

## **TDI Extended Range Diver – subjects covered**

History of Deep Air Diving.

Physics

A.Pressure Review.

B.Formulas for solving dive planning problems, MOD, best mix, etc.

Physiology

A.Hypoxia.

B.Oxygen toxicity

I.Whole body (OTUs).

II.Central Nervous System.

C.Nitrogen Narcosis.

D.Nitrogen Absorption and Elimination.

E.Carbon Dioxide Toxicity.

F.Carbon Monoxide.

G.Hyperthermia.

H.Hypothermia.

Decompression Options

A.Air.

B.Nitrox.

C.Oxygen.

Equipment Considerations

A.Twin cylinder or single cylinder option.

B.Stage cylinder options.

C.Regulator options.

D.Harness / BC options.

E.Computer / depth gauge / bottom timer options.

F.Ascent and navigation reels.

G.Lift Bags/surface marker buoys for drifting or free decompression.

H.Lights.

I.Redundant mask and knife.

J.Jon-line or Garvin clips.

Dive Tables

A.Introduction and review of different models (Buhlmann, DCIEM, U.S. Navy recommended).

Introduction to computer generated tables.B.

Dive planning

A.Operation Planning

I.Support.

II.Teams.

B.Team planning

I.Gas requirements.

II.Oxygen limitations.

III.Nitrogen limitations.

C.Emergency Planning

I.Omitted decompression.

II.Oxygen toxicity.

III.Decompression sickness.

IV.General.

Procedures

A. Bottom, Travel and Decompression Gas.

- I. Normal Operations.
- II. Failure, loss or inadequate emergency procedures.
- III. Analysis and logging.

B. Descent

- I. Methods of entry, down lines or free descent.
- II. Recognizing narcosis.
- III. Breathing.
- IV. Organization of equipment carried on diver.

C. Ascent

- I. Variable rates.
- II. Trim and compensation.

D. Support.

E. Navigation

- I. From shore.
- II. From descent Line.
- III. From live-a-board vessel.