

Kongsborg Accident



IMCA Safety Flash 03/16

Accient on-board Kongsborg on the 25th of August 2015

Crewman Lost an Eye

According to “Casualty investigation code MSC.255(84)” this is a “Serious accident”
A serious injury means an injury which is sustained by a person, resulting in
Incapacitation where the person is unable to function normally for more than 72 hours,
Commencing within seven days from the date when the injury was suffered.

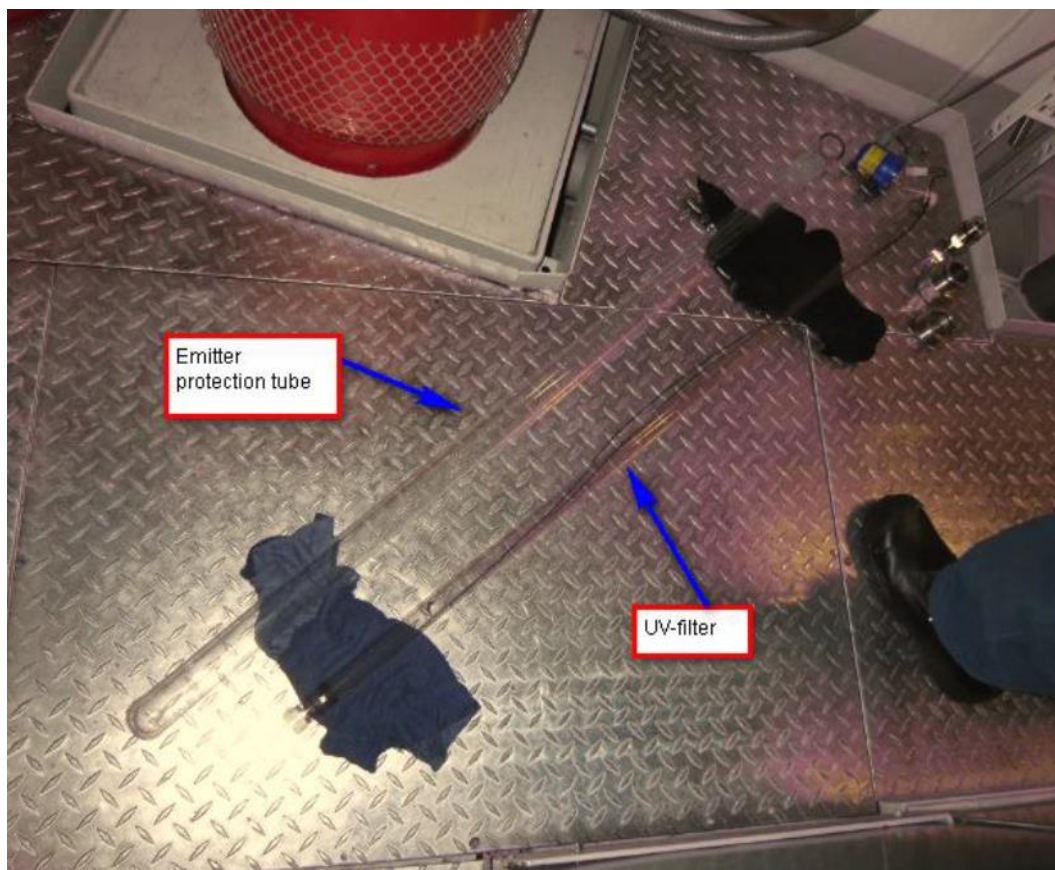
Ship particulars

Name of vessel:	KONGBORG
Call sign:	OZ2145
MMSI:	231605000
Port of registry:	Tórshavn
Register:	Føroysk Altjóða Skipaskrá
Type of vessel:	Offshore supply
IMO number:	9667760
Year built:/ Shipyard:	2013 / Havyard Ship Technology AS
Hull material:	Steel
Gross tonnage:	4.075,00
Length overall:	86,808 m

Breadth overall: 19,600 m
Draught max.: 8,000 metrar
Propulsion power: 3.800,00 KW

