

RULING OF THE MARITIME DISCIPLINARY COURT OF THE NETHERLANDS OF 31 OCTOBER 2018 (NO. 11 OF 2018) IN CASE 2017.V6-ATLANTIC DAWN

As petitioned by:

the Minister of Infrastructure and the Environment, now the Ministry of Infrastructure and Water Management, in The Hague, **petitioner**, authorised representative: first M. Schipper, currently K. van der Wall, ILT/shipping inspector,

versus

R.A.S. S., the person concerned, who did not appear.

1. The course of the proceedings

On 8 September 2017, the Maritime Disciplinary Court received from M. Schipper, inspector ILT/shipping, a written petition for a disciplinary hearing of the case against the person concerned as the captain of the Dutch seagoing vessel Atlantic Dawn. 18 (29) appendices were attached to the petition.

The Disciplinary Court sent the person concerned a letter in the English language (both by registered and ordinary mail) informing him of the petition, enclosing a translation of the petition and its appendices in English, and notifying the person concerned of the opportunity to file a statement of defence.



A statement of defence dated 2 February 2018 was received from the legal counsel of the person concerned, J. van der Stelt, LL.M. The inspector responded to this by submitting a reply on 9 March 2018, which was followed on 16 April 2018 by a rejoinder from the counsellor of the person concerned. Copies of these documents have been forwarded to the inspector and the counsellor of the person concerned respectively.

The presiding judge stipulated that the oral hearing of the case would be held at 11.00 hours on 26 September 2018 at the offices of the Disciplinary Court in Amsterdam.

The Human Environment and Transport Inspectorate and the person concerned – the latter in the English language, both by ordinary and registered mail – and his counsellor were summoned to appear at the hearing of the Disciplinary Court.

The court hearing was held on 26 September 2018. K. van der Wall, ILT/Shipping inspector appeared at the hearing for the petitioner. The person concerned did not appear. Leave was granted to proceed in default of appearance against him.

2. The petition

In summarised form, the following forms the basis for the petition. A fatal accident took place on board the Dutch seagoing vessel Atlantic Dawn on 17 October 2016. At the time of the accident the ship was lying at anchor off the coast of Saudi Arabia, close to Jazan (Red Sea).

At the time of the accident the victim, the Filipino boatswain P.V. P., was working with a two-component paint system. This work was being carried out in a small tank in the engine room.

The victim lost consciousness in the tank and was found with a cable with an uninsulated fitting in his hand. The cable had been repaired with duct tape at various points. There was no protective cover over the fitting. The cable was connected to a socket, outside of the tank.



There are various working conditions that could have contributed to the fatality. More specifically, this concerns faulty electrical equipment in the form of the cable with a fitting described above, as well as the presence of hazardous substances in the 2-component paint being used and the risk of symptoms that may resemble drowsiness, inebriation or being under the influence of narcotics.

The person concerned was the ship's captain at the time.

It is stated in the petition that the investigation has shown that electrocution caused by a defective cable with a fitting and an unprotected lamp is likely to have been the direct cause of death.

None the less, the person concerned cannot be held accountable for this because there is nothing to suggest that he was aware of the existence and use of the cable.

The person concerned is charged – in briefly summarised form – as follows: – because of the vapours released from the paint, the absence of suitable measuring equipment, the dimensions and arrangement of the tank and taking into account undesirable events, the painting work could not have been carried out safely in the tank and therefore should not have been carried out ; the person concerned should not have allowed this work to proceed in view of his duties, obligations and responsibilities and, above all, the duty of care of a good seaman towards the persons on board; – nevertheless, the work did take place and the person concerned did not sufficiently supervise the presence of adequate ventilation, the proper taking of readings at several points in the tank and the taking of readings permanently or at times during the work, while there were sufficient grounds to suspect that the atmosphere in the tank could be contaminated with asphyxiating, intoxicating and flammable vapours.



The person concerned thus acted contrary to the principles of good seamanship within the meaning of Article 55a in conjunction with Article 4.4 of the Dutch Seafarer's Act.

3. The position of the person concerned

The person concerned has - briefly summarised - put forward the following arguments:

- the facts on which the petition is based do not correspond to the actual facts in crucial respects and are contested;

- during the work, continuous mechanical ventilation was provided; this created an overpressure in the tank which was discharged through the tank manhole and the ventilation; any gases or vapours were blown out of the tank; these could therefore not have played a role in the accident because at that time no painting was yet taking place.

