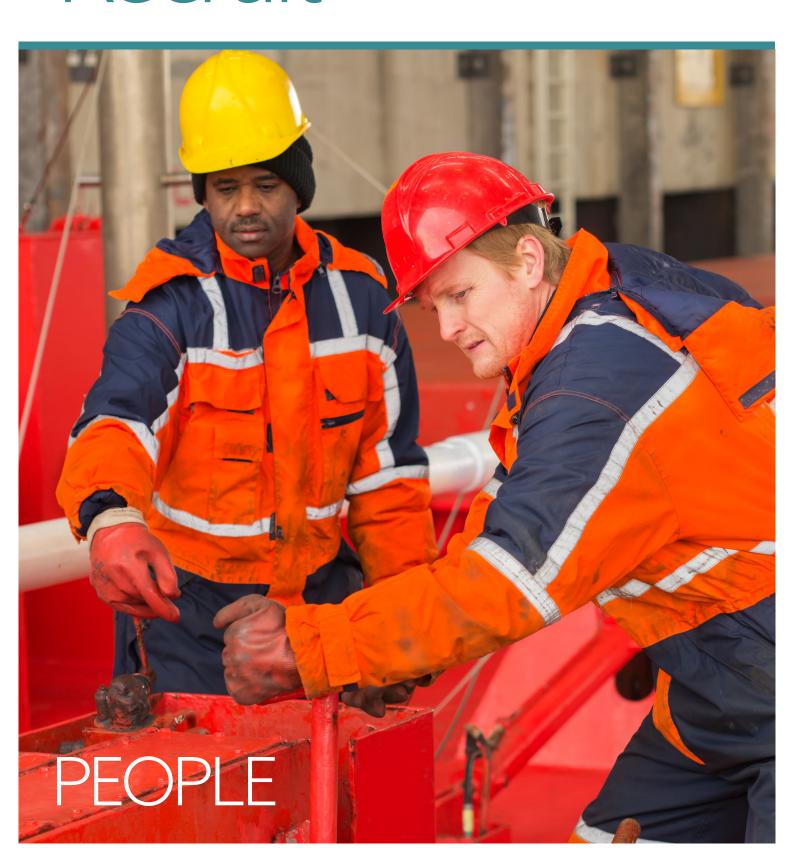


# The Right Crew -Recruit



# The Right Crew - Recruit

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# Loss Prevention Series - The Right Crew

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2 The Right Crew - Recruit

3 The Right Crew - Retain

### Introduction

This briefing considers the loss prevention aspects of crew selection and recruitment.

It is based around Elements 3 and 3A of Tanker Management Self-Assessment (TMSA) which states that 'ship's crews are at the heart of efforts to improve safety and the protection of the environment. It is vital that crew members are motivated, trained, qualified and competent to carry out their roles'.

This is not new - in an 1896 edition of the loss prevention book 'Suggestions' North reported that a good ship was nothing unless it had the 'right' crew.

North's loss prevention department has carried out root cause analysis of all large claims between 2010 and 2015. The results of the analysis led back to just two root causes time and again, seafarer standards and safety culture, both of which have been concerns within the industry for some time. Recruitment, selection, and retention of appropriately trained and qualified seafarers, with the right attitudes, is therefore key to reducing the number of incidents and to the long term success of a shipping company.

But getting recruitment, selection and retention right is problematic. Shortage of seafarers, the lack of accessible employment history, the geographic distances between seafarers and their employers, and the use of third parties to provide seafarers are just some of the systemic challenges that ship owners face.

All crew will have STCW certificates, this briefing is about ideas for selecting and recruiting the 'right' STCW qualified crew for your ships. Getting the crew 'right' can be enormously beneficial to your company.

Please send any feedback or good ideas to loss.prevention@nepia.com

# What Type of Crew Do you want?

All crew will have STCW certificates - this briefing is about ideas for choosing between the 'right' and 'wrong' STCW qualified crew for your ships. Getting the crew 'right' can be enormously beneficial to your company.

