet
Depth moulded	13 feet

The tonnages of the "Security" were:—

Underdeck	173.34
Gross	188.50
Register	69.78

The "Security" had four watertight bulkheads separating the following compartments:—

- Fore peak
- Crew's cabin and chain locker
- Cross bunker
- Machinery space and salvage pump space
- After peak.

There were two vertical sliding watertight doors in the bulkhead between the stokehold and cross bunker.

The "Security" had a forecandle about 57 feet long and 7 feet high. The forecandle contained the boiler casing, accommodation for officers, washplaces, and lavatories, galley, stores, coal shoot to cross bunker and companionway to crew's cabin. It was open at the after end, port and starboard, from the boiler casing to the ship's side. On the forecandle was a wood chart and wheelhouse.

The boiler casing was steel and extended to the forecandle deck. At each side there was a steel door 22 inches wide, 4 feet 9 inches high with sill 19 inches high above the deck. An opening in the top of the casing was closed by a hinged steel cover. These are, hereafter, referred to as fiddley doors.

Aft of the forecandle was a steel engine casing 3 feet high at the fore end and 5 feet high at the aft end. At the after end of the engine casing was a wood door 2 feet 2 inches wide, 3 feet 3 inches high with sill 18 inches high above the deck. On each side were three 13½ inches diameter lights and in the top were ten 10 inches diameter hinged lights.

Round the main deck aft of the forecandle was a steel bulwark 2 feet 9 inches high with three freeing ports each side, fitted with hinged shutters.

There was one 7 inches diameter ventilator on the forecandle deck, to the crew's cabin. There were ventilators on the casing top, to the machinery space.

There were four scuppers each side draining the main deck, and led overboard below the wood fender. There were discharges from the W.C.s forward, led overboard below the wood fender.

On the forecandle deck was a hatchway about 4 feet long 5 feet wide, serving the cross bunker through a coal shoot in the forecandle, and on the main deck aft was a hatchway 4 feet square with steel coaming to the pump room. These two hatchways were closed by the usual arrangement of wood covers, tarpaulins, cleats, battens, and wedges.

In the forecandle was a 20 inches diameter hatch to the fore peak and on the main deck was an 18 inches diameter hatch to the after peak. These hatches were closed by watertight steel plate covers.

On each side of the main deck were four 17½ inches diameter coaling scuttles with screw joints, two serving the cross bunker and two serving the side bunker.

In the forecandle was a steel companionway to the crew's cabin. It had a wood door 2 feet 9 inches wide, 4 feet 6 inches high with sill 18 inches high above the deck.

The "Security" had a fender all round at the level of the main deck consisting of wood 6 inches by 9 inches fitted between two angle bars rivetted to the ship's side, and with a steel face plate secured by bolts passing through the shell.

The "Security" had three 11 inches diameter side scuttles fitted with hinged deadlights, port and starboard to the crew's cabin.

The propelling machinery comprised one triple expansion reciprocating steam engine having three cylinders, 16 inches, 26 inches and 43 inches diameter and 27 inches stroke, made in 1904 by J. P. Rennoldson & Sons, South Shields, and one Scotch boiler, made in 1904 by J. T. Eltringham & Company, South Shields.

According to the ship's register the Indicated Horse Power was 700.

The steering engine was a two-cylinder oscillating type fitted in the lower wheelhouse, the connection to the rudder quadrant being by rod and chain.

The "Security" had two lifeboats, one each side, under radial davits, at the after end of the forecandle deck.

The "Security" was classed Lloyds'+100A "for towing purposes."

The third No. 3 Special Survey was carried out at London in November, 1942.

A load line certificate was issued by Lloyd's on 23rd November, 1942, to remain in force until 23rd November, 1947.

The assigned freeboard was 1 foot 6 inches measured from the top of the steel main deck at side.

The mean draft corresponding to the freeboard was 12 feet 1 inch.

The last Annual Load Line Survey was carried out at London in March, 1946.

The last inspection in dry dock by a Lloyd's Surveyor was in November, 1944.

