

THE PROCEDURE BY EVALUATION OF DIVERS FOR THE DEEP DIVING

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Rezumat. Când un scafandru este selectat pentru cursul de scufundări profunde, el trebuie să treacă un test medical și să nu fie afectat de SNIP (Sindromul Nervos al Înaltelor Presiuni). Dacă el coboară foarte repede la adâncimi mai mari de 150 m, într-un mediu respirator de amestec heliu-oxigen, apar efecte neurologice și psihomotorii care duc la scăderea performanțelor organismului uman. Testul de scufundări profunde constă în înregistrarea tremorului postural și a electroencefalogramei la presiunea atmosferică și la 180 m adâncime. Rezultatele obținute la suprafață se compară cu cele de la adâncime și se stabilesc limite procentuale de abatere a înregistrărilor făcute la presurizare cu cele de la suprafață.

Abstract. When a diver is selected to perform a deep diving course, he has to pass a medical test and isn't affected by the HPNS (High Pressure Nervous Syndrome). When a diver is selected to perform a deep diving course, he has to pass an evaluation stage in order to prove his ability to tolerate the compression speed accompanied by the helium - oxygen breathing mixture without encountering the HPNS effects. The deep diving test consists in postural tremor and the EEG registration, in both conditions: at the atmospheric pressure and at 180 m deep too. Then the results obtained at the surface percentage limits are fixed for the maximum deflection agreed between the values registration made under pressure and the atmospheric pressure (surface) values.

Keywords: deep diving test, EEG waves, postural tremor

1. Introduction

Diving activity below 60 m, presumes the utilization of the synthetic breathing mixtures. These are made by oxygen diluted with an inert gas. The atmospheric air contains 21% of oxygen and 79% of nitrogen.

The narcotic effect of the nitrogen, which appears deeper 60 m, imposes to use another inert gaseous and the most appropriate is helium, due to his properties. This forms with the oxygen in various concentrations, the synthetic breathing mixture helium-oxygen, which has an indistinguishable narcotic effect.

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