Test Your FPVE Knowledge – Issue #7

The below picture shows two different kinds of insulation you may find on a foreign passenger vessel (or any other commercial vessel, for that matter). This is also a vertical bulkhead.

In the middle of the picture note there is a step in the thickness of the silver colored insulation (it is thicker on the right side of the picture). Note, also, how the insulation is installed. The insulation on the left is uniform in thickness whereas the insulation on the right is "dimpled" (like a pin cushion).

Insulation is typically installed onto a number of long metal pins that are welded to the bare steel bulkhead. Picture a bulkhead that looks like a porcupine. The insulation is basically impaled onto all of the pins and round discs (commonly referred to as "speed clips") are pressed down over the pin to hold the insulation in place against the bulkhead.

SFP insulation is the approved noncombustible material installed that protects the unexposed side by prolonging heat rise within protected areas. The thickness of the SFP insulation is critical. Hence, the left side of the picture is SFP insulation. The right side of the picture is insulation associated with the ships HVAC environment management system. It may look similar in appearance, but it is often not as firm as the SFP insulation. The dimpling, in this case, is the giveaway.

SFP insulation will typically only be available to check during the SFP exam. If you are onboard a vessel undergoing any modifications, you may find it necessary to examine the SFP in the modified areas. Thickness is the key so make sure the installed thickness matches the approval certificate. If you find SFP insulation with the dimpled appearance of the HVAC insulation below, you'll want to make sure the thinnest areas (where the clips are pushed in the furthest) is at least as thick as that noted in the approval certificate.

The below set of pictures show the same piece of equipment; a UV flame detector test lamp.

Flame, smoke and heat detectors are part of the ships detection system. Flame detectors, in particular, are typically found in machinery spaces above main engines or generators but they may also be found in areas where garbage is stored (particularly stern mooring decks if any garbage is maintained there). The detector does as it's name suggests, detects the presence of a flame.

The UV test lamp shown is used to perform function test on UV flame detectors. The lamp emits light similar to that of a flame, flash or fire. At a range of up to 15 meters the lamp is aimed at the UV detector until an alarm is activated. Most flame detectors will activate within 30 seconds; refer to manufacture's model instructions for additional information. As a note of caution, avoid looking into the light if the crew is using it to perform a function test.

Depending on what detection systems are installed on a given ship, you may find this piece of equipment being used by the crew during an Annual COC Exam as you test samples of the ships detection system.