This was an Inquiry into the circumstances attending the loss on 8th December, 1946, of the steam tug "Security" while engaged with two other tugs, the "Contest" and the "Watercock", in towing the engineless motor tanker "Kelletia" of 7,434 tons gross, which was in ballast from Falmouth to the North-East coast. The weather at the time was very bad.

The "Contest" is a steel, single deck, single screw steam tug built in 1923, 100 feet in length and 26.1 feet in beam and 213 tons gross. She belonged to the same owners as the "Security".

The "Watercock" is a steel, single deck, single screw steam tug built in 1923, 96.6 feet in length and 24.5 feet in beam and 200 tons gross, and was owned by the Ocean Salvage Company.

It has been a difficult and unsatisfactory case to investigate.

Although the sinking of the "Security" occurred on 8th December, 1946, the Inquiry did not start until 10th January, 1949.

It should have been clear to everyone from the outset that an Inquiry of this kind must be held, and that it would be necessary to have available all the information that could be obtained as to the condition of the vessel at the time of her loss. Nevertheless, the Owners' Superintendent thought fit on retiring at the end of December, 1946, to destroy all note books and documents relating to the vessels that had been under his superintendence. The Superintendent was an elderly man, aged 82, and appeared to regard these papers as his own private property although they had come into existence in the course of carrying out his duties to his employers. As the condition of the vessel on sailing from the Thames was bound to be very much in issue, these note books and other documents might have been expected to contain valuable evidence, both positive and negative, on this question. The Court is of opinion that there was no justification for the Superintendent's action.

The Court is also of opinion that in view of the fact as stated above that it was obvious that an Inquiry must be held, instant notice should have been given on behalf of the Minister of Transport to the owners that all relevant documents must be preserved.

As has been stated by this Court in former cases, it is of the utmost importance that statements should be taken at the earliest possible moment by someone experienced in the matter from all the witnesses who could throw any light upon what happened. This is what is done as a matter of course in cases of ship collisions, and the Court is of opinion that a similar practice should be adopted for cases such as the present. It was quite clear that nothing of the sort had been done for the purposes of this Inquiry.

Moreover, although the condition of the "Security" was a matter into which it was vital to enquire, little, if any, attempt had been made to collate the various repair accounts and survey reports. Indeed, it was only on the last day of the Inquiry that certain survey reports with regard to wastage in the ship's bottom plating were forthcoming, having been filed at Lloyd's Register under the name of "Stoke" which had been her name while under requisition. As the change of name was known to those in charge of investigating the matter on behalf of the Minister, the Court is of opinion that these documents could and ought to have been discovered much sooner. Had they been so discovered, they must or ought to have led (in conjunction with the relevant repair accounts which were held at the Ministry) to further enquiries.

The "Security", as indicated above, had a forecandle extending for more than half her length. Although an old ship, she had had a long and useful life in sea and river towage. According to the masters of the other tugs, she appeared on account of her long forecandle to be making better weather of it than the other tugs until shortly before she disappeared, when she was seen to be in difficulties.

In these circumstances it became material to consider whether there was anything in her design or condition which might have been the cause of such difficulties arising.

To deal first of all with the question of design, the result of having a long forecandle was to create a comparatively narrow alleyway about 5 feet wide on each side of the ship. On the inboard side of each alleyway there was a fiddley door with a sill 19 inches high situated 9 or 10 feet from the after end of the alleyway.

According to the evidence, the practice on board the "Security" at the time in question was to leave the doors open when at sea. As however the top of the sill was brought to water level with a list of about 30°, there was obvious danger in such a practice with the vessel in a rough sea from abeam to right aft. Indeed, a previous master of the "Security" described such an incident with heavy water piling up in one of the alleyways, a disaster only being averted by reason of the doors being closed at the time.

There appears to be no doubt that the final cause of the sinking of the "Security" was entry of water down the port fiddley door which was open, and possibly also down the door from the engine room to the after deck. Once that started to happen there can have been little or no chance of any recovery.

