



Exploration & Production

GENERAL SPECIFICATION

STRUCTURAL

GS STR 461

Diving Specification

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Contents

1. Scope	4
1.1 Applicability	4
1.2 Exclusions.....	4
2. Reference documents.....	4
3. Definitions, abbreviations and acronyms	5
3.1 Definitions	5
3.2 Abbreviations	6
3.3 Acronyms.....	7
4. Basic general requirements	7
4.1 Regulations, codes and standards	7
4.2 CONTRACTOR Safety Management System	7
4.3 Representatives	8
4.4 Audit	9
4.5 Risk Assessment, dive plans and contingency planning.....	10
5. Available diving methods, limits and restrictions	10
5.1 General.....	10
5.2 Immersion duration	11
5.3 Decompression techniques.....	11
5.4 Breathing gases.....	11
5.5 Diving methods	12
5.6 Restrictions after diving.....	14
6. Personnel.....	14
6.1 Language.....	14
6.2 Personnel training	14
6.3 Diving team manning level	15
7. CONTRACTOR'S Diving Safety Manual	15
7.1 Basic content	15
7.2 Technical content.....	16
7.3 Diving procedures	16



7.4	Personnel.....	16
7.5	Emergencies.....	17



1. Scope

To clearly define the standards, procedure and specification for all underwater work by divers covering both the safety and technical aspects of diving and of underwater works carried out on behalf of Total.

1.1 Applicability

This specification applies world wide, however additional specific conditions prevailing in some area may also apply.

In many countries where dedicated diving related regulations and laws or decrees exist, the present Specification must be read in conjunction with these local rules, the more stringent will always apply.

1.2 Exclusions

Operations specifically NOT covered by this General specification:

- Diving from lock-out submersible or with wet manned submersible.
- "Diving" in a one atmosphere suit and in submersibles.
- The operation of unmanned vehicles with or without umbilical (ROV or AUV) except when this type of equipment is operated in conjunction with divers
- Diving with artificial breathing mixes containing Hydrogen.

The CONTRACTOR may be directly the employer of the divers or a company who is sub-contracting the diving services from a specialized contractor employing divers. When the CONTRACTOR is not the employer of divers, it is his responsibility to make ensure that the specifications are applied by the diving sub-contractor.

2. Reference documents

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

Standards

Reference	Title
Not applicable	

Professional Documents

Reference	Title
Not applicable	



Regulations

Reference	Title
Not applicable	

Codes

Reference	Title
IMCA D 014	IMCA International Code of Practice for Offshore Diving,

Other documents

Reference	Title
Not applicable	

Total General Specifications

Reference	Title
Not applicable	

3. Definitions, abbreviations and acronyms

3.1 Definitions

Sub-sea work by diver: Any work carried out by a diver under water at a depth greater than 1 metre.

Hyperbaric: Qualifies any work carried out by a person, in the wet or in the dry, at a pressure greater than 0,1 bar over local atmospheric pressure.

Diver: A person at work who dives. "Dives" means that during a given operation he is exposed, at least for a phase of the operation, to immersion in a liquid at a depth of more than 1 metre.

Diving Supervisor: The person designated to supervise a diving operation, he is located at atmospheric pressure.

Hyperbaric worker: A person at work who is exposed to a pressure in excess of 0,1 bar over local atmospheric pressure and who is not exposed to immersion at any time during exposure to pressure.

Hyperbaric operation supervisor: The person designated to supervise an hyperbaric intervention where no person is exposed to immersion at any time during the operation.

Stand-by diver or stand-by hyperbaric worker: The person in charge of rescuing a diver or an hyperbaric worker during the course of an intervention. He should be in the adequate state of readiness to provide immediate assistance.

Nitrox: A gas mixture composed of nitrogen and oxygen (air is a Nitrox containing 21 % of oxygen).

Heliox: A gas mixture composed of helium and oxygen (by extension a saturation habitat is said to be Heliox even if it is contaminated with up to 0.8 bar of nitrogen).

Trimix: A gas mixture containing oxygen, nitrogen and helium.

