



# SEA VIEW GAUGE



*a safety accessory for tankers*

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This is not a test report. Instead, it is a definition and justification for one of the greatest unsung heroes of the diver's wardrobe. Most scuba divers are cognizant of the value of a tank full of air. Without it, they cannot stay down and when empty, it quickly becomes imperative to surface. But what about that vital gap between full and empty?

It is this realm which we would like to explore, for it contains the answer to the Sea Vue's existence. We have chosen the Sea Vue Gauge because Sportsways appears to have coined the word. But, let's start at the beginning.

In the early years of diving, before Sea Vue gauges were available, divers pondered this problem of air consumption underwater. Divers would use their scuba until it quit, then surface for lack of air. Navy studies on air consumption led to the evolution of a mathematical formula for computing air duration underwater. The formula went something like this:

$$(D/33 + 1) \times .75 = V \quad \text{where}$$

D = depth in feet.

33 = feet of sea water equal to 1 atmosphere of pressure.

1 = additional atmosphere to arrive at absolute pressure.

.75 = cubic ft. consumption (approx.) of air at sea level from a demand unit during moderate exercise. With hard work this may increase to 1.75 c.f.m.

V = volume (cu. ft.) consumption at depth D per minute.

Of course, the mathematical formula did not always work well because no one really pinpointed the respiratory rate of a random individual at a particular depth. There were just too many variables: a person's physical condition, stamina, breathing style, water temperature, underwater work load, current, and personal emotional state. It would take an IBM computer to plug all that data into the classical air consumption formula.

Stacked on top of this impractical formula, was the frequent problem of multi-level diving. Seldom does a sports diver remain in one constant position, at one constant depth, very long. Although preached by every instructor, and carefully explained in most scuba instruction books, the air consumption formula was deemed unrealistic.

A more successful step toward the air duration problem, was the creation of the J-valve by U. S. Divers. This mechanism consisted of a 300-lb. spring loaded valve that auto-

matically slammed shut when the tank pressure was very low. When the valve closed, a diver's air supply ceased — thus warning him that the tank was almost empty. By yanking down on the pull rod mounted alongside the tank, the diver opened the valve manually — thus releasing that last 300 lbs. pressure trapped in the tank. It was, and still is, an effective warning device . . . but certainly not a gauge by which to plan your dive.

The problems with relying on the J-valve warning device were fairly obvious. It seemed as though that darn J-valve system would go into action at the most inopportune times: like when the diver was 400 yds. from the boat; or when he had just entered the hull of a shipwreck; or inside a cave; or a variety of other embarrassing places. More than one diver has attempted the 50-yard dash underwater, in an effort to beat out that 300 lb. reserve.

Often overlooked in diving instructional classes, and never even handled by some divers at all, either through lack of opportunity to do so, the lack of funds, or ignorance, the Sea Vue gauge has received very little recognition.

In randomly checking through seven books on diving instruction all published in this decade, only one mentioned the gauge and then in a negative manner because of its expense — approximately \$24.00.

Because of its obvious safety features, however, in accurately planning a dive while underwater, SKIN DIVER's staff decided to present to its readers a rundown on this important piece of equipment developed by Sportsways back in 1959, and termed — the Waterlung Sea Vue gauge.

## MECHANICS

The Sea Vue Gauge consists of a 26" long high pressure flexible hose with a male coupling attachment at one end that screws into the first stage of most single hose regulators having a removable plug for the purpose. At the business end of the Sea Vue is a gauge divided in 100 psi increments going from 0 up to 3000 psi. When a 71.2 ft. cylinder of air is filled to its capacity of 2250 psi then the gauge will, of course, read 2250 psi and as the air is progressively used up, the gauge will record it at its true pressure reading.

The special neoprene covered, braided monel stainless steel alloy high pressure hose was designed for flexibility, corrosive resistance and safety. It has a safety factor of