

## **Reels and Reel work**

Although inherently reels fall into two categories cave reels and wreck reels, many people are now using the classic cave-style friction reels in open water.

### **Reels:**

Reels are used for assisting with navigation, surveying and as an aid to decompression. Reels are primarily categorised by the amount of line they carry and although friction reels will be primarily be discussed here, it is worth mentioning the other types.

#### **Ratchet Reels**

Popular amongst wreck divers. These reels are typically large which makes them difficult to stow. They normally carry 50m of line which can be allowed to free run by depressing the ratchet handle. Line can then be reeled in by winding. If the winding stops the reel spool will rotate back against the ratchet and lock. To let more line out simply depress the ratchet.

#### **Friction Reels**

The most common type of reel for wreck and cave diving. They are equipped with either a central adjustable friction control or a screw clutch that works on the spool. When the lock is released it is easy for the reel to over run if the line is not checked, hence these reels need a little familiarisation before using them in anger.

### **General Guidelines for Reel Use**

- When working with a reel, remember to lock the reel before attempting to tie a knot or loop around an object. In a large wreck or cave dropping an unlocked reel could be disastrous.
- As the line pays out, keep a finger on the reel to stop over-spooling the line.
- When returning the line to the spool, keep tension on the line by guiding it through your index finger.

### **Reel Categories**

Reels are often categorised thus:

#### **Primary Reel**

- One with at least 50 meters of line, often used to run a penetration line or as a decompression reel. When used for decompression with a DSMB it may be deployed from the bottom of slightly deeper than the first stop. Often when decompression diving a primary reel and a smaller backup reel will be joined together in case the first one jams when released. If deployed from the bottom, a safe alternative to this is to secure the primary reel to the wreck.

### **Safety Reel**

- A smaller reel (25meters) used only in an emergency, primarily when a search for a lost permanent line is required.

### **Jump or Gap Reel**

- A smaller reel again, often a finger reel with 10 meters of line or less. Used to run a temporary line from one permanent line to another

### **Explorer Reel**

- Explorer reels vary significantly dependant on the distance of penetration/survey required and the environment within which it is taking place. Generally, they carry heavy duty line, sometime short sections (150m) on multiple reels or one big reel.

### **Jon-lines**

- Although technically not a reel, a Jon-line can be a great decompression aid and is a good general tool underwater. Normally it is a 2 meter length of strong line with a piston or butterfly clip on one end and a loop on the other. If decompressing in current on a line attached to the shot line, the Jon-line is passed around the line and back through its own loop. Being of smaller diameter than the shot line, it will lock in the larger ropes weave. The clip is attached to the crutch ring of the divers harness.

### **How Many Reels?**

When cave diving a minimum of two reels is recommended. The same number applies to open water decompression diving.

### **Golden Rules.**

#### **Reel Man**

In any penetration dive the reel man is the first in and last out. This rule should **NEVER** be broken.

### **Team order**

Team order is always maintained in a line following dive. This is only broken if there is an emergency in the team. In a light failure situation the diver with no light is shuffled to the centre of the team. In an out of gas scenario the distressed diver is allowed to lead the exit, thus controlling pace.

### **Line Rules**

The following is a basic guide to line laying.

- Unless the situation demands it and the line is designed for it, do not pull on the line. Make an OK sign with your hand and use it as a guide if visibility deteriorates.
- Never swim under a line.
- Keep a visual picture in your head of where the line is at all times. If visibility suddenly disappears you will have a better chance of finding it again.
- As you swim along a line inspect it for damage and bad tie offs. Correct if necessary.
- Never run a slack line. It could lead to entrapment of you or other divers.
- Never lay your line under an obstruction. Imagine yourself following it out 'blind'. Could you do it?
- Keep knots/wraps on the outside of tie points so that they can easily be followed in a blind exit.
- Assist the person running the reel by providing light at each tie off and if necessary swim ahead and take any slack out of the line being recovered.

### **Types of line**

Lines used vary dependant on the application. Most divers carried reels will use 1.5-2mm braided nylon line. This line is available in fluorescent colours that can be useful when identifying different divers.

### **Knots and Tying Off**

Lines are often looped together and hence knots are not required. Where a tie-off is to be made to an item such as a loose rock or outcrop then a clove hitch is useful. Speed wraps where the line is passed around an object and then back under the line in a single wrap, are good for general line laying. There are many basic knots but as divers if you can tie a Bowline, a Clove Hitch and a Reef Knot these will cover most eventualities. There is an old saying 'If you can't tie knots, tie lots of knots'. This sometimes works.

To learn how to tie lots of knots, use the following link:

<http://www3.sympatico.ca/lar.richardson/nlknots.htm>