Surface demand: A diving technique when the diver's gas is continuously supplied from the surface via an umbilical.

Reduced Surface Demand Package: A diving technique using the surface demand mode, operated from a small craft or an inflatable.

Wet bell: A structure with a closed top section which is capable of containing a dry gaseous atmosphere to provide a volume of breathable gases for the diver(s).

Diving bell: A pressure vessel for human occupancy which is used to transport divers under pressure either to or from the underwater site.

Compression: Procedure used to increase pressure in a compression chamber or diving bell.

Decompression: Procedure, defining time schedule, pressure, environmental situation and breathing gases, used to reduce the pressure to which a diver is exposed whether in water or in a compression chamber.

Compression chamber: A pressure vessel which is not intended to be immersed, where a person can be exposed to increased pressure.

Recompression: Procedure used to compress a person who has been previously exposed to pressure, this action may be in relation with the technique of "surface decompression" or for the purpose of treatment of symptoms of decompression illness.

Occupational Doctor: A medical doctor with a qualification in occupational medicine.

Surface decompression: A diving technique when the diver is removed from the water before the decompression is completed; immediately upon surfacing he is recompressed in a recompression chamber to undergo the final stages of decompression.

Decompression stop: A period of time at constant pressure or stable depth of immersion which has to be observed during a decompression procedure.

Bounce dive: A diving technique when the diver is decompressed back to atmospheric pressure after each underwater intervention.

Saturation dive: A diving technique when the diver is living under pressure in a pressurised habitat and final decompression is performed at the end of the mission.

3.2 Abbreviations

DSV	Diving support vessel
ROV	Remotely operated vehicle
AUV	Autonomous underwater vehicle
SCUBA	Self contained breathing apparatus
RSDP	Reduced surface demand package
TUP	Transfer under pressure
DCS or DCI	Decompression sickness or illness
DDC	Deck decompression chamber, Surface recompression chamber



DP	Dynamic positioning
ADC	Association of Diving Contractors (USA)

3.3 Acronyms

IMCA	International marine contractors association
AODC	Association of diving contractors
DMAC	Diving medical advisory committee
SNETI	Syndicat national des entrepreneurs de travaux immergés

4. Basic general requirements

4.1 Regulations, codes and standards

Local national rules concerning commercial diving activities apply. Where there is no local regulation specific for diving activities, the reference regulation for hyperbaric works will be the French décret n° 90-277.

The reference code of practice is **IMCA D014** Code of Practice for Offshore Diving.

The IMCA code defines the basic guidance for all diving operations but several points required in this Specification are more stringent than the above and must be followed.

As a minimum the CONTRACTOR shall comply to with national applicable laws and this Specification.

The CONTRACTOR is recommended to be a member of IMCA throughout the duration of the contract with the COMPANY.

No diving operation which is not in full compliance with the minimum standards described in this specification shall be allowed to take place.

Should any deviation from the minimum standard be needed for any particular reason, then a formal request shall be submitted to the COMPANY for formal autorisation.

Subsidiaries may use the Derogation Procedure to produce a Particular Diving Specification to take into account national rules or the diving situation in the zone of operation.

The standards described in this specification are the minimum acceptable to COMPANY. Prior to any derogation or particular specification being issued, the diving CONTRACTOR must demonstrate that an equivalent or better level of safety is being maintained.

4.2 CONTRACTOR Safety Management System

The CONTRACTOR shall have in place a fully documented Health Safety and Environment Management System which must be relevant to the CONTRACTOR'S Operations and must include the safe management of sub-sea works by divers.

4.2.1 Medical Support

The Occupational Doctor appointed by the CONTRACTOR, shall

- have approved and signed all medical aspects of CONTRACTOR'S SAFETY Manuals including those parts related to diving operations,



- have organized medical fitness assessment for personnel qualified to undergo pressurization,
- have arranged specialised medical support in case of diving related medical emergency. This support shall be effective during all operations involving divers, and 24 h after completion of the last decompression. The Doctor to be mobilised in case of need shall hold the required travel and security documents to travel offshore,
- have declared this medical support to be the competent person and checked that he is trained to the necessary level of competence,
- have organised external communications with a recognized diving medical organisation for consultation purpose from the Diving Supervisor level.