There was not sufficient information available to enable any reliable calculations of stability to be made, but there is no doubt that the "Security" had ample initial stability and also sufficient reserve stability provided the fiddley and other doors were kept closed.

The position, however, with regard to the condition of the "Security" was unsatisfactory. This was due partly to war conditions.

In August, 1939, the "Security" was requisitioned, and for the next five years was employed in Admiralty service. From July, 1942, until re-delivered to her owners in August, 1944, she was managed by Messrs. Watkins, tug owners, on behalf of the Admiralty.

In November, 1942, the "Security" underwent her third No. 3 Special Survey, and as a result was re-classified Lloyd's 100A for towing purposes. During that survey about thirty per cent. of her side plating was drill tested, that is to say every strake of plating from the main deck down to but not including the strake next the bar keel, the drilling being done in three places along the length of the vessel, just aft of the forepeak tank, amidships and just forward of the after peak tank.

It is important to notice that, as stated in the previous paragraph, the plates in the strake next to the bar keel port and starboard were not drilled, the reason being that there was thick cement laid on the inside. This is of importance because the two plates port and starboard in this strake amidships were found in March, 1944, to be so badly wasted that two large doubling plates had to be fitted on the outside. This was discovered because a leak developed while the "Security" was at anchor off the Tyne in the course of towing another vessel from the Thames to the Firth of Forth in calm weather. Temporary repairs were carried out and the "Security" completed her voyage to the Forth, after which she was dry-docked at Sunderland. There it was found necessary to fit doubling plates port and starboard, each 7 feet 6 inches by 28 inches by 8/20 inch.

Unfortunately, this was one of the matters which only came to light in the course of the Inquiry, on the fifth day, and in consequence it was impossible to get any exact information as to the extent of the wastage because of the lapse of time, and also because of the illness of the Lloyd's surveyor who examined the vessel in dry dock. It is however clear that for the purpose of temporary repairs in the Tyne it was necessary for the diver to insert in the plate on the port side a wooden plug no less than 2½ inches in diameter. After repairs in dry dock she was re-classified by Lloyd's and there is no suggestion that this was not proper, but the fact that such wastage had occurred was obviously important, and steps should have been taken to ensure that the fact was not forgotten. During the invasion of France, the "Security" was employed for towage purposes across the Channel, but on the 10th August, 1944, she was handed back to her owners. On that day an off-survey was held when the vessel was placed on the hard at Gravesend. Various people were present, including the Owners' Superintendent and a Consultant Engineer on behalf of Messrs. Watkins. The

latter had been present when temporary repairs had been made to the bottom of the vessel in March, 1944, as described above, but had not been present when the vessel was dry-docked at Sunderland. The Consultant Engineer was aware that two doubling plates had been fitted, but did not know why it had been found necessary to fit the second plate. No one else had been present on behalf of Messrs. Watkins, at Sunderland, but on the other hand presumably competent surveyors had been present and passed the repairs on that occasion. Although, therefore, with a normal peace-time routine it would have been imperative for the owners (in which capacity Messrs. Watkins were then acting) and their representatives to have taken more active steps to enquire into the reason for the repairs, it is understandable that nothing further was done at a time of such stress and over-work of all those connected with shipping.

As stated above, the "Security" was on the hard when examined on the 10th August, but owing to the depth of mud no examination of her bottom was possible below the turn of the bilge, and it is unlikely that there was any real examination above that point.

There was thus no opportunity for the Owners' Superintendent or anyone else to observe that doubling plates had been fitted, and most unfortunately, the Superintendent received no information on the point either from Messrs. Watkins' Consultant Engineer, or from the master of the tug who was in the employ of her owners. The vessel was re-classed, and again there is no suggestion that this was improper.

The "Security" a few months later was placed in dry dock for collision repairs and was re-classed, the last survey being on 13th November, 1944, after all repairs had been properly carried out. During those repairs it is material to note for reasons which appear later that the steering gear was dismantled. Advantage was taken of this dry-docking to carry out the annual freeboard survey. Certificates in respect of both damage repairs and load line survey were duly issued on behalf of Lloyd's Register. The certificate in respect of damage repairs stated, *inter alia*, that the condition of the outside plating in the way of the side lights was "Good" and there was a similar statement in the second certificate.

