

Can you recognize a change?

September 2016



MALE-TO-MALE VARIABLE LENGTH COUPLING



In 2014 there was a fire on a passenger vessel operating about a mile offshore from the United States in the Atlantic Ocean. A crew member making rounds in a machinery space noticed a small fuel spray fire above one of the four propulsion engines. He left the area and informed the bridge. Proper emergency procedures were followed, and the fire was quickly extinguished using the vessel's fixed fire protection system (CO₂). None of the 174 persons on board were injured.

The vessel was equipped with four diesel propulsion engines (1). Fuel was delivered to each cylinder through a threaded variable length coupling (2). There were four couplings per engine. These couplings are designed to facilitate installation by their capability to lengthen when the ends are threaded into the cylinder connections. On the passenger vessel that experienced the engine fire, couplings on three of the four engines had been replaced with threaded hose fittings and rubber hoses (3). One of those hoses failed and sprayed fuel directly onto the hot engine exhaust, which likely provided the ignition source.

Reference: United States Coast Guard Marine Safety Alert 12-14, Washington, DC, November 3, 2014.

What can you do?

While this incident occurred on a passenger ship, a similar incident can occur in a process plant if a robust management of change (MOC) procedure is not followed. Perhaps the most important step in MOC is recognizing a change. If the change is not recognized, the MOC process will never be initiated!

- Always use the correct replacement parts when repairing any equipment.
- Understand your plant's MOC procedures, and your role in implementing those procedures.
- Know how to recognize changes in procedures, equipment, instrumentation, controls, process control computer software, materials, and safety systems.
- If you are involved in approving change proposals as part of your plant MOC process, make sure that you understand the basis for the original design when you evaluate the proposed change.
- If you are not sure if something is a change, ask for help, or be safe and initiate the MOC procedure.
- If you see something different in your plant, ask if the MOC procedure has been followed for the modification.

You can't manage a change that nobody has recognized!

©AIChE 2016. All rights reserved. Reproduction for non-commercial, educational purposes is encouraged. However, reproduction for any commercial purpose without express written consent of AIChE is strictly prohibited. Contact us at ccps_beacon@aiiche.org or 646-495-1371.