Lost Time Injury (LTI): Stored Pressure Release - Crewman Lost an Eye

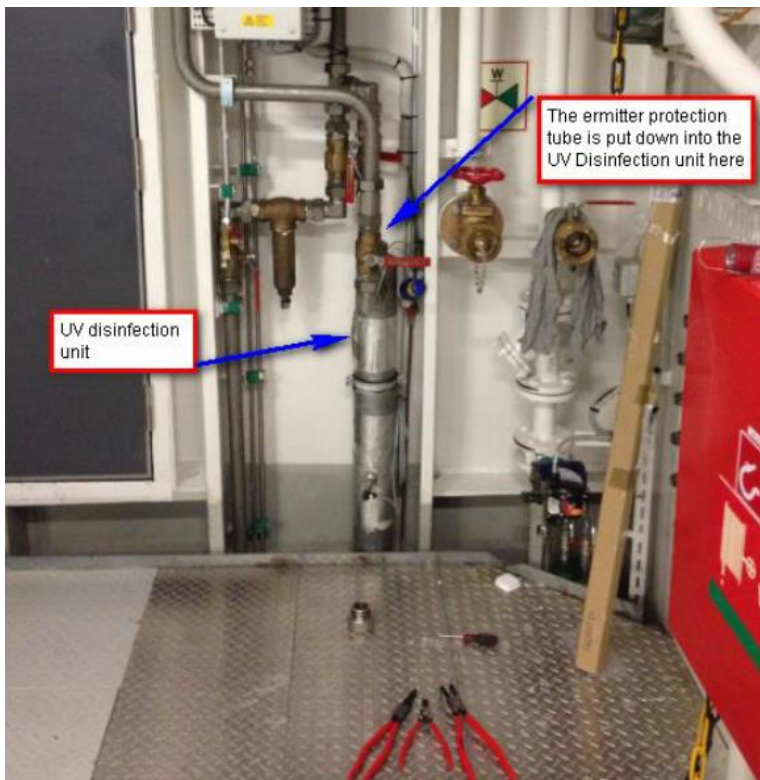
A member has reported an incident in which a crewman lost an eye during a stored pressure release incident. The incident occurred during maintenance work on the UV disinfection unit for the freshwater system on an offshore vessel. The job was installation of the emitter protection tube. As the injured person started to tighten the tension screw, it appears that he inadvertently touched the inlet valve handle – opening it by a third. This led to water running into the UV disinfection unit, building up pressure below the emitter protection tube and forcing it out through the opening. The glass element hit the injured person on the forehead and smashed. He was hit in the face and eyes by pieces of glass, and was brought to hospital for surgery. The doctors were unable to save the left eye.



Emitter tube and UV-filter ready to be inserted



Investigations revealed the inlet valve was approximately 1/3 open



Actual system on-board.



Emitter protection tube lowered into the filter (picture from another vessel).

- The investigation revealed the following:
- The injured person had dismantled the UV disinfection unit on other occasions and was therefore familiar with the equipment;
- The UV sterilizer has a vendor user manual which indicates which valves to close and how to change out the filter;
- The shut off valves before and after the UV disinfection unit were closed. The bypass valve was open. The valve upstream of the shut off valve ahead of the unit was open. The fresh water inlet supply was also not shut off;
- The following direct causes were identified:
 - The hydrophore pump was running and building pressure into the system
 - The 2nd Engineer wanted to verify the correct position of the seal ring so he used a torch and bent over and placed his head directly over the tube
 - Type of valves – It was possible to open the water inlet valve by accident due to the type of valve handle, which led to water running into the UV disinfection unit and building up a pressure below the emitter protection tube. This resulted in the emitter protection tube being forced out through the opening in the tension screw with high speed, hitting the 2nd Engineer in the face;

The following indirect causes were identified:

- Location/layout of pipes and valves: Tight space and difficult ergonomics
- There was no system description in place for this maintenance task
- There was poor risk awareness related to this specific job
- There are gaps in compliance with vessel company requirements
- A permit to work including a Lock out Tag out (LOTO) or isolation of the pump should have been issued for the job in accordance with company work permit system – this was not done
- Failure to use Proper Personal Protective Equipment (PPE) – The injured person was not wearing safety glasses, as required in company procedures when working on high pressure systems.