The next occasion on which an examination was held on behalf of Lloyd's Register was on 15th March, 1946, for the purpose of the annual load line survey, when again the condition of the side scuttles was certified as "Good". It is therefore somewhat surprising that, only about a fortnight later, when the crew were engaged in chipping the side inside the crew space one of the chipping hammers went through the side near but below the water line and below the after side light or scuttle on the starboard side. The plating was wasted to the thickness of paper in the way of the hole. Temporary repairs by plugging were made by the crew, and a day or two later the vessel was placed on the hard and a plate about a foot square was welded on the outside. No more chipping had been carried out by the crew after the incident, but apart from a cursory examination in the vicinity of the hole nothing further in the way of examination was done.

Moreover, the Owners' Superintendent who gave orders for the plate to be welded on omitted to call in Lloyd's Surveyor. He gave an unsatisfactory reason for this omission. Whether he would have done differently had he known of the wasted bottom plates must remain a matter of conjecture.

This incident was another of the matters which only came to light quite by accident by a chance answer of one of the ship's witnesses. Had a proper examination been made beforehand of the repair accounts, as should have been done on behalf of the Minister, the matter would have come to light and have been investigated before the Inquiry. This would have ensured a more orderly presentation of the case on behalf of the Minister and would also have avoided much waste of time.

There was a second incident affecting the seaworthiness of the "Security" where again the Superintendent failed to call in Lloyd's Surveyor. In September, 1946, the "Security" had been in collision as a result of which she had suffered damage to her stem. In consequence, in the course of her normal working in the river, water obtained access to the forepeak under pressure by reason of headway. Thereafter the water used to spray out. While accepting the evidence that it was difficult to obtain docking facilities at the time, the Court was left with the impression that the Superintendent was not then taking that active interest that he may have done in the past. Whatever be the facts as to that, there is no doubt that repairs were eventually made in November shortly before the "Security" sailed. There is no suggestion that such repairs were otherwise than satisfactory or that they had any connection with the vessel's loss, but there is no doubt that this was a matter affecting the vessel's seaworthiness and that Lloyd's Surveyor should have been summoned.

Another matter which only came out accidentally during the course of the Inquiry was with regard to the steering gear which was of a rare if not unique pattern, and was as fitted when built. As pointed out above, it was dismantled in November, 1944, and further repairs were carried out in July and September, 1945, and March and November, 1946. There was evidence that the gear was frequently giving trouble and was liable to jamb, and it is clear that the gear did jamb at Dover while the vessel was on her way round to Falmouth. There was evidence from a former master of the tug which to some extent contradicted the other evidence, and the Superintendent denied that there was anything wrong with the gear.

Having carefully considered all the evidence, the Court has come to the conclusion that insufficient attention was paid by the Superintendent to complaints with regard to the steering gear which the Court is satisfied were made and were justified.

There were several other respects in which the condition of the vessel was not good at the time she sailed for Falmouth.

The starboard hawse pipe, where it should have joined the side plating, was cracked and admitted water on to the main deck.

The bilge pipe line in the space under the crew space was wasted and holed, rendering it useless for the purpose of pumping out that compartment.

The horizontal bolts which secured the belting to the ship's side were leaking and admitted water both to the crew space and to the bunkers. Whether water entered in this way to such an extent as to contribute to her loss will be discussed later.

Having regard to all the circumstances the Court has come to the conclusion that the "Security" was in a "ripe" condition. It may be that such condition had developed fairly rapidly in the last year or two, but the Court is of opinion that more care in supervision would have revealed her state.

It is in the light of the above conclusion as to her condition that the Court has to consider the question (Number 6) whether the "Security" was seaworthy when she sailed from Gravesend for Falmouth.

