

(No. 2017.)

“ALPHA.”

The Merchant Shipping Acts, 1854 to 1876.

In the matter of the formal Investigation held at the Moot Hall, Newcastle-on-Tyne, on the 11th of December 1883, before H. C. ROTHERY, Esquire, Wreck Commissioner, assisted by Captains METHVEN and KENNEDY, as Assessors, into the circumstances attending the damage caused by fire to the sailing ship “ALPHA,” and the subsequent sinking and loss of the said ship off Buenos Ayres, on the 6th of September 1883.

Report of Court.

The Court, having carefully inquired into the circumstances of the above-mentioned shipping casualty, finds, for the reasons annexed, that the loss of the said ship was due to the spontaneous combustion of the coal with which she was laden, and that neither the master nor the chief officer are in any way to blame for the casualty, they having taken all proper measures and done all in their power to keep the fire under.

The Court is not asked to deal with their certificates, or to make any order as to costs.

Dated this 11th day of December 1883.

(Signed) H. C. ROTHERY, Wreck Commissioner.

We concur in the above report.

(Signed) R. METHVEN, H. C. KENNEDY, } Assessors.

Annex to the Report.

This case was heard at Newcastle-on-Tyne, on the 11th of December 1883, when Mr. Howard Smith appeared for the Board of Trade. The master of the “Alpha” was present, but was not represented by either counsel or solicitor. Five witnesses having been produced by the Board of Trade and examined, Mr. Howard Smith handed in a statement of the questions upon which the Board of Trade desired the opinion of the Court. The master then stated that he did not wish to address the Court, and Mr. Howard Smith having been heard for the Board of Trade, the Court proceeded to give judgment on the questions on which its opinion had been asked. The circumstances of the case are as follow:—

The “Alpha,” which was a wooden barque belonging to the Port of Swansea, of 397 tons gross and register, was built at Bridport in the year 1864, and at the time of her loss was the property of the Swansea Merchant Shipowners’ Company, Limited, Mr. Henry Joseph Mudge, of Swansea, being the managing owner. She left Leith on the 13th of June last, with a crew of 12 hands all told, and a cargo of about 542 tons of coal, besides 5 tons for the ship’s use, and drawing 15 feet 6 inches forward and 15 feet 7 inches aft, bound to Buenos Ayres. Previous to her departure she had been fitted with iron tubes which went down to within 18 inches of the skin of the ship, and down which a thermometer could be passed to test the temperature of the cargo. After they had been at sea five days the captain asked the chief officer if he had yet tested the temperature of the coal, and on finding that he had not done so, he directed him to do it at once; and from that day we are told that the temperature of the coal was tested every day, and gave an average of 55° to 60°. As they neared the equator, however, the temperature naturally rose, and at length on the 2nd or 3rd of August, when they were in about 3° north latitude, it was found that the temperature in the fore hatch had risen to 90°, whilst that in the main and after hatches was only 84°. In the next 24 hours the heat had risen in the main hatchways from 84° to 96°, and in the following four or five days to 109°, but during the next

three weeks it fell again to 104°, the heat in the other hatchways being all the time about 84°. To prevent the entrance of atmospheric air into the hold, all the openings were securely fastened up, but on the 30th of August they were off Cape Santa Maria, and it then became necessary to open the main hatchway to get at the anchors and cables. Care was however taken to keep it open for as short a time as possible, but the same night it was found that there was a slight increase of temperature, and on the following day it rose to 112°. At midnight, the wind having died away, they came to anchor about 15 miles N.E. of English Bank Light Vessel, the temperature at the time being about 120°. There they remained until about 4 a.m. on the 1st of September following, when a breeze having sprung up the vessel was again got under weigh, the temperature in the main hatchway being at that time 142°, and by 5 a.m. it had risen to 150°, the greatest heat being about 12 feet below the deck. Finding that the temperature was rising so rapidly, the master determined to pour water upon the cargo, and with that view he caused a hole to be cut in the main hatchway, and having fitted a funnel to it he poured water through it on to the cargo. The heat however continued to increase, and by 11 a.m. it had risen to 180°, but by 5 p.m., owing to the water that had been poured into the hold, and which at 6 p.m. stood at 5 feet 6 inches, the temperature had fallen to 136°. At this time the breeze began to freshen, and the weather becoming thick, the pilot was afraid to proceed any further owing to the number of vessels that were in the river, and she was accordingly brought to anchor about 7 miles E.N.E. of the India Point Light Ship. There she remained until 1 p.m. of the 3rd, when the temperature having again increased, the master determined to slip and run for Buenos Ayres beach; but at about 4 p.m. the main hatchway and skylights were blown out, and flames came out of the main hatchway, upon which she was again brought to an anchor, and water was poured into the hold. At 6 a.m. of the following day, the 4th, the men said they were exhausted and could do no more, upon which the master ordered the boats to be got out, and they proceeded towards a French brig which was lying near them, and which thereupon got under weigh and took them to the British man-of-war, the “Sylvia,” which they reached on the morning of the 5th, and on explaining to the commander of that vessel the condition of the “Alpha,” he at once got under weigh and proceeded to her assistance. On reaching her they took hold of her and towed her down to the outer roads of Buenos Ayres, and anchored her near the shore; and when about 13 feet 6 inches of water had been poured into the hold she settled down upon the mud. The master then went ashore to obtain additional assistance, and on his return more water was poured into her, until it finally rose over the hatchways. The vessel was subsequently sold at auction, and realized a sum of 80%. We were told by the captain that she was not insured.