4.2.2 CONTRACTOR'S documentation

The CONTRACTOR shall make available to the COMPANY a controlled copy of all relevant operational safety manuals and all diving procedures which comply with the regulation in force.

This documentation shall describe normal operations, any emergency procedures and necessary contingency plans, with references to designated medical support for hyperbaric operations.

At least six weeks before any mobilisation, the CONTRACTOR shall supply the COMPANY with site and job specific operations, safety and emergency procedures for formal approval

The CONTRACTOR shall strictly adhere to the approved procedures.

The CONTRACTOR shall establish a means of collecting reports and logs for all operations and maintenance of equipment, these records will be available to the COMPANY at any time during the course of the contract.

The CONTRACTOR shall make sure that all relevant certificates for personnel or equipment are kept up to date and are available for inspection on site by the COMPANY at any time during the course of the works.

4.3 Representatives

4.3.1 Designation of representatives

The COMPANY designates a COMPANY Diving Representative for any sub-sea work involving divers and is the primary operational contact during the works.

The CONTRACTOR shall designate a representative and his back to back alternate if required who will be on site the correspondent of the designated on site COMPANY Diving Representative.

4.3.2 Site CONTRACTOR Diving Representative

The designated CONTRACTOR Diving Representative, and his back to back alternate if required for 24 hour operations, must be on site during all sub-sea work.

His duty towards the COMPANY is :

- to be the CONTRACTOR Diving Representative on site in all respects for operational and technical matters.

- to be the only link/channel between the CONTRACTOR and the COMPANY Diving Representative. This applies for routine matters as well as for emergency situations.
- he must have full access on CONTRACTOR documents such as diver log books, medical certificates, dives reports, etc.
- to record on a CONTRACTOR personal log book the following data:
 - Daily log of the operations
 - Details and sketches of the sub-sea works or findings carried out during the dive
 - Daily Weather information (sea state, current, wind velocity)
 - Personal comments.
- to propose necessary decisions during the course of the contract (modification of the scope of work, request to stop ongoing operations, warnings, etc.)
- to participate in as necessary meetings with the COMPANY to insure a good progress of the works.
- to have effective hand over with his back to back alternate. For 24 hour operations, one CONTRACTOR Diving Representative and one alternate are compulsory. There must be one single CONTRACTOR personal Log Book for these two persons.

Prior to the start of any diving operation, the CONTRACTOR Diving Representative shall obtain clearance and appropriate work permit from the COMPANY in accordance with the Permit to Work system and procedures. This will confirm that:

- all parties involved in the operation or in the vicinity of the operation are mutually aware of each other activities,
- all items of plant or equipment requiring physical isolation has been closed down and locked (including any impressed current cathodic protection systems when working in the vicinity of structures);
- restrictions on certain activities at risk of interfering with the operations have been documented and notified,
- where a vessel or a barge, which is not placed under the responsibility of the CONTRACTOR, is part of the operation or in the vicinity of the operation, a communication link between the Master of the vessel or the barge with the CONTRACTOR diving supervisor has been established.

4.4 Audit

Before beginning a sub-sea works campaign involving divers, the vessel supporting the dive (including, for example, mooring/DP system, crew qualifications, cranes certifications etc), the diving plant and the equipment shall be audited in accordance with IMCA procedures. The audits are normally carried out by the CONTRACTOR as part of the planned maintenance system. The COMPANY Diving Representative shall satisfy himself that all relevant action points have been cleared.

Where any doubts exist, or if required by COMPANY, an additional independent audit will be carried out by a competent person appointed by COMPANY

Before commencing any operations involving divers, the contingency plans and emergency procedures shall be verified for all on call systems, results shall be documented.