# **Crew Selection and Recruitment**

### A Series of Filters

Adopting a systematic filtering approach should provide a process that will make it easier to get consistent selection and recruitment - it increases the chances of you ending up with the type of crew that you want.

## STCW - A 'Qualified' Success?

A ship operator must select crew that are STCW qualified - the STCW standard should provide crew from anywhere in the world that are adequately qualified to undertake their role.

However, with such a large number of seafarers qualifying in various countries at 1000s of different training institutions around the world it is inevitable that some STCW certificated seafarers will fall short of the standards required by shipowners.

# STCW - Enough Experience?

Over a number of years there has been a significant reduction in the amount of sea time required to obtain professional seagoing qualifications. This may be problematic when employing junior sea staff but has also led to a reduction in experience in rank.

Taken together this means that crew selection and recruitment cannot be based on STCW qualifications alone it must be more robust to succeed.

It should include a series of filters suitable to provide the 'right' crew. These filters should focus on standards i.e. what the seafarer knows and has experienced and on attitude i.e. the seafarer's ability to adopt systems and your company's ethos.

The key to getting the crew you want is to **filter out** the wrong crew as you start with the selection process and go through the recruitment process.

Remember that the 'right' type of crew might differ in certain aspects depending on the ship type or trade. The filters might need adjusting to suit the ship type or trade For selection and recruitment of key crew members there should be more specific or in depth filters - for example the selection and recruitment of the top four, and hygiene awareness for those involved in food handling and preparation.

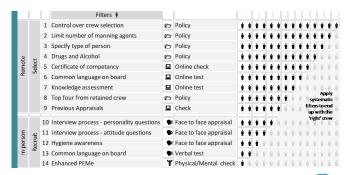
Adopting a systematic filter approach should provide a process that will make it easier to get consistent selection and recruitment - it increases the chances of you ending up with the type of crew that you want.



The diagram represents how the filters may be applied systematically in order to end up with the 'right' type of crew.

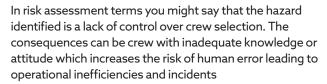
Initially all crew can be filtered by remote filters which do not require a face to face meeting - such as policy and online tests and checks. As you get closer to the actual recruitment the number of suitable crew reduces until you eventually end up with face to face recruitment of the 'right' crew. All the 'right' crew selection and recruitment filters are systematic control measures to reduce the risk of not getting crew with the right knowledge, personality and attitude.

# Suggested 'Right' Crew Selection and Recruitment



### 1. Control Over Crew Selection

# Policy



The first step in this systematic approach is to take control of the crew selection and recruitment process. Simply requesting or relying on the manning agent or agents to provide the 'right' crew will not work - there has to be a degree of direct control and oversight. The usual way to achieve this is to have a crewing manager and/or team who understands the overall policy and for any agents to be provided with key tactics. Relying on the agents to provide the 'right' crew by their own means has less chance of success.

For example - those responsible for selecting and recruiting crew must be clear about your policy for:

- Multi-cultural crews what mix of nationalities you will accept.
- Crew retention recruiting the top four from retained crew.
- Enhanced pre-employment medicals which programme to follow and how to manage referrals.
- Minimum knowledge requirements.

In risk assessment terms - you might say that the hazard identified is a lack of control over crew selection - the consequences can be crew with inadequate knowledge, personality and attitude which increases the risk of human error leading to an accident. The less control and oversight of the crew selection process the higher the risk that the crew employed will not have the right knowledge, personality and attitude to contribute to the safe and efficient operation of your ships. In addition any benefit from additional training and mentoring of the 'wrong' individuals is likely to be lost.

# 2. Limit Number of Manning Agents



In risk assessment terms you might say that the hazard identified is a lack of control over crew selection. The consequences can be crew with inadequate knowledge or attitude which increases the risk of human error leading to an

If you employ a third party crew provider it is important for you to make clear the requirements of your crew selection policy to that provider.

Otherwise you lose control of crew selection to the crew provider. This might be acceptable if they have their own robust crew selection policy similar to that suggested in this briefing but it could be a problem if they do not.

