

## Abstract

### Comparison of air diving decompression tables for domestic use

**Objectives:**

To provide optimal choice of air diving decompression tables for commercial divers in Korea.

**Methods and contents:**

1. Introduction of overseas air diving decompression tables used in the United States, Japan, Canada, and France.

2. Comparison of the overseas decompression tables along with the decompression table in Ministry of Labor and Employment Public Notice 2014-28 in terms of allowable air diving depth, allowable no decompression depth and time limits, decompression times per bottom time, decompression methods, descending and ascending rates, surface intervals between dives, and use of oxygen for decompression efficiency.

3. Questionnaire for understanding local commercial diving contractors' attitude towards decompression tables.

**Results:**

Korean decompression tables provided the shortest decompression time in most depths and times except short dive times or/and shallow depths. Procedure for Air decompression was provided but

no instructions on decompression chamber operation nor air diving limit were provided. Some members of Korea Offshore & Marine Construction Committee have never used decompression tables insisting they had worked within the limit of no decompression diving. USN decompression tables provided the longest decompression time in the most of dive times and depths. USN decompression tables were informative for in-water oxygen decompression and surface decompression. Japanese decompression equation was next to USN decompression tables in terms of decompression time. However, it required complicated calculation and recheck process that should be done before or/and during diving. Canadian tables provided slightly more decompression time than French but their decompression times were similar each other. Local divers may find difficulty in use of French decompression tables due to language barrier.

As the study was based on theoretical reviews, field tests are required to develop a new decompression tables for commercial divers in Korea. Until then, USN and Canadian air diving decompression tables are the best option for local commercial diving industries.

**Key words:**

Decompression tables, Decompression chamber, Oxygen decompression, Surface decompression, Surface interval.