Oil leak from fuel pump return line

MARS Report 201038

21.(a) Marine Accidents

A. Introducing new vocabulary

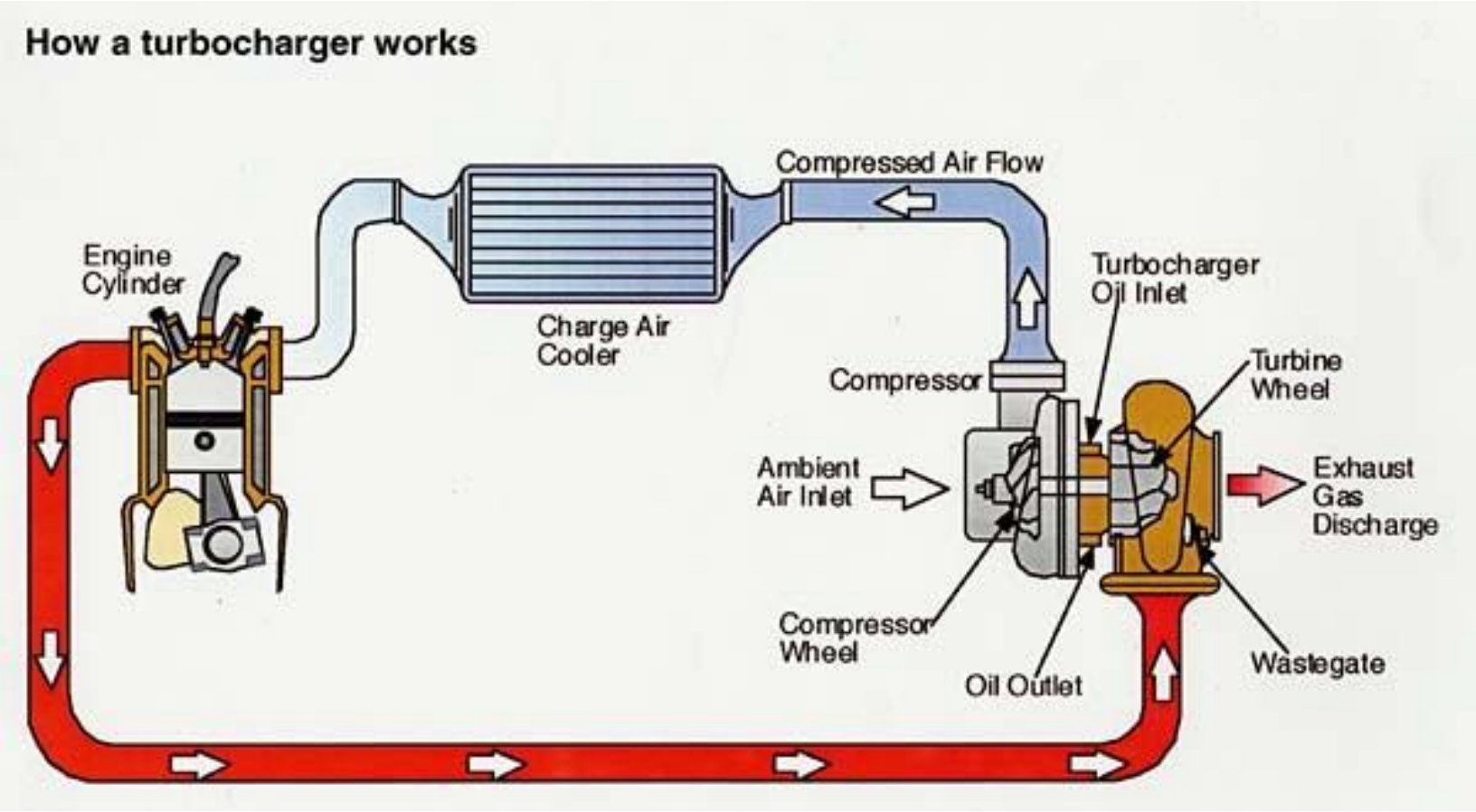
- *UMS mode*
- *duty engineer*
- *engine top, middle and lower platforms*
- *flywheel*
- *ventilation blowers*
- *oil mist*
- *source of the leak*