The allegations are largely based on incorrect assumptions and are therefore unfounded.

4. The assessment of the petition

A. The Atlantic Dawn's vessel data attached to the petition (p. 32 of the petition) shows that the vessel in question is heavy cargo ship of 5460 GRT sailing under the Dutch flag, with a length of 111.7 m and a breadth of 16.8 m. The year of construction is 2013.

B. The petition, the defence, the reply and the rejoinder provide the following – uncontested – information.

(1) The work during which the accident took place was being carried out in a tank in/under the engine room, referred to as the 'oily bilge tank'. This tank had not been painted since the construction of the ship.

The tank was located on the starboard side at the base of the main engine (see annex 1 to the statement of defence).



The dimensions were: content 4.7 m³, height 1.44 m, width increasing from back to front in a longitudinal direction from 1.70 m to 2.50 m, length varying from 2.60 on the starboard side to 2.50 on the midship side (see drawings of annex 2 to the defence and annex 1 to the reply). There were two (transverse) trusses in the tank (it is not clear whether there were any more of these trusses), so that the tank was divided into three

compartments.

The distance from the front truss to the front of the tank and the distance between the front truss and the rear truss each amounted to 0.60 m. Both trusses had recesses, holes, in the front truss two recesses, in the rear truss three. Two pipes ran from a heating coil through two openings on the midship side – one in the front truss, one in the back truss.

At the top of the compartment between the two trusses was a round manhole. The tank was accessible from the engine room through that manhole, for which a ladder was placed against the front truss. The tank was equipped with a venting system, by means of a pipe that ran to

the deck.

Above the tank and below the work floor ('the plate') of the engine room there was a space through which several pipes ran.

(2) On 14, 15 and 17 October 2016, work was carried out in the tank on the instructions of the person concerned. First the tank had to be cleaned and the rust removed, where necessary by chipping it, then the cleaned steel of the tank had to be painted with a two-component paint. The work was to be carried out working from front to back.

(3) On the morning of 17 October 2016, the boatswain was working in the tank. This person lost consciousness in the tank at some point in time. When he was found, he had in his hand an electric cable with a bare fitting attached to it. The cable had been repaired with duct tape at various points. There was no insulated handle on the fitting and no protective glass around the lamp. The cable was connected to a socket in the engine room, outside of the tank. The boatswain had burns on his hand.



C. The ship was subject to a safety management system (see appendices 13–A, B, C, C–1 to the petition, p. 51/60), which included various safe working instructions, such as for entering confined spaces (SWI No 25; Annex 13–C–2 to the petition, p. 61/64) and for working with chemicals, including paints and thinners (SWI No 27; Annex 13–C–3 to the petition, p. 74).

D. SWI no. 25 contained instructions including the following: 'Rescue operations of persons in confined spaces: ONLY with breathing apparatus'. This SWI included a blank form of a permit for entering a certain confined space.

To enter the tank in question, which was a confined space, permits were issued for 14 October 2016, 15 October 2016 and 17 October 2016 (annexes 13-C-2-A/C to the petition, p. 65/73).

These permits were issued by the first mate as nominated responsible person.

The following was stated on all permits 'This permit is rendered invalid should ventilation of the space stop or if any of the conditions noted in the checklist change'.

All permits were marked with a tick in the box with an affirmative answer to the following questions:

pre-entry preparation:

.has the space been thoroughly ventilated by mechanical means? .have arrangements been made for frequent atmosphere checks to be made while the space is occupied and after work breaks ?

.have arrangements been made for the space to be continuously ventilated throughout the period of occupation and during work breaks ?

According to the permits for 14 and 15 October 2016, on those days around at 8:30 hours a check and an oxygen measurement were carried out in the tank by the first mate. The boatswain and one or two sailors had been



working in the tank for some time (between around 8:30 hours and 21:50 hours, with interruptions). The first mate had been in the tank again for a few minutes around 10:35 hours and the person concerned had also come to look into the tank (around 18:00 hours).

