

The Israeli Naval Hyperbaric Institute is in a constant state of development, broadening the field of its activities in clinical medicine, research, and all the support facilities required to keep the Institute up to date with the latest developments in diving and hyperbaric medicine, and to push it forward into the future as an innovator in its own right.

The postal address of the Israeli Naval Hyperbaric institute is

*PO Box 8040,
Haifa 31080,
ISRAEL.*

Department of Energy,
Petroleum Engineering Division,
Thames House South,
Millbank, London, SW1P 4QJ

18 April 1984.

DIVING SAFETY MEMORANDUM NO 3/1984
DIVING SAFETY INTERLOCKS

The Norwegian Petroleum Directorate Safety Notice issued in Diving Safety Memo 2/1984 drew attention to the need for safety interlocks in diving systems. This memo draws attention to regulation 12(4)(a) of the Diving Operations at Work Regulation 1981 with particular emphasis on the need for interlocks on pressurised systems.

In addition to company safety procedures diving systems are to be fitted with safety interlocks where necessary to prevent any unintentional or uncontrolled loss of pressure. Particular attention should be directed to chamber/bell mating systems, diver evacuation mating systems, food and equipment locks. (Where interlocks are not fitted at present this should be done before July 1st 1984).

Internal communicating doors in the TUP chamber should be shut and a seal obtained when bell mating or unmating or transfer of personnel or equipment is taking place. These doors should not be opened again until such time as the internal door between the transfer chamber and the transfer trunk has been shut.

18 April, 1984.

DIVING SAFETY MEMORANDUM NO 4/1984
DIVER CERTIFICATION: TRANSITIONAL
CERTIFICATES

Some doubt appears to exist as to the validity of transitional certificates issued by the diving contractors in accordance with regulation 15 of the Diving Operations at Work Regulations 1981 and the length of time that these certificates remain valid.

Transitional certificates remain valid for as long as the owner wishes to use them unless, of course, they are revoked by the Health and Safety Executive. There is no intention at present to cancel transitional certificates.

Some contractors prefer divers to hold an HSE certificate. Divers who hold transitional certificates who wish to obtain an HSE certificate should apply in writing to the Health and Safety Executive, SP1 SC2, Regina House, 259 Old Marylebone Road, London, NW15RR.

The diver may be asked to provide evidence of his competence.

SA WARNER
Chief Inspector of Diving

REFRACTIVE ERRORS AND THEIR
CORRECTIONS FOR DIVERS

FJ Geddes

All of us have had the experience, when diving without a face mask, of blurred vision underwater. With the use of a mask, everything becomes clear again due to the refractive difference of air and water. That is, for most of us. But what about the diver who has an optical correction? The mask is a help, but only to a certain distance, and then all becomes blurred again.

What can be done? The choices are to use either contact lenses, or stick-on spectacle frames with lenses inside the mask, or ready-made prescription lenses to fit masks such as the Tabata mini, or full prescription lenses laminated to the inside of the face plate glass. There are advantages and disadvantages with each method.

Contact lenses

These, whether hard or soft, are an excellent way of correcting vision underwater. Soft lenses seem to be more resistant to "float out" and are usually easier to wear. Peripheral vision, while the lenses are in, is first class.

The disadvantage is cost. They usually cost about \$140-\$180 per pair, and in the event of the mask flooding, "float out" is just one more problem for the diver who may have his or her hands full at the time.

Stick-ons

This method is quite cheap. Providing the rubber suction cups and/or glue hold, it is a good aid to vision. An old, or spare, pair of spectacles can be utilised by this method.

The disadvantages are that three glass surfaces must be kept clean and droplet free, and the field of vision can be restricted by the spectacle frame.

Ready made lenses

These lenses are really only suitable for basic low-power, non-astigmatic prescriptions. The top power used should be not more than -3.00 dioptres. Beyond this power, distance, pupil centres, and lens centres become more critical. Ready made lenses, being set into the mask at a standard distance apart may not correspond with the divers

inter-pupillary distance. The range of masks available is quite small with little chance of fitting the non-standard diver who has difficulty getting a good seal on some masks. Cost is not too bad, averaging \$40-\$50, plus the cost of a new mask.

