

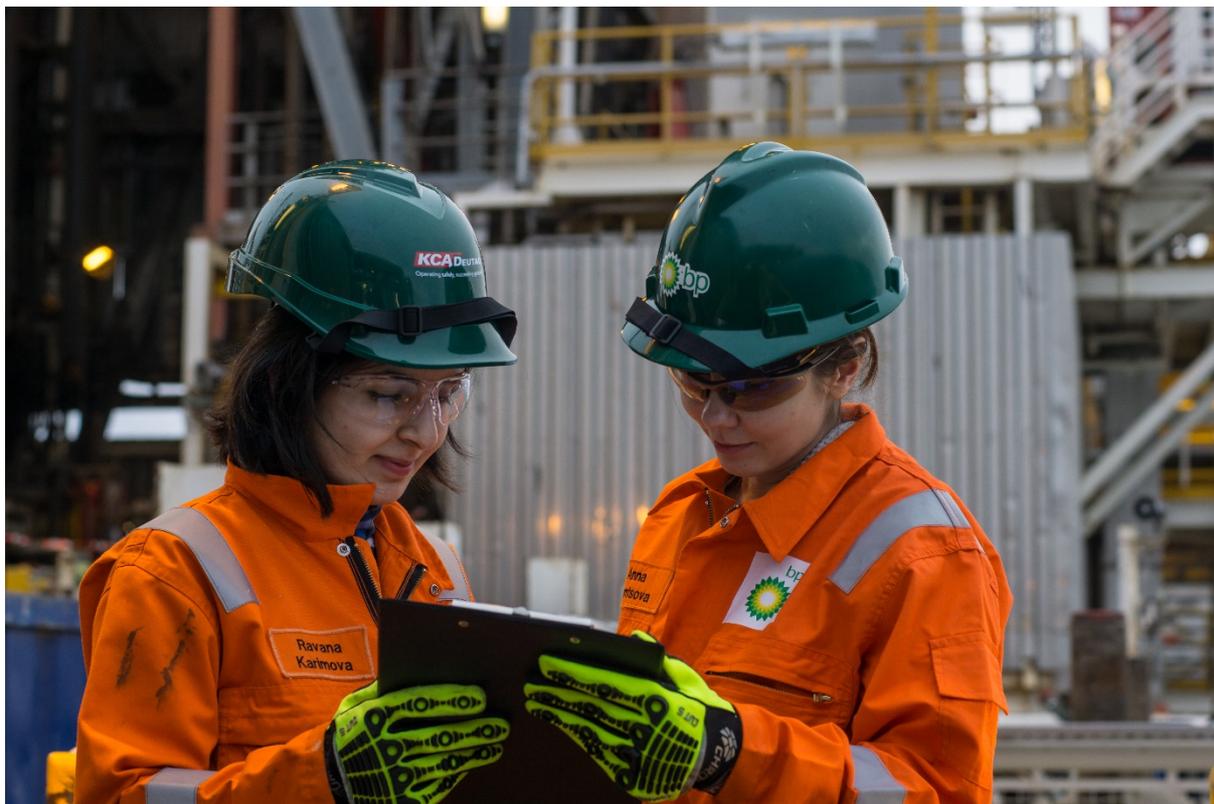
PERSONAL PROTECTIVE EQUIPMENT FOR FEMALE MARINERS – FIT FOR PURPOSE?

Introduction.

Recently, **CHIRP** Maritime received a request from a significant sector of the maritime industry to comment and offer opinion concerning the suitability and availability of Personal Protective Equipment, (PPE), for female seafarers and whether the PPE is fit for purpose.

Historically, seafaring has principally been the domain of men. With respect to concerns related to suitable PPE, the comparatively small number of women seafarers have been largely ignored. From a male perspective, **CHIRP** Maritime is certain that many mariners will have experienced unsuitable PPE at some point in their careers with few of us having correctly fitting garments or equipment 100% of the time. In an industry that promotes itself as being extremely safety conscious this is somewhat incongruous.