According to the permit for 17 October 2016, the first mate had performed an oxygen measurement at 8:30 hours (oxygen 20.9%, hydrocarbon 0%, toxic gases 0 ppm). The first mate was back in the tank for a few minutes at around 10:35 hours. The boatswain was in the tank from 8:30 to 10:00 hours and the boatswain entered the tank again at 10:40 hours.

E. In SWI no. 27, reference was made to the material safety data sheet for the use of chemical substances. With regard to paint and thinner the instruction 'make sure that you have good ventilation when painting indoors' applied.

The petition stated that paintwork was carried out in the tank using a particular two-component paint and that the material safety data sheet of both components of this paint was requested and obtained. These documents are attached as annexes 13–C–3–A/B (p. 75/110). The properties of the paint mentioned in these documents show that they contained substances that were very harmful on inhalation and that the paint components should only be used with adequate ventilation. Some ingredients had 'narcotic effects' when the vapour was inhaled and could cause 'drowsiness or dizziness'. As mentioned in the petition, limit values were set for certain substances in the paint.

In the documents, the following information is given under 'respiratory protection': 'If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary'.



F. A report of findings drawn up by Inspector M. Schipper (annex 10 to the petition, pp 40/43), contains – rendered briefly – information including the following.

The reporting official boarded the Atlantic Dawn on 11 November 2016. The reporting official spoke there with Captain A.K. He said that he boarded the vessel shortly after the accident and was the first person to enter the tank after the accident. In addition to [the outside of] the tank, he found the following in the vicinity of the manhole: the power cable in question, compressed air breathing devices and emergency escape breathing devices, medical oxygen equipment and a ventilator. Captain A.K. provided six photographs of the situation as it was initially found by him, including an overview photo (annex 10 to the petition, p. 44/45, four of which are reproduced in Annex 2/3 and 8/9 to the reply).

The first mate and the cadet told the reporting official that on 17 October 2016 the first mate had measured the tank for oxygen around 08:30 and again around 10:45. The first mate showed the reporting official how he had taken the reading at the time: only directly under the manhole and only for oxygen.

The reporting official heard that the victim was found in the foremost part of the tank.

The reporting official has spoken to several crew members: the first mate and the cadet, the chief engineer and the second engineer. On that basis, the reporting official has come to the following conclusions: The work on the tank had started a week previously. The tank had been emptied and cleaned, and it had been chipped. After that a start was made with the painting work. A two-component paint was being used at the time of the accident; In the morning of 17 October 2016, the first mate had inspected the tank and measured its oxygen content. After that, the boatswain went into the tank. The cadet kept watch outside the tank. At 10:00 am the boatswain left the tank again for the coffee break. After the



coffee break the first mate inspected the tank again and measured the oxygen content. The cadet stated that after that the boatswain was gone for a while and came back with the cable with fitting and lamp, which he had connected to a socket. The lamp was working. The boatswain went back into the tank to continue the work at about 10:40 hours. The cadet said he could not see the boatswain, but could hear what he was saying. There was a lifeline for the contact. Around 11:35 am the boatswain asked for water. That was provided by the cadet. The boatswain also asked for new paint. After the cadet had mixed it he tried to give it to the boatswain, but received no reply. The cadet went to look into the tank, saw the boatswain lying down and then went to get help.

G. A statement made by cadet D. (annex 8D to the petition, p. 36) includes, in summarised form, the following:

Around 11:45 hours the boatswain asked for water and paint. The cadet gave him some water. When he then tried to hand him the paint, the boatswain did not answer. He went below to look and saw that the boatswain was unconscious. He immediately went to chief engineer.

H. A statement made by the chief engineer (annex 8C to the petition, p.35) includes, in summarised form, the following:

At 11:50 am he was alerted in the engine room by the cadet. He went to look into the tank. The boatswain was unconscious and did not respond. He saw saliva at the boatswain's mouth and in his hand the lamp. He left the tank again. Immediately afterwards the seamen P. and B. arrived and entered the tank. Serrano joined them and also entered the tank after seaman B. had left it. The person concerned ordered the boatswain to be taken out of the tank. This was done at 12:15 hours. First aid (CPR) was then provided. The boatswain was brought to the aft deck and later transferred to a lifeboat.