- ***inlet pipe bosses, boss*** : an area of increased thickness, usually cylindrical, that strengthens or provides room for a locating device on a shaft, hub of a wheel, etc

- *pipeline flange*
- *fuel pump oil return line*
- *fuel pump inlet pipe boss*
- *splash preventing screening*
- *oversight*
- *fuel oil inlet and return pipes*
- *bolt – tighten / tightness*

- ***screeening*** : a spray seal ; a strip/layer of wood, plaster, or metal placed on a surface to act as a guide to the thickness of the cement or plaster coat to be applied

turbo-charger air intake



- *oil mist*
- *oil leak*
- *failed joint - connection*
- *bolts*

Reading skills

B.1 Reading for gist:

Read the text and discuss with your partner the main idea of the text.

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- The vessel was en route and operating **in UMS mode**. The **duty engineer** entered the engine room at 06:50 to *man the engine room*. He discovered fuel oil **spraying** around the main engine top, middle and lower platforms, as well as around the flywheel area. Under the influence of the main engine **turbo-charger air intake** and the engine room **ventilation blowers**, the **oil mist** was being carried right across the machinery space, increasing the **fire hazard**. The **main engine** *was immediately stopped* and the ship's engineers began the job of *tracing* the source of the **leak**.

C.1 Vocabulary Development

(a) Choose the right term (MCT):

•The vessel was en route and operating in UMS (*model, mode, make*).
•The duty engineer entered the engine room at 06:50 to man the engine room and discovered fuel oil (*spreading, splashing, spraying*) around the main engine top, middle and lower platforms, as well as around the flywheel area.
•Under the influence of the main engine turbo-charger air (*intake, input, inflow*) and the engine room ventilation blowers, the oil mist was being carried right across the machinery space, (*decreasing, increasing, causing*) the fire hazard.
•The main engine was immediately stopped and the ship's engineers began the job of tracing the source of the (*lead, leak, read*).

Complete the text below

- The vessel was en route and operating **……** .
- The **duty engineer** entered the engine room at 06:50 to **……** .
- He discovered fuel oil **spraying** around
  - **……** .,
  - **……** .,
  - as well as **……** ..
- Under the influence of the main engine **turbo-charger air intake** and the engine room **ventilation blowers**, the **oil mist ……** ., increasing the **……** .
- The **main engine** *was immediately stopped* and the ship's engineers began the job of **……** ..

It was soon established that the leak originated from a **failed joint** at a **pipeline flange** on a **fuel pump oil return line**. It was also observed that the joint and the fuel pump **inlet pipe bosses** were not covered with approved splash prevention **screening**, as required under Solas. This was apparently due to an **oversight** in the case of the flange and due to the awkward shapes of the **castings** on the fuel pump body. All fuel oil inlet and return pipes were checked and it was found that some of the **bolts** required about *half a turn* of the **nuts** to obtain proper **tightness**.

Supply the right term

- It was soon established that the leak originated from a **failed** _____ at a **pipeline flange** on a _____ **oil return line**.
- It was also observed that the joint and the fuel pump **inlet pipe** _____ were not covered with approved splash prevention _____ , as required under Solas.
- This was apparently due to an _____ in the case of the flange and due to the awkward shapes of the _____ on the fuel pump body.
- All fuel oil inlet and return pipes were checked and it was found that some of the _____ required about *half a turn* of the _____ to obtain proper **tightness**.

MCT - Supply the right term:

- It was soon established that the leak originated from a failed (*lever, point, joint*) at a pipeline flange on a fuel pump oil return (*mine, line, gear*).
- It was also observed that the joint (which had been opened during a recent drydocking) and the fuel pump inlet pipe (*booms, bosses, bores*), were not covered with approved splash prevention screening, as required under Solas.
- This was apparently due to an oversight in the case of the (*range, cage, flange*) and due to the awkward shapes of the castings on the fuel pump body.
- All fuel oil inlet and return pipes were checked and it was found that some of the (*joints, bolts, bosses*) required about half a turn of the nuts to obtain proper tightness.