There are a number of issues with having too many crew providers in proportion to your company size.

The first is simply a matter of workload. If you have a small in house crewing team it is much easier to oversee a small number of crewing agents and ensure they are following your crew selection policy.

Another factor is the commercial relationship between you and your crew providers. If you have too many crew providers in relation to your company size this may mean that you are doing very little business with some providers, and this may be a disincentive for them to ensure that your policies are adhered

Having a manageable number of crew providers in relation to your company size should benefit both your ability to oversee their work and the quality of crew you are likely to be provided.

# 3. Specify Type of Person

Policy



Competence is the ability of an individual to do a job properly - the 'right' crew will be competent.

Competence is a combination of practical theoretical knowledge (an STCW certificate?) with personality, attitude, and experience.

The 'right' crew will have the awareness and willingness to do a job properly and consistently - and understand how that job may be made safer or more effective through a cycle of continuous improvement.

Assessing training standards and levels of competence must be a priority. If crew do not meet your minimum requirements



in this area then it is unlikely that they will be a good fit for your company.

This means thinking about what you see as a 'normal' seafarer for your company. The matrix on the next page may assist.

# Suggested 'Right' Crew Selection Matrix:

Practical Knowledge	Theoretical	Personality Attitude	
	STCW certificate	Automatically aware and willing to do the job properly. Proactive approach to training. High levels of common sense and natural risk assessment ability. May also be experienced. Good team members and leaders. Know how to make good decisions.	Type 1 'Right' crew
	STCW certificate	Has the right attitude to be trained to do the job properly. Understands the need to do the job properly. Can be trained in risk assessment and how to do a job safely. Gains from experience. Can become reliable team members and leaders. Can be trained to make good decisions.	Type 2 'Right' crew
	STCW certificate	Accepts training to do the job properly but does not understand the training. Thinks risk assessment is 'something pre-prepared that you print out'. Has not gained much from experience. Will struggle to do the job safely. Struggle to become reliable team members. Often make poor decisions.	Type 3 'Wrong' crew
	STCW certificate	STCW training questionable. Has no interest in the job. Sees training as 'something that has to be done'. Has no knowledge or understanding of risk assessment. Is at sea for the money with anyone who will employ them. Rarely team members – usually spectators. Never take a decision.	Type 4 'Wrong' crew

A crew selection policy might start with the idea that 'most people are average'. This means that when you consider the question 'what am I looking for' you must have some clear ideas of what type of person you consider to be 'average' - the 'right' crew selection matrix suggests that Type 2 crew might be considered average. A suggested crew selection policy might be:

- At least 90% Type 2 crew a good reliable crew.
- The remaining 10% Type 1 crew very good crew having most of the 'top 4' as Type 1 would be a very good situation.
- Ideally no Type 3 or Type 4 crew. Realistically there will be some Type 3 who may get through selection. Initially the recruitment process should identify and remove these by

face to face interview. Later the promotion and retention process will also help to filter - for example by psychometric

• No type 4 crew should be employed. The selection process must identify them and remove them. If Type 4 crew are recruited then there is a major non-conformity in the selection process.

If you employ a crew provider it is important for you to make clear the requirements of your crew selection policy to them and to ensure that these requirements are being met.

# 4. Drugs and Alcohol

Policy



ILO points out variables that need to be considered:

- ships act as both workplace and home
- mixed cultures, customs and languages
- o significant variations in national laws

Every ship operator should develop their own policy. The main sources of guidance for best practice include:

### **STCW**

Guidance is contained in the non-mandatory Section B -

Drug and alcohol abuse directly affect the fitness and ability of a seafarer to perform watchkeeping duties. Seafarers found to be under the influence of drugs or alcohol should not be permitted to perform watchkeeping duties until they are no longer impaired in their ability to perform those duties.

### ILO

Drug and Alcohol Prevention Programmes in the Maritime Industry (A Manual for Planners).

