Fire in the engine room – fuel spray fire

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A fire broke out on the starboard main engine due to a leak from the fuel pipe connection.

IOGP Life Saving Rules:

Hot work

What happened?

A fire broke out on the starboard main engine due to a leak from the fuel pipe connection, which allowed fuel to be sprayed out onto hot engine surfaces. Although the fire was quickly extinguished by the crew and no injuries or pollution occurred, the incident highlighted a serious lapse in fuel line protective barriers and fire prevention measures.

What went right?

- The fire detection system activated immediately.
- The Master and the crew followed emergency response procedures; all personnel mustered safely.
- The Fire team responded quickly and effectively with portable extinguishers.
- The emergency generator auto-started when the blackout occurred.

What when wrong?

- After recent maintenance, bolts for a fuel return pipe were not reinstalled. This was the cause of the leakage.
- The protective cover of the injection pump and the fuel line was not refitted after maintenance.
- There was no anti-splashing tape applied on fuel lines near hot surfaces.
- The water mist system did not activate because its power supply was OFF.
- The quick-closing valves and emergency stop were activated late, showing that crew awareness of critical system timing could have been better.

What lessons can we learn?

- Always check after maintenance that all bolts, fittings, and covers (if fitted) are reinstalled. Create a check-list; use a check-list.
- Protective covers or Anti-splash tape should be fitted on exposed fuel pipes/joints near hot surfaces and should be replaced if missing or damaged; never leave them uncovered.
- Ensure safety equipment such as water mist systems, quick-closing valves and emergency stops, are in good working condition and that all crew are fully familiar with how safety equipment should be operated.