I. A statement made by the person concerned, R.A.S. S. (annex 8A to the petition, p. 33) includes, in summarised form, the following:



Around 11:50 hours he received a message by telephone that the boatswain was unconscious in the tank. When he arrived at the tank, crew members were taking the boatswain out of the tank. He himself went down into the tank, where he saw seaman P. They tried to get the boatswain out of the tank, but needed more help. Around 12:15 hours the boatswain was out of the tank. He was taken to the aft deck on a stretcher. First aid has been provided continuously (CPR). He went with the lifeboat and went to the hospital. There he was informed that the boatswain had died.

5. The ruling of the Disciplinary Court

A. The content of the documents referred to above has led to the following conclusions being drawn in this case with an adequate measure of certainty.

On 14, 15 and 17 October 2016, work was carried out in a tank on board the Dutch seagoing vessel Atlantic Dawn, while it was anchored off the coast of Saudi Arabia. This tank was located on the starboard side in/under the engine room and was divided by (at least two) trusses into (at least three) compartments; for the dimensions and layout see under 5.B. The tank was first cleaned and chipped where necessary and then painted with a two-component paint. The boatswain worked in the tank on all of these days. On the morning of 17 October 2016 the boatswain was the only one at work in the tank.

Cadet D. kept watch outside the tank and was in contact with the boatswain through oral communication and a lifeline.

After the coffee break the boatswain first collected a faulty and dangerous cable from somewhere with a bare socket and a lamp, which he connected to a power outlet, after which he entered the tank with it.

At a given point in time the boatswain lost consciousness in the tank. It can be assumed that the boatswain was then in the front compartment of the tank.



After the cadet raised the alarm, it took the crew quite some time, apparently almost half an hour, to get the unconscious boatswain out of the tank. Compressed air and oxygen equipment were used in the rescue operation. After that, constant efforts were made to resuscitate the boatswain (CPR). He was first taken to the stern and then taken to hospital by lifeboat and ambulance. At some point in time it was then established that the boatswain had died.

Although only a limited investigation has been conducted into this matter, it can be assumed that the boatswain became unconscious and then died as a result of electrocution due to the use of the dangerous cord with its fitting.

B. The person concerned is not being held responsible for the presence on board or the use of the dangerous cord, nor for the electrocution or death of the boatswain.

Furthermore, it has not been shown that harmful vapours/gases in the tank, in particular from the two-component paint, or a lack of oxygen, played a role in the loss of consciousness or death of the boatswain.

C. The petitioner's objections are aimed at whether this work should have been carried out on board at the time, in particular whether it could be safely carried out. A number of factors play a role in this: (1) the dimensions and layout of the tank, (2) the release of noxious vapours/gases from the paint used in the tank, (3) the absence of measuring equipment to determine the presence of these vapours in the tank,

(4) the manner and frequency with which the oxygen content in the tank was measured, (5) the provision of adequate ventilation in the different compartments of the tank, and (6) the ability to provide assistance to persons working in the tank, if necessary, and to evacuate them from the tank.

D. The tank was a confined space in the sense of the SWI nr. 25. This entailed additional risks, especially when entering without the use of breathing apparatus: there had to be a constant supply of oxygen for the person or persons present there and harmful vapours/gases – in particular



from the two-component paint used – had to be removed. This required a suitable ventilation system.

Also, the atmosphere in the tank had to be properly tested beforehand, namely with a multi-gas detector for oxygen, hydrocarbons and if possible also for relevant harmful vapours/gases.

This applied to all compartments of the tank.

A certain two-component paint was used to paint the tank. This could result in the release of substances that were very harmful on inhalation. This paint should only be used indoors with adequate ventilation.

Limit values were set for certain substances. If there was a risk at a dangerous level of the harmful vapours/gases, a suitable respirator should have been used. (see SWI no. 27 and the Safety data sheets, mentioned above under 4E).

Article 9 of IMO resolution A.1050 (27) of 30.11.2011, revised recommendations for entering enclosed spaces aboard ships, reads as follows:

"Persons entering enclosed spaces should be provided with calibrated and tested multi-gas detectors that monitor levels of oxygen (20,8-21 %), hydrocarbon/carbon monoxide (less than 1%) and other gases as appropriate (less than 50% occupational exposure limit of any toxic vapours and gases/the specific gas)".

