

ATTACHMENT 17

I Robert Moore, *A Time to Die: The Untold Story of the Kursk Tragedy*, Crown Publishers, 2002, at 240

**COMMENTS TO PROPOSED RULE ON APPROVAL TESTS AND
STANDARDS FOR CLOSED-CIRCUIT ESCAPE RESPIRATORS**

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rising pressure meant that a fire would ignite more easily and burn with greater ferocity, and the men were dealing with chemicals that react violently with water.

According to specialists in the Russian Navy's rescue department, at some stage one of the survivors ripped open the packaging around a chemical cartridge and appears to have fumbled and dropped it. As the cartridge fell into the water, with highly flammable oil and lubricants floating on its surface, the chemical reaction was sufficiently violent to ignite a blaze. We know from the fire-line in the compartment that at this stage, the water was nearly waist-high.

In a sealed, high-pressure environment like the ninth compartment, a fire is not just a problem—it is a truly cataclysmic event. This was a flash fire that would have rolled at high speed across the surface of the water. In just a second or two, the fireball would have used up all the precious oxygen the crew had meticulously tried to preserve.

Some of the sailors fought to escape, ducking below the water. Their bodies were later discovered with a distinctive pattern of burns: backs badly charred, chests scarcely touched. Others, it seemed, had been grouped around the spot where the cartridge was dropped—they were found with thermal burns compatible with a violent chemical reaction. The lower limbs of all of the bodies recovered from the aft compartment were untouched by fire, confirming the view of Russian experts that the men had been standing deep in water when the fire erupted.

For those who had managed to duck under the water and emerge to breathe, when they resurfaced they faced an atmosphere no longer capable of supporting life. One of the sailors had a mask seared to his face. The superheated gases would have burned their lungs, and they would have faced yet another killer. As the fire reacted with the paintwork and metals inside the ninth compartment, carbon monoxide was being generated in lethal quantities. Carbon monoxide is known as the silent killer. It comes with no taste or smell; it is not detectable by the human senses. Victims of CO poi-

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