This lists variables that are unique to life on board ship that need to be considered. These include:

- Ships act as both workplace and home.
- Mixed cultures, customs and languages.
- Significant variations in national laws, regulations and enforcement standards.

# **OCIMF**

Guidelines for the control of drugs and alcohol on board ship.

OCIMF recommends that shipping companies should have a clearly written policy on drug and alcohol abuse that is easily understood by seafarers as well as shore-based staff. In order to enforce their policy, companies should have rules of conduct and controls in place, with the objective that no seafarer will navigate a ship or operate its on board equipment whilst impaired by drugs or alcohol. It is recommended that seafarers be subject to testing and screening for drugs and alcohol abuse by means of a



combined programme of un-announced testing and routine medical examination. The frequency of this un-announced testing should be sufficient so as to serve as an effective deterrent to such abuse.

ILO state that it is the responsibility of the ship operator or manager to ensure that the Master and senior officers have the training, education and necessary skills to carry out the company policy.

At the recruitment stage - every crew member should be briefed on the extent of the ship operator's drug and alcohol policy. The 'right' type of crew will be entirely comfortable with the requirements of that policy.

### **5 Certificates of Competency**

On Line check



It is a good idea to keep a record of all checks made - email or screen shots - so that there is positive contemporaneous evidence that the checks were made.

Most national maritime administrations issuing STCW certificates will have a system to enable other national maritime administrations and ship operators to check the validity and authenticity of certificates of competency. Certificate checking should be carried out routinely as part of the selection process.

# IMO provides a database of STCW countries that provide direct checking of certificates.

It is a good idea to keep a record of all checks made - email or screen shots - so that there is positive contemporaneous evidence that the checks were made.

# 6. Common Language On Board

On Line Test



There will also be pastoral issues to consider during crew recruitment. Getting the right crew might mean a multinational mix that can communicate socially as well as effectively for the safe operation of the ship.

Every ship operator should develop a policy on working language standards. The mandatory requirements for a common working language on board are as follows:

### **SOLAS**

SOLAS underlines the need for a common working language in the interest of safety at sea. Unless the crew speak another common language - English must be used as the working language for safety communications as follows:

- Bridge-to-bridge.
- Bridge-to-shore.
- Pilot-to-bridge watchkeepers.

# **STCW**

All ships' crew must be able to effectively coordinate their activities in an emergency - this implies the ability to communicate in a common language. This may have to be demonstrated during a port State control inspection - for example at a life boat drill.

Officers in charge of a navigational watch must have the ability to understand and use the IMO Standard Marine Communication Phrases (SMCP).

Engine watch keepers are required to demonstrate an ability to interpret engineering publications written in English and to speak clearly and comprehensively when communicating to perform engineering duties.

GMDSS operators must be able to communicate SOLAS information in written and spoken English.

Navigation watch ratings must be able to comply with helm orders in English and communicate effectively.

Any crew with safety or pollution prevention duties - an ability to use English in standard marine phrases is recommended.

Requires the ship operator to provide SMS information in a working language or languages understood by the crew and to ensure effective communication on SMS issues.

All crew to be recruited should, as a minimum, be assessed for safe communication ability against the SMCP. This assessment should initially be written or CBT during the selection process. Suitable maritime English tests are available to purchase.

Later - during the recruitment process - the assessment should be verbal as part of the face to face interview.

# 7. Knowledge Assessment

On Line Test



An online crew evaluation test is a guick and remote way of assessing practical theoretical knowledge to at least STCW standards - and to a certain extent it can assess personality and attitude. It can be designed to indicate whether the crew have the ability to deal with emergencies and to take safe decisions.

In addition to an online check of the certificate of competency as per filter 5 - all crew should be required to complete an online crew evaluation test. These types of tests are available for purchase 'off the shelf' and most allow the ship operator to customize the questions to suit their crew selection and recruitment policy.

An online crew evaluation test is a quick and remote way of assessing practical theoretical knowledge to at least STCW standards - and to a certain extent it can assess personality and attitude. It can be designed to indicate whether the crew



have the ability to deal with emergencies and to take safe decisions.

