LS 370-A Compact Well Bell Dive Systems comply with the following international standards:-

- International Marine Contractors Association (IMCA) International Code of Practice for Offshore Diving- IMCA D014.
- IMCA Diving Equipment Systems Inspection Guidance Note for Surface Orientated Diving System (Air) –IMCA Design D023

The system comprises the following main components:-

- An open bottom diving bell with acrylic dome and emergency onboard life support.
- Bell and guide wire mechanical handling system with skid and floding A-frame.
- Hydraulic power pack and hydraulic control panel.

1- Specification

Design Standard	: DNV Rules for Diving Systems
Certification Authority	: Lloyd's Register
Main power supply requirement	: 35 kw
Standby power supply requirement	: 25 kw

2- Physical Data

	Length	Width	Height	Weight
Wet Bell	1.72 m	1.74 m	2.98 m	1,560 kgs
Skid	5.20 m	3.20 m	4.70 m	9.700 kgs
Hydraulic Power Pack	1.50 m	1.20 m	1.40 m	1.450 kgs
Umbilical basket	3.45 m	2.00 m	1.45 m	450 kgs

3- Wet bell

The wet bell comprises the following main components

3.1 Wet bell structure

The bell is equipped with a 1.2 metre diameter acrylic dome and stainless steel flange mounted in a tubular steel structure with heavy base and support feet.

3.2 Bell life support

The onboard life support system comprises:-

A 20 m3 ball-out air supply which supplies the divers manifold with emergency air. The system is split into two 10m3 supplies, each with one 50 litre 200 bar cylinder (first stage) regulator and control valve.

3.3 Bell Lighting

The bell is equipped with three 110 V 75 W bell lights.

4- Bell handling system

The bell handling system comprises the following main components:-

4.1 skid.

4.2 A-frame.

4.3 Bell winch

The Bell winch is installed underneath the control van and is hydraulically operated. It is equipped with an automatic level-winding device, hydrostatic brake and fail-safe mechanical brake.

Maximum lift : 40 KN

4.4 **Guide wire system**

The guide wire system provides a secondary means of bell recovery. It will raise the guide wire weight and the bell at a maximum ascent rate of 10m/sec.

Maximum Lift : 40 KN

4.5 **Bell Umbilical and Umbilical Handling System**

Life support and power supplies for the bell are supplied through the bell umbilical. The Umbilical is secured by a stainless steel kellim's grip to the bell and comprises:-

* Air Hoses
* Pneumo hoses
* Diver comms cables
* Bell Lighting power cables
* Co-axial CCTV cable

Length	: 100 m
Safe working load	: 500 kgf
Theoretical break load	: 2,500 kgf

5- Hydraulic power pack

The hydraulic power pack provides power for the bell and guide wire winches, A-frame luffing cylinders, bell safety latch and the bell umbilical power sheave. The power pack is equipped with:-

* 22 KW main hydraulic pump
* 15 KW standby hydraulic pump

The hydraulic power pack is installed on the rear end of the skid above the guide wire winch. The hydraulic controls for the bell and umbilical handling systems are provided on a control console at the back of the skid on a pedestal mounted above the bell winch.

The hydraulic control panel provides all the hydraulic controls for bell and guide wire weight deployment and umbilical handling.

6- Electrical power distribution board

The electrical distribution board is installed inside a weatherproof stainless steel enclosure positioned on the rear of the skid. Connections and a selector switch are provided for main and emergency power supply.

7- Standby diver station

A fold-up standby diver seat with fold-up PVC canopy is provided at the rear of the skid in front of the hydraulic control panel. The seat is made of galvanized steel with hard wood slats with a cut-out for the diver's ball-out cylinder.