Engine room scalding

WHAT HAPPENED

A marine aggregate dredger came alongside a Continental wharf to discharge her cargo; power was switched as normal from the main engine to the auxiliary engine. During the discharge an alarm was triggered. The 2nd Engineer who was on watch investigated this alarm and discovered that there was insufficient water in the heat exchanger of the auxiliary generator.

The auxiliary generator was running when the 2nd Engineer removed the cap from the tank with his gloved hand and a rag. As he did this hot water (85 to 90 degrees centigrade) was released under pressure onto his face and arms. Thankfully he was wearing eye protection. He received immediate on board first aid and was then taken to hospital where he was diagnosed to have sustained first degree burns to his face and 2nd degree burns to his forearms. He was instructed to return to the UK to have his bandages dressed and changed within 48 hours.

Causes of the incident

Preliminary investigations show that although the

employee did “Stop and Think”, an incorrect assessment was made of how the heat exchanger operated.
He incorrectly assumed that as the vent was dry and the cap was loose that the system would not be pressurised. Making this incorrect assessment he failed to identify the following potential hazards whilst carrying out this task with the auxiliary generator running. These being:

- That you should never work on energised systems
- That the auxiliary generator had been running for some time and was extremely hot.
- That the coolant system was pressurised whilst the auxiliary generator was running
- That the coolant would have been extremely hot in the system at that time

LEARNING POINTS / ACTIONS TAKEN

The need to always wear the appropriate PPE for a particular task and where anyone is in any doubt of a task to be undertaken then advice and guidance to be sought

- Reinforce the use of safe systems of work at all times
- Reinforce isolation and lock out procedures
- Reinforce the “Stop & Think” process
- Reinforce the use of work safe risk assessment process

LOCATION:	**MARINE & SHIP TO SHORE**	**ALERT STATUS:**	**Normal**
ACTIVITY:	**MAINTENANCE & HOUSEKEEPING**	**DATE ISSUED:**	**18/03/2015 11:09:25**
SUB ACTIVITY:	**N/A**	**INCIDENT No:**	**01411**