A crew evaluation test should be designed to indicate how crew deal with relatively minor or routine operational problems.

These systems can also be used to benchmark your crew against other operators, compare between nationalities and different crew providers.

# 8. Top Four from Retained Crew

Getting the top four that you want is a return on your investment in selection, recruitment, and training - so don't

Ideally most existing and newly recruited crew will be Type 2 crew - a good reliable crew with the right attitude to be trained to do the job properly.

As crews spend longer with a ship operator the investment of additional training begins to pay off. Risk assessment and safety culture improve and the crew member gains from experience. Those 'gains' should not be lost so the need to have good retention rates for senior ranks is a very important policy in reducing the risk of human error.

As a starting point the aim might be to engage only suitable Masters from retained crew or from newly recruited Type 1 crew that could be developed into a situation where the top four senior officers are all recruited from retained crew or from newly recruited Type 1 crew. Psychometric testing may be another tool to use to assess the top 4 and we will look at these in more detail in the Loss Prevention briefing on retention.

Getting the top four that you want is a return on your investment and should lead to more safe and efficient operations.

We will be examining retention strategies in a separate loss prevention briefing.

# 9. Previous Appraisals

Check

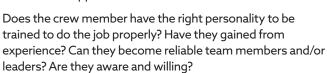
Often this may be done verbally but it is a good idea to try and keep a record of all checks made - email or phone notes - so that there is positive contemporaneous evidence that the checks were made.

If possible - obtain references and previous appraisal reports. Often this may be done verbally but it is a good idea to try and keep a record of all checks made - email or phone notes - so that there is positive contemporaneous evidence that the checks were made.

Appraisals will be discussed in more detail in our loss prevention briefing on retention.

### 10. Interview Process - Personality Questions

Face to Face Appraisal



The best way to interview is to have an interview process that can be followed for each interview. The interview should be built around asking each crew member the same questions and scoring the answers to those questions to achieve a consistent rating.

There should be two types of questions to assess competence. There will be an STCW certificate and a knowledge test which will be evidence of practical theoretical knowledge - the interview should assess personality and attitude - does the crew member being interviewed have the awareness and willingness to do a job properly, consistently, and safely?

All interviews are best conducted 'face to face'. As a minimum requirement - recruitment interviews for the 'top four' should not take place by Skype. Psychometric testing may be another tool to use to assess personality types and we will look at these in more detail in the Loss Prevention briefing on retention.

Personality questions will assess the personality - does the crew member have right personality to be trained to do the job properly. Have they gained from experience? Can they become reliable team members and/or leaders? Are they aware and willing?

# Example:

Personality questions - Tell me about your last trip to sea?		
Suggested answers to score against – adjust for rank	Score (1 poor, 3 Average, 5 good)	
Can they name the type of ship?		
Where did you go?		
What was the cargo?		
What were the crew like?		
Total score - Minimum score for Type 2 crew is 12:		

This is just a suggested question - the interviewer should think of a suitable question that will work for them. By always asking the same personality question the interviewer can develop a quick method of assessing whether the crew member is interested in the job or is just interested in the wages.



# 11. Interview Process - Attitude Questions

Face to Face Appraisal



These questions will help show whether the crew member has the right attitude to be trained and can take good decisions so that the job is done safely. They will help assess common sense and risk assessment ability. They will give good indications of whether a crew member can become a reliable team member and/or leader.

Attitude questions will put the crew member in a situation and ask what they would do. There should be a fixed question with the same scenario for each rank. These questions will help show whether the crew member has the right attitude to be trained and can take good decisions so that the job is done safely. They will help assess common sense and risk assessment ability. They will give good indications of whether a crew member can become a reliable team member and/or leader.

# Example:

Attitude questions - Master/Chief Officer: Your ship is berthed port side to and is to sail in one hours' time at 02:00. The wind is currently F6 on the port beam. At midnight a gust of wind pushed the stern off the quay and one mooring parted. You request an additional a tug for departure. Port control says there are no tugs available until daylight at 07:00. What do you do?