These being the facts of the case, I will now proceed to deal with the questions which have been put to us by the Board of Trade; and the first question which we are asked is, “Whether the coal shipped on board the ‘Alpha’ is dangerous for shipment on long voyages?” The whole of the coal which this vessel had in her, with the exception of some 38 tons, which had been put on board some 6 days before the rest of the cargo, came, we are told, from the Carfin Colliery, which is a small colliery in the Motherwell district of Lanarkshire. We are told that it has three seams, called respectively the Main, the Virgin, and the Virtual. The Main is the uppermost seam, then comes the Virgin, which is about 36 fathoms below it, and about 7 fathoms below this is the Virtual. The Main and Virgin seams are each about 4 feet thick, whilst the Virtual is about 3 feet thick. The coal from the Main and Virtual seams is a soft bituminous coal, and is known as a second quality house coal; but that from the Virgin seam, although of the same character, is a very inferior coal, and contains, we are told, from 3 to 5 per cent. of stones. Mr. Ure, the managing partner of the Carfin Colliery, told us that the coal shipped on board this vessel consisted of 207 tons 10 cwt. from the Main seam, 234 tons 10 cwt. from the Virtual seam, 12 tons 17 cwt. from the Virgin seam, and 49 tons 3 cwt. from

either the Virtual or the Main, but he could not say from which, making a total of 504 tons. Whence the remaining 38 tons of coal, which had been put in first, came from, or what was its character, we were not informed. It will thus be seen that of the 504 tons of coal which were supplied by the Carfin Colliery, the greater portion came from the two best seams, the Main and the Virtual, and that only 12 tons 17 cwt. was of the inferior quality from the Virgin seam. We were told, however, by Mr. Moore, the Government Inspector for the Eastern District of Scotland, that all these seams, the Main and the Virtual as well as the Virgin, contain more or less iron pyrites in nodules and laminæ; and although the owners of the colliery would no doubt for their own credit and for the credit of the colliery use their best endeavours to remove the pyrites, Mr. Moore was of opinion that it was not possible to do so effectually, for that pieces of the pyrites would be very liable to escape detection and be left in the coal, and would thus get into the hold of the vessel. He thought that, even with the greatest care, it would be quite impossible to remove all the pyrites from it. This being so, and the presence of pyrites being, as is well known, very liable to set up so called spontaneous combustion in the coal, we are not prepared to say that the coal which this vessel had on board was of such a character as to be suitable for shipment on long voyages.

The second question which we are asked is, "Were the coals shipped in proper condition, and whether breakage was as far as possible prevented?" We were told that the coal was sent from the colliery on the 7th and 8th of June, being despatched as it was wrought, and that it was shipped between the 8th and the 12th, and that during the whole of that time the weather was very fine, so that it may fairly be assumed that when shipped it was dry, and to that extent was in good condition. Being, however, a soft coal, we were told by Mr. Moore that it would be quite impossible to prevent breakage of some kind when it was shot down into the hold, so that although only large coal seems to have been sent down to the ship, there can be no doubt that there would be some amount of small coal under the hatches, and there would of course be the danger, as I have stated, of more or less pyrites being mixed with it.

