

Oil Rig with bad air at sea

The new captain (OIM) was confronted with bad, foul smelling air on his first hitch coming from the supply air ducting and being delivered to his crew on this Semi-Sub offshore MODU.

The Issue:

The newly appointed OIM suspected he had a serious problem on board his offshore drilling unit the moment he stepped into the briefing room. The rig, a twenty-somewhat old unit, had a smell about it that was not what was expected in mid ocean with the freshness of the sea breezing through the AHU. There was a trickle of airflow through the air supply ports and the closer one approached the defuser, the more intense the smell of 'old' air clung to your nostrils.

The maintenance department was instructed to investigate, but after numerous filter changes, blower cubic increases and meetings, the OIM opted for an internal survey of the supply ducting by robotics and UV camera to determine and eradicate the root cause.

What happened?

Offshore Support Services conducted an on-site survey of the supply-, exhaust- and return ducting internally *free of charge*. The condition of the Air Handling Unit (AHU or HVAC) was assessed and surveyed as well. The comprehensive survey was completed within one day. Armed with the video footage (DVD) captured and the physical samples submitted for laboratory analysis, an in depth post survey report was compiled and submitted on the findings.

Not surprisingly the combined results of the footage and laboratory report was shocking with the exposure of more than a hundred people to some deadly bio-hazardous agents and sickness causing organisms. With every breath the health and hygiene of the crew was compromised with the inhalation of bacteria, viruses, fungi, mildew and free floating dust particles.

On the downstream side of the main supply blower the problem started with severe mildew and fungal growth in the ideal habitat created with heated air, moisture and darkness.

The return/exhaust air was almost completely blocked by foreign matter and bio-hazardous items creating another ideal habitat for these dangerous and unhealthy/unhygienic critters.

What made the scenario even worse was that the rig utilized a system where 35% of the air was re-circulated back into the supply from the exhaust ducting. This created the perfect environment for all these bio-hazardous organisms to multiply and be distributed throughout the rig. In practical terms it meant that if a crewmember had flu in the one cabin, his sneezing would have the virus/bacteria taken into the exhaust system and circulated to other cabins, infecting those unsuspecting healthy individuals. It also meant foreign hazards were being showered onto the fresh produce, the galley, mess and other communal areas.

The video footage also enabled the owners to assess the physical condition of the ducting, rust and 'flaps' having collapsed inside the return air system. These were subsequently repaired as a direct result of locating the exact position of the blockage.

The Outcome:

Offshore Support Services conducted an in depth cleaning, sanitizing and sterilization of the entire accommodation air unit. This involved the physical removal of foreign matter from every inch of ducting, the application of a comprehensive sanitizing agent to the surface matter and the sterilizing of the ducting throughout via fogging. The entire unit was completed within seven days without any person having to leave his cabin, office or chair.

The owners also opted for the installation of two of our Air Purification units. These units were installed at the respective AHU supplying a section which ensures continuous sterilization of the air and permanent elimination of infestations, mildew and circulating viruses.

Learnings:

- Air is vital to life; clean air is vital to health and hygiene.
- Accurate information on what is not readily visible is critical for decision-making.
- Facing and admitting to these bio-hazardous threats are not always comfortable, but complete solutions are available.

For further information:

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A smelly chain store with rodents

Cockroach nest in the Galley