There is a further point concerning signalling arrangements as between the three tugs themselves and the vessel to be towed. This seems to have been left by the owners entirely to the individual masters, and no provision was made either for up-to-date signalling equipment or to see that any of the crew was able to use what equipment there was. The only one of the tugs which was properly equipped in this respect was the "Watercock", which carried an Aldis Lamp and someone competent to work it, whereas on board the "Security" the mate had to borrow the engineer's torch in order to make the signals referred to hereafter. When the arrangements for the towage

were made, it was appreciated that the towage would occupy at any rate a week and the need for proper signalling arrangements should have been apparent. Although the Court does not desire, in the present case, to attribute the lack thereof to anything but an error of judgment, the Court desires to emphasize the necessity for proper arrangements in the future as it considers these are necessary for the seaworthiness of the tug in carrying out the operation.

Having regard to all the circumstances, the Court has no alternative but to answer Question 6 in the negative, that is to say that the "Security" was not seaworthy when she sailed from Gravesend for Falmouth.

The arrangement under which the three tugs concerned were employed for the towage was made between the owners of the "Kelletia" and the owners of the "Security". A question was raised at Falmouth by the master of the "Kelletia" as to whether the two smaller tugs were suitable for a winter towage which was to occupy a period of at any rate a week. The Court is satisfied that the doubts of the master of the "Kelletia" were to some extent shared by the tug masters themselves, and it is not without some hesitation that the Court has given the answer to Question 27. The Court, however, does not attribute any blame to the owners of the "Security" for her selection for the towage of the "Kelletia".

The three tugs left Gravesend on the 18th November, 1946, en route to Falmouth, but owing to bad weather the "Contest" did not arrive there until 3rd December and the other two the following day.

The "Security" and the "Watercock" had to run into Dover for shelter, and here there were two incidents which affected the seaworthiness of the "Security".

On arrival at Dover, and while proceeding to a berth alongside the "Watercock", the steering gear of the "Security" jammed causing her to take a sheer. As stated above such a thing had happened before, and apparently the master regarded it as all in the day's work.

The second incident at Dover was that during bad weather the "Security" and the "Watercock" ranged together to such an extent that some of the fender of the "Security" on the port side, just forward of amidships, was broken away and dropped into the water. Some of the horizontal bolts securing the fender were sheered or distorted, thus enabling water to enter the bunkers in rough weather. No repairs were made at Dover.

The two tugs left Dover on the 26th November, but had to put into Newhaven for shelter that evening, where they remained until 1st December. Heavy weather was again experienced and both vessels put into the Solent.

About an hour before their arrival there, a quantity of water was discovered under the floor of the crew space which is situated just abaft the forepeak. This water was pumped out not by the ordinary bilge pump but by hoses led from the salvage pump room aft. It was stated that this course was adopted in order to save time, but the Court suspects that it was done because it was known that the bilge pipe line in that compartment was defective. According to the evidence efforts were made to find out how the water came in, but without success. The chief engineer thought the water must have come down the chain pipes which led down at the forward end of the crew space, but the other witnesses said that this could not have happened without being seen.

The quantity of water in the space was estimated by the ship's witnesses as about three tons, but on the measurements given it may well have been considerably more. Whatever the source, it should have been regarded as a disquieting event.

But although the "Security" after anchoring at Cowes went into Portsmouth and remained there until 4th December, no report of any kind was made to his

owners by the master of the "Security" as to these three happenings, which must be regarded as having a vital bearing upon the seaworthiness of the tug for a winter towage of a large engine-less tanker in ballast.

A further incident occurred between Portsmouth and Falmouth when water was observed trickling out from the door of the port bunkers in the stokehold. This was in the way of where the damage to the belting had been done and it is probable that sea water entered through the bolt holes. The chief engineer stated that he made temporary repairs at Falmouth. This again was a matter vitally affecting the seaworthiness of the vessel but no report was made at Falmouth or any request for an examination.

The master of the "Security" lost his life when the vessel sank, and there is no evidence as to why he failed to report these matters, but the Court has felt itself bound to regard his failure as a most regrettable error of judgment. Had all this information been available to those charged with the final decision to order or allow the "Security" to take part in the towage, it is inconceivable that she would have been allowed to go.

