DIVING SAFETY MEMORANDA NO 11/1977 - TRANSFER OF A DIVER UNDER PRESSURE BY HELICOPTER

Commander SA Warren, Dept of Energy, UK

International Underwater Contractors (IUC) have developed a system to allow the transfer of divers by helicopter under continuous pressure from an offshore installation to an onshore decompression facility.

This transfer system has been developed for divers working in the North Sea and has recently been demonstrated successfully. It is capable of transporting an injured diver from an offshore situation to a large compression chamber onshore where medical teams can treat and monitor a diver's condition in clinical surroundings and in close proximity to a major hospital.

Under some sets of circumstances it could be used in the rig abandonment role. The large helicopter chamber being capable of containing up to eight persons.

This system is available in the United Kingdom now.

It is recommended that diving companies ensure, wherever possible, that their diving chamber complexes are sited in such a position that provides the necessary space for operating the transfer under pressure system and that where necessary the adaptor spool pieces are made available.

International Underwater Contractors (Scotland) Ltd will make available drawings of the mating flanges of the chambers to anyone in the industry who cares to check the compatibility of their own installations. Additionally, Comex of Aberdeen has indicated that they would be willing to manufacture spool pieces for systems where adaptation is required and supply these spool pieces at cost.

The physical dimensions of the transfer chamber are:

Length overall	7 ft 8 ins
Diameter including handles	2 ft 8 ins
Width of detachable trolley	3 ft 8 ins
Minimum distance from deck to bottom of flange	4 ins
Maximum height with trolley removed	2 ft 9 ins
Maximum height on trolley	4 ft
Weight equipped but unmanned	550 lbs
Weight of trolley	84 lbs

Dimensions of helicopter chamber:

Length overall with clamp	8 ft 6 ins
Wheel centres front to back	3 ft 8.5 ins
Wheel centres left to right	26.5 ins
Minimum distance from deck to bottom flange	15 ins
Horizontal distance flange face to front wheels	2 ft 6 ins
Maximum height above deck	5 ft 1 in
Maximum diameter	44.75 ins
Weight equipped but unmanned	1750 lbs

Both chambers have lifting pad eyes at either end and in the middle. The of maximum working pressure of both vessels is 335 lbs psi with a safety factor of 6 times. Helicopter chamber power requirements are 24-30 volts. AC or DC (DC preferred) maximum requirement 32 amps at 28 volts.