HOW WE TESTED

Testers performed a thorough comparative analysis of the survival suits both in the water and on land. Details that were scrutinized included: weight, material, seam construction, zipper, reflective surface, boot and glove configuration, and air-purge valves.

Land evaluations included logging the time it took to don the suit and how easy it was to carry-out typical actions involved in abandoning ship, including walking on an uneven surface, cutting a raft tether, tying a bowline, throwing a heaving line, and climbing a ladder.

While checking seals and insulation in the water, testers also evaluated mobility by treading water, changing position, and attempting to swim. In-the-water testing included a 30-minute immersion time per suit in water 35-37 degrees. Once in the water, air was purged from the suits, and changes in flotation alignment were noted as was the ability to swim in the suit. Approximately 50 percent of the time, the tester remained passive and made comments on the cooling of the core and limbs, along with specific suit characteristics. Attempts to use post-immersion skin temperature to indicate the effectiveness of the suit proved unreliable.

The polyurethane-coated Stearns 1596 (left) is tested beside the neoprene Stearns 1590 small. To check buoyancy, seals, and insulation, testers floated, bobbed, and tried to swim, spending 30 minutes in the water in each suit.