As stated above the master of the "Kelletia", when he saw the tugs, expressed doubts as to their ability for the operation. The tug masters also had their doubts, but said that having been sent to do the job they were willing to carry on. Eventually the master of the "Kelletia" was instructed by the London office of his owners to "proceed and make the best of things as soon as he thought the weather was favourable and to take no chances during the voyage no matter how long it takes."

The master of the "Kelletia" did not give oral evidence at the Inquiry as he was abroad, but evidence by affidavit and a letter written shortly after the loss of the "Security" were read. It is not, however, clear why he made a sudden decision to leave shortly after noon on Saturday, 7th December. Earlier that day after consultation with the master of the "Contest" (the senior of the three tug masters), the master of the "Kelletia" had cancelled the sailing. Not very long afterwards, however, without apparently any consultation with anybody the master gave orders to leave. The South cone was flying, which indicated a Southerly gale, and the Court considers that the master of the "Kelletia" was guilty of an error of judgment in deciding to sail without any consultation with the tug masters.

On leaving, the three tugs were made fast as follows:—

The "Contest" towing ahead with 90 fathoms of 14 inch manilla shackled to 45 fathoms of 4½ inch steel wire, which in turn was shackled to the starboard cable of the "Kelletia" paid out to a length of 15 fathoms.

The "Watercock" towing on the starboard bow with 10 fathoms of 5 inch steel wire shackled to 60 fathoms of 14 inch manilla, which in turn was shackled to a length (probably about 60 fathoms) of 4½ inch steel wire, the end of which was made fast on the starboard bow of the "Kelletia".

The "Security" towing on the port bow with 90 fathoms of 12 inch rope shackled to 60 fathoms of 4 inch steel wire, the end of which was made fast on the port bow of the "Kelletia".

The usual stop ropes were fitted at the stern and the tow ropes were adjusted so as to bring the three tugs about level with one another.

The flotilla was off St. Anthony's Head about 12.40 p.m. on Saturday, 7th December, the wind being strong and squally from the Westward and a heavy swell from the Westward was encountered on clearing the land.

Good progress was made and Start Point was abeam at 9.0 p.m. at which time the wind after blowing North Westerly for a time had backed to the

South West. During the middle watch the wind moderated to about force 4 but was still squally with a falling barometer. Between 5.0 and 6.0 a.m. the wind backed suddenly to the Southward and freshened. Thereafter it continued to back and by about 8.0 or 9.0 a.m. was South Easterly, a moderate to fresh gale. After proceeding with the wind abeam for an hour or so the master of the "Contest" decided to alter course into the wind and all three tugs altered accordingly. The wind was increasing all the time and by 11.0 a.m. the flotilla was in effect hove to. There was heavy rain with hard squalls. Weather forecasts had been received on board both the "Security" and the "Kelletia", but events proved these to be entirely unreliable. A review of the weather actually experienced shows that a low and intense secondary depression supervened on a primary depression causing the wind to back and increase in an entirely unpredicted fashion. Some idea of what might happen might possibly have been obtained by a consideration of a very quickly falling barometer together with other signs, but this would not have enabled any other action to be taken by the flotilla. The only possible shelter was behind the Isle of Wight, and the flotilla was still only to the Southward of Anvil Point.

During the day there were two disquieting occurrences in the engine room. Between 10 a.m. and 12 noon the fender plate on the port side of the stokehold fell down owing to the securing bolt shearing. This plate which ran from the side pocket to amidships was for the purpose of preventing ashes and coal going down into the bilge. The reason this happened was stated by the chief engineer to be due to deterioration. The second disquieting occurrence was that, according to the chief engineer, as soon as the fender plate fell down two of the floor plates were forced up by reason of water in the bilges to the depth of about a foot (that is to say about half the bilge depth) going from side to side as the vessel rolled. There was a faint suggestion by the chief engineer that this was water from the ash cock used for cooling the ashes, but he agreed the amount was more than usual and the Court does not accept the suggestion that it was ash cock water. An attempt was made to pump the water out by means of hoses led from the salvage pump; but there appears to have been no reduction in the quantity of water before the vessel sank. It was stated that the water did not run aft into the engine room bilges because the limber holes were choked. The question where this water came from must remain a matter of conjecture, but in view of the evidence as to deterioration of plating the Court is of opinion that it may well have been due to opening of seams or leaks in other ways. Whatever was the cause, the presence of loose water in the bottom of the vessel was an obvious danger to stability.