E. The ventilation.

The defence argued that during the work on 14, 15 and 17 October 2016, the tank was continuously forcibly ventilated by means of a mobile fan that was installed several decks above the tank manhole, at the level of the engine room air inlet, and that by means of a flexible hose with a diameter of 30 cm, the fan blew fresh air from outside of the engine room through the manhole in the tank, creating an overpressure in the tank that was discharged through the manhole and the tank ventilation; this venting emerged a few decks higher up.



The statement of defence was accompanied by five photographs that are said to have been taken during a 'reconstruction' – after the accident – of the arrangement of the fan and hose, from the fan to and in the manhole. It is noted that the hose was temporarily removed from the manhole to allow entry and exit from the tank.

The statement of defence claims on the one hand that the tank and its immediate surroundings were left undisturbed during the first days after the accident on the instructions of the person concerned and that the location of the accident was not cleared until shortly after Captain A.K. had boarded the vessel, shortly after the accident. On the other hand, it is stated that shortly after the accident the engine room was cleaned up for safety reasons.

Captain A.K. is said to have been the first person to enter the tank after the accident. He found a fan outside the tank, at the manhole, (and not at the air inlet of the engine room).

The Disciplinary Court believes that the red mouth of this fan can also be seen in the photo in annex 2 of the rejoinder, i.e. in the space between the plate and the top of the tank.

Captain A.K. apparently did not find any flexible hoses for the supply of fresh air and nor are they visible in his photographs.

Such flexible hoses can easily be slid together into fairly small packages. These hoses can be seen in the photos of the 'reconstruction', but the fan is not visible. The position of the fan in the gap is not consistent with the position of the ventilation system in the 'reconstruction' as shown in the photos. The hose then runs – without interruption – over the engine room plate, through the gap into the tank manhole. Moreover, no information was provided as to when and for what reason such a 'reconstruction' would have been held.

The statements made by the person concerned and the crew members – the written statements and the statements made to the inspector – do not mention any ventilation system or parts of one, but there is nothing to show that this was asked.



The permits were all checked off to show that the tank had been thoroughly mechanically ventilated beforehand and that measures had been taken to ventilate the tank continuously during the presence of persons and during work stoppages; however, they did not specify what these measures were and how they provided them.

In view of the above, the Disciplinary Court has doubts about whether a ventilation system with fan and hoses was actually installed and used in the tank during the work. It is conceivable that a ventilation system with hoses was not used, but only the fan was placed near the manhole in order to ventilate the air in the tank from there to some extent, especially at times when the work was interrupted. In that case there would be no ventilation as required for safe working in the tank.

On the other hand, the Disciplinary Court cannot conclude with a sufficient degree of certainty that such a ventilation system with hoses was *not* used at the time.

The defence is accompanied by a photograph showing the type plate of the fan used. According to this nameplate, the fan had a capacity of 70 m³ per minute. The diameter of the flexible hoses can be set at 30 cm. The Disciplinary Court estimates the diameter of the manhole of the tank at maximum of

50 cm It is not clear in which part of the tank the vent pipe was fitted to the deck. The diameter of this pipe will not have been more than 20 cm. The openings in the two trusses in the tank were probably round and not oval. The two openings in the front truss were estimated to have a maximum diameter of 50 cm.

If it is assumed that a ventilation system consisting of this fan and those flexible hoses, the end of which was suspended in the tank, was in operation during the work, then the Disciplinary Court – having regard to the capacity of the fan, the size and arrangement of the tank and the vent pipe – is of the



opinion that this ventilation system was sufficient for an adequate supply of fresh air and the removal of harmful vapours/gases.

This also applies to the front compartment (especially if the vent pipe started there). It should be noted that for optimal ventilation of that compartment, the end of the hose should have been taken there through one of the openings in the front truss. It does not appear that this was done.

F. The measurements

It can be assumed that the first mate performed two measurements on each of the three working days mentioned: before work started at 8.30 hours and after the coffee break at 10.35 hours. It can be assumed that he only measured the oxygen content and that no other gases or vapours were tested. In this way it was not possible to measure the presence of harmful substances from the paint.

There is nothing to show which measuring equipment was available on board; in particular, it has not been shown whether the harmful vapours/gases from the paint could be measured, in particular those for which limit values had been set. The petition stated that no such measuring equipment had been found on board (by the inspector/reporting official). It is advisable that crew members who are going to paint in a confined space are provided with a breathing apparatus with a paint filter suitable for filtering the harmful vapours/gases from the paint to be used.