The third question that we are asked is, "Whether the holds were properly ventilated so as to insure a system of surface ventilation only, without ventilating the body of the cargo?" The master, who gave his evidence in a very clear and straightforward manner, told us that there were two booby hatches, one at the fore side of the fore mast, and the other just forward of the break of the poop and about 18 feet abaft the main mast. There were also, he said, two grating hatches in the cabin, and two ventilators fitted with cowls, one about a foot abaft the main hatchway, and the other in the fore hatchway. These ventilators merely pierced the upper deck, and were thus well adapted to carry off any gases that might be given off by the coal without setting up a through ventilation, which we are told it is most important in these cases to avoid.

The fourth question that we are asked is, "Whether the holds were properly and sufficiently cleared, and whether there was anything left from the previous cargo which would in any way affect the cargo of coal?" We are told that on the previous voyage she had brought a cargo of saltpetre from Iquique, which she had discharged at Leith, but that the hold had afterwards been thoroughly cleaned out, and that every portion of the saltpetre had been removed.

The fifth question that we are asked is, "Whether proper means existed whereby the temperature of the cargo could be ascertained, and whether it was properly ascertained and registered from time to time

during the voyage?" I have already said that the vessel was fitted with iron tubes, of which there was one in each of the hatchways, having a diameter of about 2 inches, and extending from the top to within 18 inches of the skin of the ship, down which a thermometer could readily be passed, the master being furnished with two for the purpose, and the temperature of the coal ascertained at the different levels. We have also stated that five days after leaving port they commenced making daily observations of the temperature until about the 2nd or 3rd of August, when, finding that the temperature was rising, the observations became more frequent. Now we have often been told by masters and owners in these inquiries that these sounding tubes, which were so strongly recommended in the Report of the Commission on Spontaneous Combustion in Coal-laden Vessels, would be of no practical use, that they would interfere with the stowage of the cargo, and that they would be liable to be injured; but this gentleman, who has, we are told, had very great experience in the carriage of coal cargoes from the South Wales ports to the West Coast of America, tells us that he found them extremely simple and useful; that they were common gas pipes, that they in no way interfered with the cargo, and that by indicating to him from day to day the condition of the cargo—of which without them he would have had no knowledge, inasmuch as no smoke was given off until quite the last—it enabled him to take the proper measures to keep the fire under, and that in all probability the lives of all on board were saved thereby. This gentleman's testimony on this point is, in our opinion, very important as instancing the great value of these sounding tubes.

I will now take the rest of the questions together. They are as follow:—

"(6) Whether, when the temperature was found to have increased, proper and sufficient measures were taken to ascertain the cause thereof?"

"(7) What was the cause of the temperature increasing on and after the 1st of September?"

"(8) Whether prompt and proper measures were taken to ascertain the cause thereof, and to extinguish the fire?"

"(9) What was the cause of the fire which subsequently broke out on board the vessel, and whether every possible effort was made to extinguish it?"

And, "(10) Whether the master and chief officer are, or whether either of them is, in default?"

Now there can be no doubt that in this case the fire arose from the spontaneous combustion of the coal, caused probably by some portions of pyrites having been left in it. The measures, however, which the master took when he found the cargo heating, to prevent the fire from breaking out, first by excluding as far as possible the air from the hold, and when that proved insufficient by pouring water upon the coal, were proper, and were promptly taken, and every effort was, in our opinion, made to keep it under. That the fire did ultimately break out, and cause the destruction of the vessel, was not the fault of either the master or the mate; they did all that could possibly be expected of them, and their conduct under the very trying circumstances in which they were placed is worthy of all praise.

The Board of Trade have not asked that the certificates of either of these officers should be dealt with, or that any order should be made as to costs.

(Signed) H. C. ROTHERY,  
Wreck Commissioner.

We concur.

(Signed) R. METHVEN,  
H. C. KENNEDY, } Assessors.

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The Merchant

In the matter of  
the Moot Hall,  
December 1883,  
Wreck Commission  
and Captain K.  
circumstances attend  
ship "HAROLD"  
of Bothnia, on

The Court, having  
circumstances of the  
finds, for the reason  
the said ship was  
thereof by George  
having allowed her  
course and inside the  
having taken any pre-  
position, put her on  
shore and then gone  
hazy that the land  
forty yards of it.

For these wrongs  
suspends the certificate  
Corner for six months.  
The Court is not  
Dated this 12th day

(Signed

We concur in the

(Signed

This case was heard  
12th of December  
appeared for the  
the owners, master,  
Five witnesses have  
Trade and examining  
statement of the  
Trade desired the  
then addressed the  
Mr. Howard Smith  
Court proceeded to  
which its opinion  
of the case are as follows

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the shore, and at

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