However, times have changed, considerably. These days, there are far more women at sea, particularly due to the huge expansion of the cruise ship industry, but also in all seagoing departments, from all sectors of the industry. It is not uncommon to find female deck officers and engineers, and the offshore industry has a considerable number of women not only mariners, but also on board as contractors or in a project capacity, all of whom require PPE.



Personal Protective Equipment Survey.

CHIRP Maritime would therefore argue that the topic of specific PPE tailored for women has relevance to our industry and is deserving of further debate. To that end, we conducted a limited survey of female seafarers in order to gauge the opinion of those most affected. The initial response took us by surprise, as the number of respondents surged as the survey spread.

We based our survey on the points raised in the initial request, namely:

- A typical woman's foot is both shorter and narrower than a typical man's foot so even if a smaller size man's boot or shoe is the correct length it would still be too wide.
- A woman's face is generally smaller and finer than a man's so protective eye wear made for a man could leave gaps at the temples allowing ingress of foreign bodies.
- With regards to hand protection, the average woman has shorter, narrower fingers and a smaller palm circumference so even a small size glove designed for a man would be loose and risk catching and entrapment.
- Slips and falls protection is not properly addressed by an improperly sized safety harness which can hinder movement and the ability to work safely.
- A woman wearing a hard hat designed for a man may risk having her vision obscured if it slips over her eyes.
- A woman who cannot find correctly fitting and comfortable PPE is less likely to wear items of PPE and thereby puts herself at increased risk of injury.

CHIRP Maritime believes that these concerns have largely been ignored, and the issue has never been seriously considered. As an example, we are all well aware that men and women have different shaped faces but had never considered this in any safety sense - it was never really a consideration that safety goggles are manufactured in male and female styles / sizes. Can shipping companies' honesty state that their procurement departments take the above into account?

Thus, the points raised would appear to have merit and add more weight to the argument that much of the PPE, as supplied to them, can be unsuitable for women. A recent report forwarded to us concerned a fire team where the boots were all sizes 11 & 12. Whilst most men are also not of this foot size, they can and do cope with slightly over-sized boots. However, as women tend to be considerably smaller, such over-sized footwear becomes a hinderance if not a dangerous encumbrance to the job, and therefore precludes them from the fire team or results in them using inappropriate footwear.

Having decided to conduct a survey, **CHIRP** Maritime developed a series of questions based on the previously mentioned criteria and then approached female seafarers with a view to collating the response and looking for common trends. These were the questions:

Specific Questions:

1. Do you currently have suitable and correctly sized PPE; coveralls, shoes/boots, gloves, eye protection, hard hat?
2. If yes, was this provided by your employer or self-provided?
3. Have you ever joined a ship where no suitable or correctly sized PPE was available to you? If so, how was this problem solved?
4. Have you ever considered yourself to be placed at risk by lack of, or unsuitable PPE onboard a ship?
5. Any other comments, views or opinions that you, your colleagues and network contacts would like to provide on the subject would be gratefully received. As a confidential reporting programme, any and all replies will be disidentified before inclusion in any document that **CHIRP** puts forward.

Responses to the Survey.

The response we received from female seafarers was very interesting. It became clear very quickly that there is in fact an issue relating to all manner of PPE.

Once the process began, it rapidly gained traction as the topic began to be discussed across the industry. It then became apparent that other issues, whilst not concerning the actual quality and

provision of PPE, were also relevant - in particular changing room facilities. What now appears to be obvious has seldom or never been properly addressed in any serious manner. Certainly, whilst separate changing facilities do exist on many cruise ships and some more modern offshore vessels, by and large women's changing room requirements are not considered and have not been met, leading to exclusion from the facilities or potentially embarrassing compromises for all parties. Whilst that particular issue is outside the scope of this document, we thought it important to mention that we have recognised the issue and it is perhaps worthy of a more substantial study in the future.