Moreover, it seems that only oxygen was measured just below the manhole and not elsewhere in the tank. This was particularly problematic here because, due to the compartmentalisation of the tank, it could not be assumed that the atmosphere was homogeneous throughout the tank. Such a measurement method should be considered incorrect. Measurements should also be taken at a larger distance from the manhole, especially also at the place where work is or will be carried out.

It is recommended that crew members who are going to work in a confined space, especially if - as in this case - it is a small space, should be provided



with their own oxygen meter, which can be worn, and which gives an acoustic signal when the oxygen content is too low.

Only two oxygen measurements per day were carried out. The permits show that on 14 and 15 October 2016 work continued until approximately 21:50 hours, while the last measurement had been carried out at 10:35 hours. This frequency of measurement cannot in itself be considered sufficient. It would make sense to do an oxygen measurement after every work interruption. It should be noted that the permit form does not allow for more than one measurement to be recorded.

On the other hand, the Disciplinary Court is of the opinion that, if the ventilation system was constructed and operated as indicated in the defence, there would be no fear of a shortage of oxygen in the tank.

G. An additional risk of working in this tank was the limited space and compartmentalisation. Not only was access through the manhole restricted, the front and rear compartments of the tank could only be reached through round openings in the trusses with an estimated maximum diameter of 50 cm. The access through two of the openings was additionally limited by the presence of pipes to a heating coil.

Under SWI No 25, a rescue operation in a confined space could only be carried out with breathing apparatus. Breathing apparatus created even more restrictions when moving through this tank.

As this accident has clearly shown, it was particularly difficult in an emergency to provide adequate assistance to someone in the front compartment of the tank and to evacuate them quickly from the tank. The rescue operation of the unconscious the boatswain took almost half an hour.

It can be taken into account that during work in the tank someone was on duty outside the tank near the manhole and there was a lifeline to the crew member in the tank. With a properly functioning ventilation system, there was little chance that anyone in the tank would become unconscious due to a



shortage of oxygen or due to harmful vapours/gases from the paint. It can be assumed that if the ventilation system failed, both the person in the tank and the watch would notice this immediately.

The use of a bare-ended dangerous power cord, which most likely led to electrocution, was not permitted, and its use with the fatal consequence cannot be considered as something that should reasonably have been taken into account.

Against the background of these circumstances, it goes too far to say that working in this tank (or even carrying out an inspection in it) was unsafe due to its size and layout and in view of a possible emergency situation and should therefore not have been permitted.

H. On the basis of the above, the Disciplinary Board concludes that – assuming that the ventilation system with the fan and hoses was in operation – it did not appear that the work in the tank could not be safely carried out and that it should therefore not have been carried out.

The petitioner's allegations against the person concerned are therefore unfounded. No disciplinary measure is called for.

I. Although the use of a faulty and dangerous cord with a bare fitting is outside the scope of the assessment of the petition, the Disciplinary Court questions why the victim went to get that cord with a fitting for his work in the tank. This seems to indicate that no other, safer source of lighting was available at the time. Battery-powered lamps would have been used at work on the two previous working days (and in the first working hours on the day of the accident). If these were no longer available for lighting in the tank, this constitutes a deficiency in the ship's equipment. It should also be noted that the use of rechargeable and long-acting LED lamps does not require a source of electricity from outside of the tank.



6. The decision

The Disciplinary Court dismisses the charges against the person concerned.

Duly delivered by A.N. van Zelm van Eldik, LL.M., presiding judge and P.J. Lensen, E.R. IJssel de Schepper, R.A. Oppelaar and J. van Vuuren, members, in the presence of E. Doeven as acting secretary and delivered by A.N. van Zelm van Eldik, LL.M., in public session on 31 October 2018.

A.N. van Zelm van Eldik presiding judge

E. Doeven acting secretary

An appeal against this ruling can be lodged within six weeks of the date of forwarding with the Dutch Trade and Industry Appeals Tribunal ('College van Beroep voor het Bedrijfsleven'), Prins Clauslaan 60, 2595 AJ The Hague, P.O. Box 20021, 2500 EA The Hague, the Netherlands.