4.5 Risk Assessment, dive plans and contingency planning

Before beginning a dive, a dive plan shall be prepared, based on an assessment of the risks to the Health and Safety of any person taking part in the diving project and shall consist of all such information and instructions as are necessary, to give advice to and to regulate the behaviour of those so taking part.

The dive plan will consist of a CONTRACTOR'S standard operating rules and of any site specific risk assessment and procedure to control the identified risks. It will also address the needs of the particular operation and will provide contingency procedures for any foreseeable emergency.

The dive plan will be submitted to the COMPANY Diving Representative to obtain the work permit, copies shall be distributed to relevant persons and at least to the diving supervisor(s) on duty.

5. Available diving methods, limits and restrictions

5.1 General

Each of the diving techniques listed below has its own limitations which may vary in accordance with local conditions and regulations. The limits and restrictions shown below are the limits accepted by COMPANY.

5.1.1 Launch and recovery system (LARS)

All diver deployment winches shall be fitted with

- primary and secondary power,
- a means of preventing the basket spinning
- and emergency recovery system such as secondary winch or recovery or safety pennant.

Where the vessel crane is designated as the emergency secondary recovery means, the basket system shall be equipped with pad eye and lifting sling compatible with the crane hook. Any such rigging shall be fitted to the basket and readily accessible by the diver

In addition it shall be equipped with proper gates or means of securing diver(s) in the basket.

Diver deployment systems operating with large air gaps shall permanently be fitted with a means of preventing the basket spinning and emergency secondary recovery such as clump weight, guide wires and secondary winch.

Downward excursion

Where diving over deep waters and it is possible to exceed the maximum safe downward excursion for the planned operation, then the diver deployment systems shall be fitted with a means of providing an artificial seabed to prevent the basket, or other diver deployment system, dropping below that depth.

This is in addition to the primary lift system and will comprise, typically, of clump weight, guide wires and secondary winch though other methods such as a suspended platform could provide a similar level of protection.

Also, consideration will need to be given to restricting the divers depth when using long horizontal excursions and it is possible to exceed the maximum safe downward excursion for the planned operation.



This applies at all depths whether diving shallow, (where a diver could incur decompression when none is planned) to operations in deepwater (where a diver, in addition to incurring additional decompression, could exceed the safe range for his gas mix).

Typical measures could include restricting the length of umbilical, increased diver depth monitoring, anti-fall harness/clip on to static lines, diver monitoring by ROV.

5.2 Immersion duration

When using surface demand, the maximum duration of immersion per diver, in one or two dives, is limited to 3 hours daily, this includes decompression time when carried out in water.

When using saturation techniques, the daily maximum immersion time per person is 6 hours.

5.3 Decompression techniques

Various techniques listed below can be used to decompress divers, the final choice is the responsibility of the CONTRACTOR. Practical description and limitations on the techniques used is to be specified in the CONTRACTOR'S diving safety manual :

- In water decompression breathing air
- In water decompression using enriched Nitrox or pure oxygen. This technique is restricted to $PO_2 < 1.6$ bar
- Open bell decompression is restricted for dives not deeper than 78 m.
- Surface decompression. This technique is restricted to Surface Decompression tables using oxygen. Surface decompression using air is not permitted. The maximum surface interval before recompression in DDC shall be as specified in the table selected and shall not exceed 3 minutes.
- TUP in bounce dive, or saturation mode

5.4 Breathing gases

5.4.1 Nitrox

Breathing Nitrox mixtures is restricted to 50 metres or 5 bar(g) and $PO_2 \# 1.6$ bar.

Breathing Air is not permitted deeper than 50 metres, or 5 bar(g)

5.4.2 Oxygen

Oxygen partial pressure in breathing gases in immersion is restricted to $PO_2 \# 1.6$ bar. This means that pure oxygen when used in water for decompression is not permitted deeper than 6 metres.

In an open bell diving system, provided the divers is secured to prevent drowning, and that he is breathing from a dedicated mask and that exhaled gas is dumped outside the open bell, the maximum partial pressure of oxygen is $PO_2 \# 2.2$ bar (when pure oxygen is breathed this corresponds to 12 metres equivalent depth).