Complete thetext below

- The …. ….. …. found a leak on a fuel pump oil return line**.**
- The leak originated from a failed joint …. ….. …. flange on a …. ….. ….. .
- It was also observed that the joint and the fuel pump **inlet pipe bosses** were not covered with …. ….. …. , as required under Solas.
- This was apparently due to an **oversight** in the case of the flange and due to the awkward shapes of …. ….. …. .
- All fuel oil inlet and return pipes were checked and it was found that some of the **bolts** required about …. ….. …. to obtain proper **tightness**.

Supply the right term:

The vessel was en route and operating in UMS (_____). The duty engineer entered the engine room at 06:50 to man the engine room and discovered fuel oil (_____) around the main engine top, middle and lower platforms, as well as around the flywheel area. Under the influence of the main engine turbo-charger air (_____) and the engine room ventilation blowers, the oil mist was being carried right across the machinery space, (_____) the fire hazard. The main engine was immediately stopped and the ship's engineers began the job of tracing the source of the (_____).

It was soon established that the leak originated from a failed (_____) at a pipeline flange on a fuel pump oil return (_____). It was also observed that the joint (which had been opened during a recent drydocking) and the fuel pump inlet pipe (_____), were not covered with approved splash prevention screening, as required under Solas. This was apparently due to an oversight in the case of the (_____) and due to the awkward shapes of the castings on the fuel pump body. All fuel oil inlet and return pipes were checked and it was found that some of the (_____) required about half a turn of the nuts to obtain proper tightness.

B2. Reading for specific information. *Read the text and answer the following questions:*

In what mode was the vessel operating?	
What did the duty engineer discover when he entered the engine room?	
Where was the fuel oil spraying? (four areas)	
In which direction was the oil mist carried?	
What kind of possible risk or hazard was the oil mist causing?	
What did the engineers do after stopping the engine?	
What should the inlet pipe bosses be covered with (under SOLAS convention)?	
What did the engineers/ratings do during the recent drydocking?	
Describe the word „oversight“. What does it refer to?	
What did the engineers have to check?	
What did they find after checking?	

Listen to the text and supply the missing words or parts of the text :

The vessel was en route and operating _____. The duty engineer entered the engine room at 06:50 to man the engine room and discovered _____ around the main engine top, middle and lower platforms, as well as around the flywheel area. Under the influence of the main engine turbo-charger air intake and the engine room ventilation blowers, the oil mist was being carried right _____, increasing the fire hazard. The main engine was immediately _____ and the ship's engineers began the job of tracing the _____.
It was soon established that the leak originated from a _____ at a pipeline flange on a fuel pump oil return line. It was also observed that the joint (which had been opened during a recent drydocking) and the fuel pump inlet pipe bosses were not covered with approved splash prevention screening, as required _____ . This was apparently due to _____ in the case of the flange and due to the awkward shapes of the castings on the fuel pump body. All fuel oil inlet and return pipes were checked and it was found that some of the bolts required about _____ of the nuts to obtain proper tightness.

Filler: *Meaning guessing game:*

- (four students, leaders of their groups, sit back to the screen (blackboard) and guess (shout out the meaning of the newly acquired term, written on the screen by the teacher).

Supply the the verb in brackets in the right place in the text:

The vessel was en route and in UMS mode (*operating*). The duty engineer the engine room at 06:50 (*entered*) to man the engine room and fuel oil spraying around the main engine top (*discovered*), middle and lower platforms, as well as around the flywheel area. Under the influence of the main engine turbo-charger air intake and the engine room ventilation blowers, the oil mist was being carried right across the machinery space (*was being carried*), increasing the fire hazard. The main engine was immediately stopped and the ship's engineers began the job of tracing the source of the leak (*began*).

It was soon established that the leak originated from a failed joint at a pipeline flange on a fuel pump oil return line (*originated*). It was also observed that the joint (which had been opened during a recent drydocking) and the fuel pump inlet pipe bosses were not with approved splash prevention screening (*covered*), as under Solas (*required*). This was apparently due to an oversight in the case of the flange and due to the awkward shapes of the castings on the fuel pump body (*was*). All fuel oil inlet and return pipes were (*checked*) and it was found that some of the bolts required about half a turn of the nuts to obtain proper tightness (*obtain*).

Follow-up. ***Wall dictation.***

- Practising the four communicative skills. (four groups, four runners)