UK P&I CLUB

Ship Type: All **Trade Area: Worldwide**

Bulletin 387 - 11/04 - Chemical Drum Explosion in Engine Room Workshop

We have recently been made aware of a fatal explosion on a chemical tanker dedicated to the carriage of methanol. The vessel was carrying drums of methanol for spraying cargo tanks in preparation for a first methanol loading. One of these drums (reportedly empty) was being cut (with an angle grinder) in the engine room workshop when it exploded.

An engine boy and motorman had requested an empty drum from the bosun to be converted into a bin for filter cleaning. Instead of using one provided by the bosun they had found a drum on deck which had previously contained methanol which suited them better. This drum had reportedly been rinsed once with fresh water and then used as a platform for painting. The drum had been used in this capacity for over a month and a half.

Apparently the two men lowered the drum to the E/R workshop, without any water rinsing, and the engine boy proceeded to use a pneumatic grinder to cut the drum. Evidence on the drum shows that they had barely penetrated the drum when it exploded from the bottom, owing to the explosive atmosphere within the drum (the drum was sealed with both its caps on, see picture below).

The engine boy bore the brunt of the blast and became engulfed in flames, a fitter who heard the blast was on the scene quickly and helped to extinguish the flames. The motorman was reportedly standing a little behind the engine boy, and his boiler suit had also caught fire although he was able to take his boiler suit off and assist the fitter.

The engine boy died on his way to hospital and the motorman suffered 2nd degree burns.

The crew obviously did not fully appreciate the inherent risks involved in the task. The lack of supervision allowed the engine boy and motorman to pick up a drum from the deck, lower it into the engine room and proceed with the job of disc cutting the drum without any checks either from the Chief Officer, regarding why the drum was being removed from the deck, or the 2nd Engineer as to why the drum was being cut up in the engine room workshop. The procedures for hot work in the onboard safety manual did not specifically include how to deal with empty drums. Consequently, in this case, the crew did not treat the task as dangerous and failed to carry out the risk assessment/procedures associated with hot work.

Source of information:
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