

The Value of Independent Audits

An real example of why an **independent Audit** by specialists in the field has often not only **saved an oil company/dive company or vessel buyer a lot of time and large amounts of money but also saved embarrassment to their reputation and of course the project loss maker, penalty fees.**

A good example of this was when one of SubNet auditors was sent to have a look at a brand new vessel which was being built for the dive company and which was nearly complete. The dive company was due to use the DSV on a very large contract. They did not just want the standard **as built** equipment function **audit** but also wanted to

know if the system was in fact what they and the Oil Company believed it was. Unfortunately it came as a major shock to them to find that it was not. The dive company is not named and do not operate now but this is a genuine example and a few people reading this will know the situation I am sure.

Example of the Audit. (extracts only)

Audit Brief (cut short for this article)

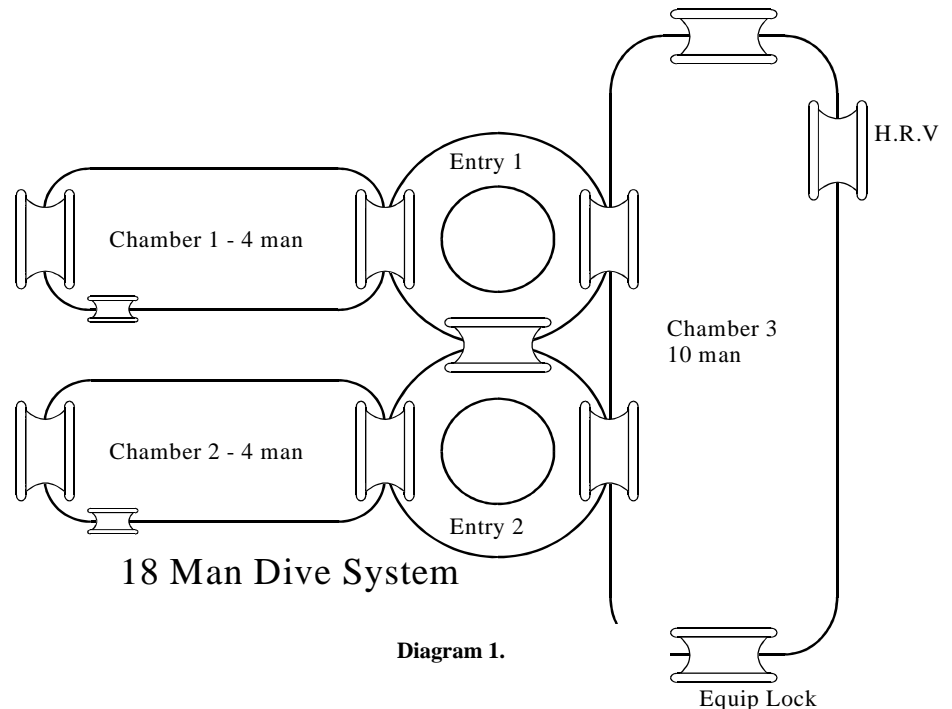
To **determine the suitability** of the saturation dive system on DSV XXX to fulfil the requirements needed on the outlined project.

Notes (cut short for this article)

The DSV XXX is a new vessel nearing build completion. It has a **new twin bell 18-man saturation dive system.**

Project (cut short for this article)

Major inspection of platform. Cleaning and inspecting welds at various depths. The project calls for **24 hr diving of both bells with 3 man bell runs each bell.** It will also be required to run **split depth level saturation** where bells can work at different depths.



Outcome of the Audit

(cut short for this article)

Please refer to the explanation and diagram.

1a. The dive system on the DSV XXX is not suitable for this project. There is a major problem with the actual dive system chamber design and layout that will make it **impossible for this dive system as built, to perform split level saturation and dive both bells with 3 man bell runs.** The layout and manning levels of the 3 chambers is **incompatible with 3 man teams diving split-level or decompressing.** The main chamber is a 10-man chamber and the other 2 are 4 man.

1b. There is also **only 1 equipment lock and this is on the 10-man chamber.**

1c. A standard decompression will also cause **disruption to dive planning and delay work.**

1d. A decompression to shallower working depth may also cause **disruption to dive planning and delay work.**

Explanation Of Outcome

Refer to diagram1

Bell 1 locks on to Entry Lock1

Bell2 Locks on to Entry Lock2

Entry Lock 1 and 2 each hold the only shower, toilets and sinks.

Chamber 3 holds the only equipment lock for suits and large equipment.

The whole system holds 18 men

Chamber 1 holds 4 men, Chamber2 holds 4 men and chamber 3 holds 10 men

With the system holding all 18 men needed for the project it is impossible for any 1 chamber to hold only 1 or any number of complete teams only.

The teams have to be split up over all the chambers.

e.g. Chamber 1 may hold one 3-man team plus 1 man from another team and chamber 3 may hold three 3 men teams plus a man from another team.

Same Depth Work

With the system all working at the same depth this layout will **cause disruption** to the occupants and outside workers due to the layout. The only equipment lock is in chamber3 and any gear for a team in chamber 1 or 2 would have to be passed through chamber 3, disrupting any sleeping occupants. When a team is called from chamber 1 or 2 they disrupt the odd man and if the odd men are called to their team they disrupts any others perhaps from all chambers.

Split Level Work *(project)*

It is impossible to conduct a split depth level work project with this layout as built. To work 2 different depths with the 2 bells you would need 2 different depth level teams of 9 divers, each diving 3 X 3 man bell runs per 24 hours each bell at each depth.

If you refer to diagram 1 you will see you **cannot isolate 9 men** in any 1 or even 2 chambers without having 1 extra man or 1 less man for the other team. We **cannot move this man back and forward because of the split-level depth constraints.**

Having only 1 equipment lock in chamber3 also **causes the problem when split depth as to how do you send in equipment to a team who is isolated from chamber 3** due to split level depth constraints. Will/can use smaller medical locks.

Decompression

Decompressing 1 team or more than 1 team to a shallower depth also **causes problems as to how to isolate just those teams.**

Decompression to surface of 1 team also **causes the same problem.** E.g. if decompressing 1 team of 3 in chamber 2 what do you do with the 4th man? Also if the entry lock 2 needs to be used to access bell2 how do the decompressing team in chamber2 use toilet facilities? This goes for any combination of split-level or decompression of and different number of divers or teams.

Conclusion

This system would have passed a standard function audit but was never the less **unsuitable for this project by a long margin.** The specialist audit went on to show problems in gas storage and distribution as well as other minor points that also **made this dive system unsuitable for the planned project.**

SubNet Services Ltd conduct specialist audits and other services world wide

as well as standard audits as part of their independent services to the industry.

SubNet Services can be contacted at 44(0)1603 813959 e-mail: info@SubNetServices.com

<http://www.SubNetServices.com>