

### Working Party Reports

## ISAF Crotch Strap Working Party

A paper by Ken Kershaw, Working Party Chairman.

The ISAF Crotch Strap WP was formed in 2008 as a result of the Norwegian submission SR06-8. The submission requested mandatory crotch straps be fitted to deck harnesses by the inclusion of the following in the OSR:-

<b>b) A harness shall be fitted with a crotch strap or thigh straps;</b>	<b>MoMu0,1,2,3</b>
<b>c) crotch straps and thigh straps shall have width and strength which is not lower than that of the harness structural webbing which it is attached to. Ref. ISO 12401</b>	<b>MoMu0,1,2,3</b>
<b>d) the device for attaching the crotch strap and the thigh straps to the harness shall have a strength which is not lower than that of the straps</b>	<b>MoMu0,1,2,3</b>

The reason for the submission was:-

NSF sent a submission on this subject in 2007. This submission was deferred, mainly after a discussion about the strength requirements. This submission replaces submission SR03-07, the main difference is that strength requirements have been added. Experience from the Sydney to Hobart Race 1998 shows that a person hanging outside the lifelines lost both safety vest and harness in connection with a trial to recover him. He was left in stormy seas without a life vest. There are also other reports on similar problems.

At the annual meeting in 2007 it was decided that life jackets shall be equipped with a crotch strap or thigh straps (OSR 5.01.2.b). It is not logical that only life jackets and not harnesses should be fitted with straps. It is indeed more important that a safety harness has a crotch strap of adequate strength. A crotch strap or thigh straps for harnesses are inexpensive and effective items to considerably reduce the risk of losing the harness in a case of emergency, and it should be mandatory and not only strongly recommended.

30.07.2008 Nils Nordenstrøm

From this “It was agreed to appoint a working party chaired by Alan Green and including Sten Edholm and others to review submission SR05-08 and SR06-08 regarding crotch straps on lifejackets and safety harnesses, to take account of reported incidents and appropriate.”

Alan Green reported back in 2009 from which the

### **Recommendation to the Oceanic and Offshore Committee:**

Reject SR06-08 and :

- i) that OSR 5.02 be amended from 1/10 to give advanced notice that harnesses shall be fitted with crotch or thigh straps as from 1/11
- ii) that OSRs 5.01 and 5.02 be amended from 1/10 by adding the recommendation that: “Crotch straps or thigh straps together with related fittings and fixtures should be strong enough to lift the wearer from the water.” Minimum strengths and relevant material specifications should be identified by the Working Party and published before end 3/10 to be effective for new equipment purchased from 1/11 (retro fitting to be encouraged)

iii) that ISAF supports research proposed by the ISO Crotch Strap Task Force. The ISO Crotch Strap Task Force to be encouraged to study other types of harness (eg climbing) to ensure that all available knowledge on harnesses is consulted and developments in the field are kept under review to be reported on a regular basis to ISAF

iv) that ISAF through the yachting media with support from its MNAs and life-saving organizations, and by example of well-known sailors, promotes the value of crotch or thigh straps. At the same time we recommend that ISAF promotes the value and use of a combined harness/lifejacket.

Since this recommendation ISAF has :-

- Adopted i) above
- Has adopted the combined ISO 12402 PFD and ISO 12401 Deck Harnesses for all new PFDs and added words emphasising that the correct donning and adjustment of these is fundamental.
- Adopted the first sentence of ii) above although subsequently withdraw the words as being inappropriate.  
The material strengths for harness crotch straps have not been included. The SRSC acknowledged that the ISO 12401 Deck Harness is intended to stop the user from going overboard and not as a means of recovery even though ISO 12401 drop tests the Deck Harness and tether (without any crotch strap) loaded to 100kg through 2m (the maximum length of a tether line).  
The SRSC further acknowledged that all ISO 12402 PFDs are fitted with a “lifting loop” intended for and positioned in such a way as to aid recovery of users from the water and that it is this and not the Deck Harness that should be used for such.
- Acknowledged that the ISO 12402 PFD crotch strap when in use is intended solely as a means to hold down the buoyant parts of the PFD.
- Acknowledged that the requirements and the testing of both ISO 12401 and ISO 12402 are far more rigorous than previously.
- Accepted the UK MAIB suggestion that the words “Crotch straps or thigh straps together with related fittings and fixtures should be strong enough to lift the wearer from the water” were incorrect and misleading and removed these from the Regulations.

From the above it can be concluded that the Working Party formed in 2008 has “reviewed the submissions SR05-08 and SR06-08 regarding crotch straps on lifejackets and safety harnesses, to take account of reported incidents and appropriate.”

What the Working Party has not done is address fall arrest harnesses, their appropriateness to offshore sailing or their compatibility with 12402 PFDs and/or 12401 deck harnesses. It is known that the offshore wind farm industry uses a combined IMO lifejacket and ISO fall arrest harness but currently this is not manufactured to a marine specification and is far from easy to don or wear.

On the basis of the above it is recommended that the current PFD/Deck Harness Crotch Strap Working Party is disbanded. Whether or not new work should be engaged upon to

investigate the appropriateness of fall arrest harnesses to offshore sailing of is a matter for the SRSC although efforts might be better spent in educating crews in the importance of correctly donning their existing PFDs/Deck Harnesses.

KK

9 Oct 2012