BRITISH SUB-AQUA CLUB

bsac.com

4 January 2010

Dear BSAC Member,

The internal letter sent out to all BSAC instructors aimed to remind them of the current and established position not a new standard. Initially the letter was sent only to BSAC Technical instructors. With the recent automatic upgrading of Extended Range Diver Instructors who held mixed gas qualifications from other agencies to Sports Mixed Gas Instructors It had become evident that there were some who were not conversant with BSAC standards. Some of the responses received from this initial circulation along with other reports indicated that these techniques were also being taught in some Branches as part of core diver training. For some time complaints of these techniques being introduced without official sanction or authorisation and in parallel to the approved techniques were being received from Branch Diving Officers, Coaches and Instructor Training Scheme staff. It was therefore decided to circulate the letter to all BSAC instructors to remove ambiguity and ensure consistent training standards throughout BSAC in relation to out of gas response.

A critical consideration in BSAC policy is that the Diver Training Programme teaches divers to identify and “take” an alternate Gas Source (AGS) from stowage rather than rely on the donor to formally “donate” their gas. As divers progress their skills and equipment configurations the emphasis changes to greater self sufficiency, indeed BSAC is now introducing the concept of self sufficiency at recreational levels through the Accelerated Decompression Procedures course. Transition to more advanced diver training will be built on this foundation.

BSAC policy and standards towards the techniques “Hogarthian rigging” and “primary take” have not changed and have been entirely consistent. BSAC has never recommended or sanctioned the teaching of these techniques within any of its training programmes, either core diver training or skill development courses. These techniques are not promoted in any BSAC training manuals. They are not part of any skills syllabus within BSAC instructor training programmes which have traditionally defined the skills taught within BSAC training. Should these techniques be presented as part of a BSAC course it would be considered a deviation of the syllabus. Furthermore, since BSAC underwater instruction has been based on demonstration for many years, this includes demonstration by virtue of the instructor employing these techniques in his/her own personal equipment configuration whilst delivering BSAC training.

Should Instructors wish to teach these techniques they should do so as certified instructors of an agency that sanctions or promotes them within that agencies training programmes. It is strongly recommended that instructors choosing to follow this path arrange suitable third party indemnity insurance to cover them as instructors when teaching other agencies programmes unless that agency provides them with such indemnity insurance.

Telford’s Quay, South Pier Road,
Ellesmere Port, Cheshire CH65 4FL
Telephone: +44 (0) 151 350 6200 Fax: +44 (0) 151 350 6215
A company registered in England No. 1417376 and limited by guarantee.
President: HRH The Prince of Wales KG KT
VAT Registration No. 523 0004 17

In keeping with the BSAC tradition of a "broad church" BSAC recognises that these techniques are used by a small number of members who have trained with other agencies. BSAC has no intention of banning their use during BSAC diving activities that do not involve instruction within BSAC core diver training, skill development courses or instructor training programmes. Similarly BSAC would not wish to prevent discussion of any topic, whether diving related or not, between individuals, nor indeed has it any power to do so.

The field trials referred to in the letter to BSAC instructors were conducted at the request of the National Diving Officer specifically to explore and examine the techniques of “Hogarthian rigging”, “Primary donate” and “Primary Take” in order to make an informed decision on whether or not to incorporate them into BSAC training.

Hundreds of thousands of divers have been taught to use an alternative gas source by the major recreational agencies whereas in comparison relatively few use twin-sets. Hogarthian rigging is not used by all of those using twin-sets by any means. Incident statistics seldom differentiate or detail the specific configuration when recording an out of gas incident. Fortunately out of gas incidents are relatively less common these days with larger high pressure cylinders, training agencies specifying larger gas reserves and the increasingly common practice of divers carrying independent redundant gas supplies. In more advanced diving where people use twin-sets and gas reserves are commonly governed by the rule of thirds, running out of gas is even rarer. Usually these divers will carry sufficient redundant gas supplies to be self sufficient.

It was felt that the field trials were necessary since there is little statistical evidence of sufficient detail to make a decision one way or another. Field trials were considered the most appropriate and objective method of making an informed judgement.

Two field trials were conducted. These were organised and supervised by a person trained in objective academic rigour who is an experienced technical diver and instructor trainer and holds certifications in a number of agencies in addition to BSAC. This includes one that specifically promotes and teaches Hogarthian rigging, namely Global Underwater Explorers (GUE). The participants in these field trials were experienced divers and/or instructors and included divers who hold certifications by GUE and regularly dive with Hogarthian rigging.