The weather continued to worsen throughout the afternoon and shortly after 4.0 p.m., the tow-rope of the "Watercock" parted. Shortly afterwards the mate of the "Security" (who was one of the survivors) received orders from his master who was at the wheel to stand-by to let go. The mate went aft to the towing hook and shortly afterwards received an order to let go which he carried out. He said that the tow-rope went clear over the stern. He did not know why the order to let go was given by the master. There are several possible explanations. One is that with the "Watercock" not towing he was finding or expected to find the "Kelletia" uncontrollable, so endangering the "Security". Another and much more likely explanation is that another jamb had been experienced in the steering gear. In the conditions existing full helm one way or the other was probably a necessity and it was when full helm was being used that jaming had occurred previously. Moreover, support is forthcoming for this view in that directly after slipping, the master gave the mate another order which was to tell the engine-room to "give her all they could." The second engineer carried out this order, but very shortly afterwards the tug took a big list to port and seemed according to him to remain listed, whereupon

he left the engine room by means of the ladder on to the after deck and stepped into water, the "Security" sinking shortly afterwards.

The evidence is naturally confused as to exactly what happened when the trouble started and as to the sequence of events. It appears, however, that at about the same time as the second engineer left the engine room the fireman left the stokehold by means of the starboard fiddley door at which time water was pouring through the port door. It is also clear that events moved very quickly.

As stated above, there is no doubt that the final cause of the sinking of the "Security" was entry of sea water into the engine room and stokehold spaces through the open doors. The Court is of opinion that the fiddley doors should have been closed in the weather conditions prevailing, and the failure to do so was an error of judgment.

But the Court has also to consider how it was that the vessel got into a position where water was able to get below in such a fashion.

The Court is of opinion that the master realised that for some reason or another his vessel was becoming unmanageable. It has been suggested above that a very likely explanation of this may be that the steering gear jammed. There is also no doubt that there was loose water in the stokehold bilges, and in view of the history set out above there may well have been water elsewhere. This may have caused the master to realise that she was sluggish or that something else was wrong.

Apart however from the water in the stokehold bilge, the matter must remain one of conjecture in view of the possibility of her becoming unmanageable, without fault on the part of anyone, in the very bad weather then existing. It would, therefore, be wrong to come to a conclusion that it had been established that the loss of the "Security" was caused or contributed to by the wrongful act or default of anyone.

The Court is, however, of opinion that the actions and inactions of the Owners' Superintendent cannot escape criticism as indicated above.

The Court desires to make certain recommendations with regard to the conduct of a towage such as has been under consideration:—

In the first place, it is imperative that the tugs concerned should be fitted with up-to-date equipment for inter-communication, both with the other tugs and the tow, and the personnel to work it. There would appear to be no reason why a wireless telephone should not be carried. One at least of the vessels concerned should also be able to receive weather forecasts.

Secondly, it is considered that the question of who was to be in charge of the towage should be discussed and understood by all concerned at the outset. This had not been done in the present case, and although no difficulty was caused thereby such a position might well have arisen.

In conclusion, the Court desires to place on record the opinion of the master of the "Kelletia" (with which it entirely concurs) that all the tug masters carried out their duties with great ability and that in particular the picking up of five survivors of the "Security" by the "Watercock" was a praiseworthy act skilfully performed in the weather conditions prevailing.

KENNETH S. CARPMAEL, *Judge*

We concur.

CHARLES V. GROVES }
E. F. SPANNER } *Assessors*
J. P. THOMSON }

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