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When a light combustible liquid is thrown out on the surface of the water, it spreads out to a thickness of one molecular layer. The rate at which this takes place depends upon the manner or force with which the liquid is discharged, the viscosity, the speed of the wind, and the peculiar properties of the matter itself, as well as the course and speed of the ship.

Benzene is used in stunt dives at water carnivals. In a minute, a pail of it floats out over a radius of thirty feet, and it will burn brightly for four to seven minutes. The distance the fire spreads will depend upon the wind, to a great extent. The wind will, of course, cause the liquid to spread out thin and burn fast, and the more it thins out the less time it will take to burn up in one spot and the less heat it will throw.

"STAY ABOARD OUT OF FIRE"

The best method of escape from this danger is clear, but it takes courage which our men have proved they possess. The longer a person can remain aboard ship, the less time he will have to remain in the water and in the fire.

"KEEP CLOTHES ON"

It is most important to remain completely clothed when it is necessary to go into fire-covered water. All clothes are needed except, of course, heavy coats, shoes or sweaters and heavy trousers. But light shirts, duck trousers, hats and socks and light-weight shoes should be kept on. The duck trousers and shirt have a certain amount of buoyancy as they collect and hold air next to the body and the hat and socks will furnish protection against burns.

"MAKE WATER WINGS"

Making water wings is very important. Duck trousers and shirts can be used to float on. This is done in the following manner: remove the trousers and tie up the legs near the cuffs and button all buttons; in a circular motion, swing the trousers through the air away from the body and hold the top of the trousers open. They will then fill up with air and can be used as water wings, if twisted into a "V" to draw the top together. When the air escapes, they can be re-filled. In this way a person can keep afloat for hours with little effort.

When thrown into the water a man has little choice as to the method of entry, but when there is a choice possible on where to leave the vessel, he should dive from the windward side (into the wind) and swim under water against the wind as far as possible. Upon coming up to the surface he must throw his arms high in a whirling motion to push away the fire above and get air to duck again and go on under water out of the danger spot.

Upon getting out of the middle of flaming area he can go on with a short breast stroke and swimming slowly, first bringing up fresh water in front to push the flame ahead and away with a forward and upward motion, and then advancing through the water on a short draw back and kick. This modified breast stroke enables a man to push flames away from his face and the fumes away from his nose and mouth. Demonstrations of this are given by aquatic fire-eaters and fire divers in college and professional shows.