Lenses laminated to the facemask glass

Finally, purpose made lenses offer the widest range of any of the four methods. Positive and negative, as well as astigmatic correction can be made. Bifocals are also available. Lens centres can be controlled precisely and the diver has a much larger range of masks to select from, the only requirement being that the glass face plate must be of good quality and readily removable from the rubber surround.

Lenses are ground flat on the front with all the prescription on the back surface. They are then cut to the required shape and laminated to the face plate with a special adhesive. With the correct adhesive, the bond is permanent even though some slight yellowing may take place if the mask is left in strong sunlight for long periods of time. Lens delamination does not seem to be a problem, as, in 20 years my firm has had only one mask returned to us for re-fitting. The cost of these lenses averages \$60 per pair, plus the face mask.

NEW PRODUCT INFORMATION

DECUPAD THERMAL RECOVERY CAPSULE

The following information has been provided by the agents for the Decupad Thermal Recovery Capsule (TRC). Three test reports (three volunteers) issued by the Textile Department at Leeds University were used and two letters from users were provided as evidence of the effectiveness of the use of the TRC.

It was developed in conjunction with the safety and medical officers of virtually all the major offshore companies, air/sea rescue, diving companies and other interested parties working out of Aberdeen, Scotland. It has been Home Office tested and is used by Conoco, Texaco, Total, Mobil, British National Oil Corporation, Shell, BP, etc as well as off Alaska, Nova Scotia, Newfoundland and other areas. Land based UK services also have TRC's available.

The TRC is designed for the prevention and treatment of hypothermia in a cold or wet environment. It is claimed to be the one single piece of equipment most likely to ensure survival of a hypothermic patient in an isolated situation, and is convenient to transport and use. The principle behind it is that if the heat produced by the metabolism of the body, even in a hypothermic patient, can be retained, rewarming will occur. This will occur in all except the most severe cases, and even in these its use will be protective and improve survival chances during transport to hospital. Many severe cases may appear to be dead but be revivable through such management. Total packed weight is approximately 10lbs and it measures 30" x 12", so is easily transportable. A weather resistant, bright

orange carrying case is provided. The unit is reusable after cleaning.

In appearance it is like a sleeping bag which opens down one side and totally encloses the patient except for an opening for the face to show. It can be opened to allow access to small desired areas as needed. It is effective even with a wet patient, there being no need to first strip the victim. The depth of the pile and the material used ensures that there is no loss of insulation due to the water.

The cost of \$A575 seems to be high but for expeditions, including diving, where hypothermia is a significant risk factor, it is cheaper than a funeral. Local agents are:

Superior Sportswear Pty Ltd,
PO Box 40,
TOONGABBIE, NSW 2146.

TWO "CROOK" TANKS

In Moline, Illinois, this May a scuba tank "took off just like a rocket", ripping through three walls and injuring two employees of the dive shop. The tank had been brought in for a hydro test and an employee had opened the valve to allow the tank to empty. Two days later two of the employees began to unscrew the valve to begin an inspection. When the valve had been partially unscrewed, air started to escape and the tank took off like a jet-propelled rocket. The valve went one way, knocking a heavy metal door from its hinges, and the tank went another. It travelled 35 feet, passing through three walls. The tank had not been hydro tested since 1976. It was concluded that the tank had been stored full of air and had contained some water, the resulting rust having fallen into and blocked the valve while the tank was upended to drain for the two days. This had prevented the venting of air when the valve was turned to the open position. Had the tank been stored with roughly 500 psi air pressure remaining in it, as is usually recommended, it is unlikely that the accident would have happened.

In Dublin recently the explosion of a tank under test resulted in a shower of cannabis resin all over the room, sticking to the floor, walls, ceiling and an employee. It also alerted the police to a hitherto ignored theft's importance. The dive shop operator had been suspicious about this tank, one of a batch left for testing at one of the shop's branches, as it seemed to be too small to qualify as an 80 cu ft cylinder despite its USA markings. Its inside measurements seemed to be less than expected. It was handed over to another test shop for a second opinion on this apparent discrepancy. There it was connected to a compressor, and exploded a few minutes later. It was one of a pair and the second cylinder, on checking, revealed that at some previous time the tank had been cut and threaded and the cannabis resin then packed like a doughnut around an inner cylinder which contained the air. Evidently the resealed cylinder had sufficient strength to stand an ordinary "fill" but insufficient to take the pressure on this occasion. It is not known whether the owner had used it much since purchasing it.