A brief sample of some of the responses to our survey are shown below. We have disidentified comments in order to give examples of the relevant issues:

Respondent A:

I am female deckhand and will happily answer questions regarding PPE issues:

1. Do you currently have suitable and correctly sized PPE, coveralls, shoes/boots, gloves, eye protection, hard hat? *A: Trousers, shirts, overalls, coats and fleeces are all designed for men, so I would say, "No, I do not have correct size uniform provided". Trousers are large and baggy and uncomfortable (even with a belt on). Men's shirts are provided by the company. I could use mine as a night dress as it does nearly reach my knees. Exactly the same issue with a winter coat. It does affect my job as everything is rather large on me and I really struggle to walk around and do the job. The only part of PPE that was a good fit was steel toe-cap boots and a hard hat!*

2. If yes, was this provided by your employer or self-provided? *A: I did buy myself very similar colour shirts and trousers for work and in my Hi viz I did put a safety pin in it, so it is not too wide and does not get caught in machinery. I also bought small size gloves.*

3. Have you ever joined a ship where no suitable or correctly sized PPE was available to you? If so, how was this problem overcome? *A: I was given the smallest man-sized clothing but as a very small female, everything given was large! I was told just to put a belt in the trousers and advised to find a tailor and adjust my coat. (which I did not do as I didn't think I should pay for my uniform to be adjusted).*

4. Have you ever considered yourself to be placed at risk by lack of, or unsuitable PPE onboard a ship? *A: There was no suitable emergency gear provided for smaller persons/females. For example, Fire Safety gear! If some men would be XXL there would be special fire protective jackets/trousers provided on the ship, same with the boots, size 13. The smallest size you can find in the safety locker are size 10. I am a size 8 female and my feet are size 4. If there was a fire on board, I would really struggle in an XXL fire suit with size 10 or 13 boots. I would not expect to have the exact size, but I think a smaller option of gear should be provided for ships!*

Respondent B:

I spent 11 years at sea as a master mariner before coming shore side.

1. Do you currently have suitable and correctly sized PPE, coveralls, shoes/boots, gloves, eye protection, hard hat? *A: I have the correct sized shoes/boots, eye protection and hard hat but I do not have suitably sized overalls or gloves. The PPE was provided by my employer.*

2. Have you ever joined a ship where no suitable or correctly sized PPE was available for you? *A: I have joined ships that do not have suitable/correct sized PPE. They swapped crew duties around, so I covered positions that the PPE was available for. The PPE was ordered and arrived within 3 weeks.*

3. Have you ever considered yourself placed at risk by the lack of or unsuitable PPE onboard a ship? *A: Yes, I believe I have been put at risk. The PPE is designed for the male shape and to get the clothing to fit I have to go up multiple sizes. This means there are large amounts of wasted material in places which causes a snagging hazard. Gloves can be a major issue as the sizes are for larger hands and you can feel like a clown trying to use them and, in most cases, you don't wear them as they are more of a hazard. Safety boots are normally not so much of an issue but the boots for fire suits are really difficult as they keep generic sizes onboard and do not normally cater to smaller sizes.*

This means when wearing them you can feel like a clown and it is very difficult to move around effectively.

Respondent C:

Serving Chief Officer

1. Do you currently have suitable and correctly sized PPE, coveralls, shoes/boots, gloves, eye protection, hard hat? If yes was this provided by your employer or self-provided? *A: I self-provided some of my PPE and so it correctly fits (part of the cost was reimbursed by my company). I bought boots and prescription safety glasses.*

2. Have you ever joined a ship where no suitable or correct size PPE was available to you? If so, how was this problem overcome? *A: I try to bring my own from my previous ship. Most of the PPE is issued by my company and although there are a selection of sizes, it does not fit me properly. The biggest problem is the boiler suit and high viz jacket. They are bulky and easily catch on parts of the ship. I have to roll sleeves up etc. Some captains are happy for crew to buy things up the road if nothing is suitable onboard.*

3. Have you ever considered yourself to be placed at risk by lack of, or unsuitable PPE onboard a ship?

A: Not at risk as such from everyday PPE but I have been made to feel belittled by asking for certain PPE that fits. Some officers say it's stupid to buy PPE for every size onboard e.g. FRC suits. But it is my role to go in the FRC and the suits are much too big. Also, fire suits are much too big. So, if I had to really fight a fire I would struggle with the large size of the suit and boots.