In the dry, oxygen partial pressure is restricted to $PO_2 \# 2.2$ bar when used for normal decompression, duration of exposure shall be adapted to cope with pulmonary toxic effects.

For emergency recompression in a chamber, pure oxygen can be breathed up to $PO_2 \# 2.8$ bar.



There is no need to use “medical oxygen” outside resuscitation and medical procedures. Oxygen for breathing or mixing shall be 99.5 % oxygen minimum.

5.4.3 Nitrogen

In Trimix, the nitrogen content and depth of breathing shall be restricted as to produce a PN_2 value equal or less than 4.8 bar.

5.4.4 Helium

There is no restriction on helium partial pressure.

To prevent anoxia which results of breathing pure helium, all helium supplies offshore shall be Heliox (at least 2 % oxygen).

5.4.5 Quality of breathing mixtures

It is responsibility of the CONTRACTOR to provide gases with proper quality. The specifications are part of the CONTRACTOR'S diving safety manual, this can be achieved by markings, analysis, controls and adequate competence of the persons in charge of gases on site.

When compressed air is produced on site, special consideration shall be given to carbon monoxide (CO) and hydrogen sulphide (H_2S) incidental contamination.

5.5 Diving methods

5.5.1 General

Whatever the type of diving method used the following principles apply:

- All communication between diver and diving supervisor must be recorded and the recording kept for at least 24 hours, or longer at COMPANY request.
- Depth of immersion of the diver shall be displayed in dive control.
- Diver launch and recovery. The means of entering the water shall not be by jumping. The means of recovery shall be sufficient to recover an unconscious diver and the standby diver in sea state acceptable to run the dive. This requires that a safety harness with jock straps is worn by any diver. Whenever possible a standard diving basket shall be used. Adequacy of systems can be demonstrated by simulations.
- A bail-out gas supply is mandatory at any depth, the volume of gas stored shall be sufficient to reach an extra source of gas or atmospheric pressure according to the necessary decompression procedure.
- For all dives, the oxygen content of the gas supplied to the diver is to be monitored on line, the oxygen analyser is to be fitted with Hi-Lo audible alarm.
- When high PO_2 breathing gas is used for in water decompression (pure oxygen or mixed gas), the supply system shall be clearly separated from working breathing gas system.

5.5.2 SCUBA

SCUBA diving is NOT allowed by COMPANY



5.5.3 Reduced Surface Demand Package (RSDP)

When diving from the DSV is not appropriate, RSDP is used to dive from a small craft, away from the main DSV.

Operations using this type of diving method and equipment are restricted to "no decompression" bottom times as applicable from the decompression tables in force in the contract, with air or other Nitrox mixtures only.

RSDP can only be used during day light. Planning of a dive shall be such that the normal dive shall be completed during day light.

The small supporting craft shall be fitted with a guarded propeller.

The maximum "distance" between the small craft and the DSV, where the DDC is located shall not be more than 15 minutes.

5.5.4 Surface demand

Surface demand technique can be used to a maximum depth of 50 metres.

The breathing gas may be air or mixed gas.

A TV camera mounted on the diving head gear is strongly recommended and shall be used wherever possible. When used, the video shall be recorded at all times and the recordings kept for a minimum of 24 hours or longer if required by COMPANY.

According to water temperature and expected duration of the dive, appropriate thermal protection or heating system shall be used. Diving in warm water may also require consideration of the thermal risks.

5.5.5 Open bell

Diving with an open bell diving system is limited to 75 metres, appropriate gas mixtures shall be used according to the depth for each phase of a dive.

Total time in immersion including decompression shall be less than 3 hours for each 24 hours period.

A TV camera mounted on the diving head gear is required and video shall be recorded at all times and the recordings kept for a minimum of 24 hours or longer if required by COMPANY.

5.5.6 Closed bell

This is the normal means for diving deeper than 50 metres. Deeper than 300 metres, a particular specification shall be prepared.

Closed bell can be associated with bounce diving or saturation diving.

Bounce diving is restricted to a maximum depth of 120 meters and 1 hour bottom time.

