

Incorrect declaration caused charcoal fire

The container vessel was sailing in open sea. In the afternoon smoke was seen coming from the vent of one of the cargo holds. The Master sounded the general alarm and all crew were mustered and accounted for.

A fire team was assembled and proceeded to shut off the ventilation and close the fire dampers for the cargo hold. An access hatch cover was opened for the fire team to enter the cargo hold. It was full of smoke and there was no visibility, so the fire team turned back and closed the hatch.

The Master decided to release CO₂ into the cargo hold and the vessel turned back to its last port of call.

After the CO₂ had been released some smoke could still be seen coming from the cargo hold, but it was less than before. The crew could not find any hot spots on deck.

The crew inspected the adjacent cargo hold to see if there were any hotspots or discolouration. They could not find any.

After the vessel berthed the local fire brigade embarked and confirmed that the fire was extinguished. The cargo manifest did not show any dangerous cargo loaded in the affected cargo hold. However, it was found that the container that caught fire was loaded with charcoal, and that the shipper had declared the charcoal was not IMDG dangerous cargo.

It was later confirmed in laboratory tests that the cargo should have been classed as dangerous cargo as per IMDG code class 4.2.



Charcoal facts

The IMDG Code for charcoal, if it applies, requires adequate heat treatment and then cooling of the charcoal before packing. This is to reduce the charcoal's reactivity by allowing it to oxidise under controlled conditions.

Charcoal may not be subject to the IMDG Code, however, if it passes a UN test for self-heating, thus indicating that it is not too reactive. This exemption requires correct sampling, testing and certification and it may assist to check the relevant documentation.

This had unfortunately not been done correctly in this case. ■

When discussing this case please consider that the actions taken at the time made sense for all involved. Do not only judge, but also ask why you think these actions were taken and could this happen on your vessel?

Discussion

Go to the "File" menu and select "Save as..." to save the pdf-file on your computer.

You can place the marker below each question to write the answer directly into the file.



1. What were the immediate causes of this accident?

2. Is there a risk that this kind of accident could happen on our vessel?

3. How could this accident have been prevented?

4. What sections of our SMS would have been breached if any?

5. If procedures were breached, why do you think this was the case?

6. Do our procedures make sense for the work we actually do?

7. Is our SMS sufficient for preventing this kind of accident?

8. Does our SMS address these risks?

9. Do we have training exercises for how to fight a fire starting in the cargo hold?

10. What are the biggest risks for a cargo fire starting onboard our vessel?

11. Are our firefighting drills effective enough to address these risks?

12. Is everyone aware about how the CO2 system works onboard, or any other fixed firefighting system?

Issues to be considered after the discussion

Discuss the following COLREGS rules and also what other COLREGS rules would apply.

Rule 5

Every vessel shall at all times maintain a proper look-out by sight and hearing, as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

Rule 7

(a) Every vessel shall use all available means appropriate to the prevailing circumstances and conditions, to determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist.

(b) Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.

(c) Assumptions shall not be made on the basis of scanty information, especially scanty radar information.

Rule 8

(a) Any action taken to avoid collision shall be taken in accordance with the Rules of this Part and shall, if the circumstances of the case admit, be positive, made in ample time and with due regard to the observance of good seamanship.