Sometimes, I would like my own budget to buy PPE which I would look after and take from ship to ship. The company are trying to improve the PPE and have picked a new company provider, but they don't have a large range of women's PPE. I am made to feel the odd one out for asking. So, there are some positive steps, but there is still a way to go.

This is just a short sample of approximately 40 respondents, and we are grateful to them for taking part in our survey, we have précised the findings below:

The respondents ranged from AB's and deckhands to captains, engineer's, a CEO of a ferry company (former captain) and a United Kingdom Maritime and Coastguard Agency marine surveyor (former captain). Without exception they have all experienced issues regarding availability or sourcing of correctly sized PPE.

The majority feel they have been potentially put at risk, not so much from standard PPE but certainly by unsuitably sized fire-fighting suits, boots and gloves. A majority take some elements of self-provided PPE with them when joining a vessel. Attitudes to this necessity range from pragmatic to resentment.

A sizeable minority make reference to 'looking stupid', 'looking like a clown', and 'feeling stupid' in oversized PPE.

The vast majority are reasonably happy with the hard hats and safety glasses provided although one respondent did mention not being able to get a seal on a BA face mask. With regards to standard PPE boots, gloves and boiler suits are the biggest issues, with respondents noting that excessive material or voluminous size risks entanglement or entrapment with machinery or ropes. Over-sized boots can induce slip and trip hazards.

The respondents are aware of, and critical of the comfort (or lack of it) with regards to PPE. We do not have any evidence of the opinion of male seafarers regarding these issues but perhaps they, too, have never been asked. However, it is true to say, that PPE is designed around the "standard male" physique. Of course, it is not so long ago that many seafarers were expected to provide their own PPE, and in some cases that culture still exists.

Once our survey results started to accumulate it was evident that there is an issue, which raises the question of **how** to resolve it? Whilst there is obviously a requirement for appropriate PPE, how

reasonable is it to expect the employer to provide a wide range of PPE that can accommodate all shapes and sizes? For sure, there are many male seafarers who have experienced ill-fitting PPE but there does appear to be a yawning gap when defining the acceptable criteria of “ill-fitting” between genders. This becomes even more important when “ill-fitting” becomes “unsafe”.

Conclusion.

In conclusion, **CHIRP** Maritime would argue that there is clearly an issue that needs to be recognised and addressed by employers if women are to be respected in the workplace and treated as equals. The MCA have recently updated their PPE Merchant Shipping Notice M1870 with [Amendment 1](#), which provides for updated safety standards. It should be noted that employers are required to ensure that PPE is to be provided to employees where they are at risk from a hazardous work activity. Unsurprisingly nowhere do regulations or shipping notices mention that PPE should increase the risk!! The Code of Safe Working Practices devotes a full chapter to PPE – one salient section is repeated below;

Suitable equipment should:

- *be appropriate for the risks involved, and the task being performed, without itself leading*
- *to any significant increased risk;*
- *fit the seafarer correctly after any necessary adjustment;*
- *take account of ergonomic requirements and the seafarer’s state of health; and*
- *be compatible with any other equipment that the seafarer has to use at the same time, so that it continues to be effective against the risk.*

A quick internet search reveals that there are manufacturers who supply female-specific personal protective equipment – all BS, EN, and ISO compliant as applicable (although they may lack company logos on helmets and boiler suits). Nevertheless, the correct equipment is available on the market. The challenge is to increase awareness in order for it to become readily available on board merchant vessels.

In order to widen the debate, **CHIRP** Maritime would like to receive correspondence from others who have issues with the suitability of PPE supplied to them or indeed it’s availability.