5.5.7 Deck emergency recompression chamber

For any sub-sea work carried out by divers at a depth greater than 10 metres, a fully equipped and properly manned double lock compression chamber (DDC) shall be available on site. The recompression procedure(s) shall be detailed in the CONTRACTOR'S Safety Manual. The DDC design shall be such that at least 2 persons can be accommodated lying down and the CONTRACTOR emergency recompression procedures can be conducted safely.



Note. Unless the maximum depth of dive is physically restricted (by natural seabed or artificially by restricting the length of his umbilical) and a the diver could physically reach beyond 10 metres, even if only by accident, then a fully equipped and properly manned double lock compression chamber (DDC) shall be available on site.

5.5.8 Evacuation of divers

The CONTRACTOR should have suitable evacuation arrangements in place for all personnel involved in the diving operation.

Divers in saturation cannot be evacuated by the same methods as other crew members. Special arrangements and procedures will, therefore, need to be made to evacuate them safely while keeping them under pressure, with life support for a minimum of 24 hours.

The exact design of such equipment and its method of deployment will depend on the facilities available, the number of divers to be evacuated, the location of the worksite, etc. These factors will need to be considered during the risk assessment. The use of purpose built hyperbaric lifeboats is one option which can be considered

5.6 Restrictions after diving

After the last dive of a mission for an individual diver, he must remain in the vicinity of an operational recompression facility as specified in the CONTRACTOR'S Safety Manual.

After diving, flying at reduced pressure is restricted according to the CONTRACTOR'S Safety manual and IMCA guidelines

6. Personnel

6.1 Language

All persons in a diving team must be competent and clear in the use and understanding of a common language. Key personnel like diving supervisors and COMPANY representatives involved in diving must additionally be capable of producing written reports in the language of the contract.

6.2 Personnel training

- In addition to the required certification of personnel, the minimum experience in Offshore Petroleum diving activity for divers, diving supervisors and superintendents is:
- Diving Supervisor: seven years diving experience with two years at supervisory level
- Assistant Supervisor: five years diving experience with one year at supervisory level
- Diver: two years diving experience.

The CONTRACTOR shall ensure that all members of the diving team are qualified and competent for the work they undertake.

Competence may not be the same as qualification. A person who has a particular qualification should have a certain level of competence in that area but the CONTRACTOR will need to demonstrate that the person has the detailed competence necessary to do the specific task required during the particular diving operation.



CONTRACTOR may, in addition to the normal diving team, have inexperienced or trainee personnel on site provided that neither safety nor operational efficiency is compromised. The proportion of any such additional trainee personnel may not exceed 25% of the divers.

6.3 Diving team manning level

The diving team size will vary according to the nature of the project and the actual team size shall be decided upon the task and risk assessment.

A standby diver shall not be in a state of repetitive dive which would lead to decompression stops for an immersion of 20 minutes at the maximum depth of the dive he is standing by for.

The absolute minimum number and qualification of personnel requirement shall however be as follows:

6.3.1 Surface demand and RSDP

The absolute minimum required to conduct a surface-demand dive is five. Diving Supervisor, working diver, standby diver, tender for working diver, tender for standby diver. Additional personnel may be needed to operate or maintain specialised equipment, such as winches, and to assist in an emergency.

6.3.2 Transfer Under Pressure (TUP)

As an absolute minimum, closed bell project requires two operations. One when the divers are in the bell or in the water under the control of a diving supervisor, and a second under a life support supervisor when the divers are in the (saturation) chamber. The absolute minimum team will be seven for each shift - diving supervisor, life support supervisor, life support technician, two divers inside the bell, one diver on the surface, and a tender for the surface diver.

6.3.3 Diving in restricted areas

Due to the hazards involved in entry into restricted areas underwater, in addition to the required standby diver at the surface, a second diver shall be deployed in the water to act as a further standby diver and shall be positioned at the entrance of the restricted area to ensure the safety of the first diver and his diving umbilical in particular.