The field trials demonstrated that when an experienced diver is approached by an out of gas diver and the procedure is enacted as a donation the donor is in control and can make his or her own decision as to whether to donate the primary regulator or a secondary alternative gas regulator. This decision will be based upon the donor diver's confidence of his/her ability to donate the primary regulator and switch to their secondary regulator. If one regulator is fitted with a long hose, the regulator he/she is breathing from will dictate the choice. Where the procedure only involves donation, the method of long hose stowage would not be an issue providing the donor is able to deploy the long hose efficiently. This does require some donor action to facilitate and secondary donate requires significantly less.

However, in addition to the necessity for significant donor input to enable a Hogarthian rigged long hose to deploy efficiently when donated the field trials identified other issues.

It is clear that we cannot assume that donation will always be the defining technique. Some divers may panic when finding themselves without gas to breathe and attempt to snatch another's regulator from the mouth, despite conditioning by repetitive training. This scenario must be considered and the worst case situation is of a panicking diver snatching the primary regulator from another diver when the latter was not aware of the approach and had no sight of that approach.

On all occasions when an unsighted approach was made and the regulator taken from the donors mouth the donor reported feeling very uncomfortable with the procedure. Even divers trained in and used to "Primary donate" reported feeling uncomfortable when a regulator was snatched from their mouth without them being prepared by having sight of the approach. This evidence informs us that whilst it is entirely reasonable to teach people to cope with loss of their primary regulator, as indeed BSAC does, it is not prudent to teach taking another divers primary regulator as the conditioned and standard response to an out of gas situation.

In the case of divers configured with Hogarthian rig and where the out of gas diver approached from beneath and on the blind (left) side there was a significant problem. The primary regulator was taken from the donor who was not immediately aware of the approach. The primary regulator was pulled downwards and to the donors left before the donor could rotate forwards and to the left. This action in turn caused the hose to tighten and trap the hose for the secondary regulator that was placed in a necklace and positioned under the chin. This in turn caused the donor difficulty in placing the secondary regulator in his mouth. The donor was able to sort this situation out but took in excess of 40 seconds to do so.

In the case of a diver approaching another diver, both swimming horizontally, from behind and slightly below and to the right; again the donor was unable to see the approach and was thus not prepared. The donor's primary regulator was taken by the casualty by reaching under the donor's right arm and across the chest to access it, the shortest route from this position. The primary regulator was pulled downwards sharply before the donor could act and again trapped the secondary regulator hose thus preventing the donor switching to it. Again the donor was able to sort this situation out but yet again it took considerable time.

In either of these scenarios as in all others a long hose properly stowed under bungees deploys without snag or need for donor input.

The trials were set up to inform National Diving Committee decisions and as such were not written up as a paper for publication. The data from these trials has been kept in the

form of notes, it may be possible to have this data written up and made available to BSAC instructors at some point in the future.

The issue of divers carrying multiple gases have been quoted by a number of adherents of “primary donate” or “primary take”. Divers who carry multiple gases are taught to be self sufficient and a loss of travel or decompression gas should result in the diver switching to his/her own nearest lean gas rather than go to another diver for gas. A diver could switch to the travel gas if the decompression gas were to be lost or the back gas if the travel gas lost. Only if both travel and decompression gases were totally lost (a really bad day at the office) and the back gas hypoxic at the depth, would the diver need to go to another diver in an emergency request for gas. In such an event it is likely that travel gas loss would be the first to be detected therefore the back gas would be breathable at that depth and an emergency grab for another diver’s regulator unnecessary. It would therefore take a catastrophic loss of both back and travel gas to precipitate an emergency out of gas situation at depth.

BSAC has always been aware that for some divers the technique of “Hogarthian rigging” has become a matter of critical importance. It would save political controversy had we adopted the technique or merely “looked the other way” as some people choose to introduce the technique within BSAC by stealth. However, BSAC as a members club as well as a training agency has a dual responsibility for both the training and diving activities of all of its members. BSAC has always reserved the right to formulate and maintain its own training policies to ensure consistency, as indeed have all other agencies. This is particularly important where emergency responses are concerned. It does so informed by evidence and best practice and its own incident statistics. Should these incident statistics indicate that current BSAC training was resulting in unsafe practices this would be addressed as a matter of some urgency. No such indication is apparent and the evidence is that current practice has an exemplary safety record. These policies are not static tablets of stone and are the subject of constant monitoring and analysis in order to respond to changes in techniques or equipment.

Regards

Mike Rowley
NDC Technical Group Leader
techg.leader@bsac.com