7. CONTRACTOR'S Diving Safety Manual

7.1 Basic content

The CONTRACTOR'S diving safety manual is to be adapted to the type of sub-sea work performed by the CONTRACTOR and the places, areas, countries where this CONTRACTOR is operating. It is a specific manual for that CONTRACTOR eventually in a given country.

It shall contain a copy of the Safety Policy statement of the CONTRACTOR, be signed by the CONTRACTOR General manager and, as far as medical and physiological matters are concerned, by the Occupational Doctor.

The manual shall be dated, issues and revisions of the manual shall be numbered.

In principle the manual shall be in accordance with IMCA recommendations for safe dive offshore.



7.2 Technical content

7.2.1 Individual diving equipment

The personal diving equipment for each type of diving method, including the state of readiness of the standby diver shall be specified

7.2.2 Diving Plant

All diving related plant, with installation and maintenance programs, shall be described, including storage and handling of gases, in particular oxygen, operation check list and provisions to cope with failure.

The certification bodies and quality assurance management system shall be specified.

Special consideration should be given to communications links within the CONTRACTOR team and between the concerned parties offshore (bridge, crane operators, other vessels and barges involved, etc.) and onshore.

7.3 Diving procedures

Diving methods and procedures definitions, restrictions and limits, and coping with emergencies shall be described.

All decompression tables (normal and emergency recompression procedures) in operation for the ongoing contract shall be specified.

For each table or procedure, the time before leaving the vicinity of a recompression facility and restrictions on flying or moving to altitude after the dive shall be specified with a rule. The minimum will be in accordance with DMAC/IMCA recommendation.

7.3.1 Special diving conditions

When diving in a restricted area, potentially contaminated zone, close to impressed current cathodic protection systems, close to inlets or outlets, diving in piles etc., the CONTRACTOR's Diving manual shall specify the technique to be used and safety precautions to be deployed, based on a risk assessment and reference to IMCA recommendation when applicable.

7.3.2 Hazardous tools and equipment

Use of hazardous equipment and tools, such as high pressure water jets, abrasive cutting disks, lifting bags, electricity under water, ultra-thermic cutting, etc., shall be done in accordance with procedures described in the CONTRACTOR'S manual. This shall be supported by risk assessment and AODC/IMCA codes of practice relevant to each particular tool or equipment. If not available CONTRACTOR must ask and strictly follow the manufacturer safety instructions regarding the use of the equipment.

7.4 Personnel

7.4.1 Responsibilities

The chain of command chart showing the various responsibilities, duties and reporting path between various positions in the CONTRACTOR'S organisation is to be specified.

Personnel training and qualification for the various positions including the person to be nominated as CONTRACTOR Diving Representative on site are to be specified.



7.4.2 Certificates

The certificates of training accepted by the CONTRACTOR shall be listed for each position.

Where an individual's competence or training is assessed by the CONTRACTOR internally, then the relevant procedure shall be specified as part of the CONTRACTOR'S quality assurance and management system.

7.4.3 Log books

Each member of the dive team shall hold and keep up to date a log book corresponding to the type of activities or responsibilities he is given in the operation (Diver, Diving supervisor, Life support technician...)

7.4.4 Medical fitness

The occupational doctor shall sign the medical fitness to work certificates and for those undergoing pressurisation or immersion the corresponding fitness certificates and log books.

7.5 Emergencies

7.5.1 Reporting

All accidents and incidents or near misses shall be reported to COMPANY.

7.5.2 First aid, Medical kit

The content of the on board minimum medical kit to be used by the diver medic or the medical doctor should he is called on board, shall be described in the manual under the control of the occupational doctor. A minimum is the oxygen resuscitation kit.

When a specific COMPANY paramedical organisation is in place on a site, co-ordination between COMPANY medics and CONTRACTOR medical back up shall be prepared in writing prior to mobilisation.

7.5.3 Decompression sickness management

Procedures to be used in case of aborted decompression or symptoms of DCI shall be described in the manual, including the list for preliminary evaluation of a situation before calling for help, applicable emergency recompression tables and all associated reporting and follow up documents.