Suggested answers to score against	Score (1 poor, 3 Average, 5 good)
Talk me through your risk assessment.	
Would you phone the company or talk to the chief officer?	
Are the crew safe if they do not stand in snap-back zones?	
Are you aware of SOLAS V Regulation 34 - what does it mean?	
Total score - Minimum score for Type 2 crew is 12:	

In brief what you might be looking for here is:

- If the tug was a control measure to reduce risk to an acceptable level then the non-availability of the tug means the job cannot safely go ahead?
- Team decisions are almost certainly safer than solo decisions. Ideally you want a Master who listens to his team, takes a safe decision, and then informs the company.
- What is the awareness of industry issues like does the Master know that there is a growing debate about the effectiveness of painting snap back zones – isn't the whole mooring deck dangerous?

• Has the Master given any thought to the overriding SOLAS obligation he has for the safety of the crew and the marine environment? If he takes a SOLAS V Reg34 decision – how would he ensure that the decision is valid – he should 'build' (collect evidence) towards the decision and not take sudden solo decisions.

### Example:

Attitude questions - Cadet/Third Mate/Bosun: The Master has asked you to go the focsle for departure. He briefs you on which ropes to single up and which rope to give to the tug. On the focsle the Bosun says 'No, we'll do things my way' and gives out different instructions. What do you do?

Suggested answers to score against	Score (1 poor, 3 Average, 5 good)
Talk me through your risk assessment.	
Call the Master or ask the Bosun how he intends to do the job?	
Are the crew safe if they do not stand in snap-back zones?	
Are you aware of SOLAS V Regulation 34 - what does it mean?	
Total score - Minimum score for Type 2 crew is 12:	

In brief what you might be looking for here is:

- If you have been trained in the procedure for mooring stations forward then there is a formal risk assessment in the procedure. Can the candidate use his common sense to risk assess the situation? Is he/she confused by the scenario?
- Team decisions are almost certainly better than solo decisions? Is it possible that the Bosun is experienced and knows how the Master wants the job done safely? How do you accommodate the Bosun's ideas if they are safe?
- An appreciation that the whole mooring deck dangerous.
- An understanding that the Master has a duty to take very important safety decisions to protect the crew and the marine environment. All crew need to support the Master by making safe decisions themselves.

Suggestion – use the same question to interview the Bosun – ask the Bosun what he feels about a newly promoted Third mate who has different plans to his? What would the Bosun do if the Third mate's instructions are un-safe?



# Example:

Attitude questions - 2nd or 3rd Engineer: The ship is in port unexpectedly asks to test the boiler safety valves. What do

Suggested answers to score against	Score (1 poor, 3 Average, 5 good)
Talk me through your risk assessment.	
Phone the company or talk to the chief engineer/Master?	
Where would you check to make sure all the crew are safe?	
Are you aware of SOLAS V Regulation 34 - what does it mean?	
Total score - Minimum score for Type 2 crew is 12:	

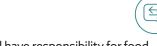
In brief what you might be looking for here is:

- Boiler surveys are an annual requirement so testing of the boiler safety valves would not be 'unexpected'. There should be a procedure for boiler tests - that procedure will have a formal risk assessment within it. Can the candidate use his common sense to risk assess the situation? Is he/she confused by the scenario?
- Team decisions are almost certainly better than solo decisions? What about using the Chief Engineer's experience? Who has ultimate responsibility for the safety of all crew?
- An appreciation that there may be crew on the top of the funnel or near the boiler safety valve exhaust pipes? Where were these pipes on your last ship?
- An understanding that the Master has a duty to take very important safety decisions to protect the crew and the marine environment. All crew need to support the Master by make safe decisions themselves. Following procedures is almost certainly safer.

Another suggestion is to use Flag State accident reports such as those from UK MAIB, German BSU, or Australian ATSB. Present the scenario only (remove the findings and conclusion) along with a blank piece of paper and ask the crew member being interviewed to do a risk assessment. What control measures are needed? If the paper remains blank it's not the right crew!

# 12. Hygiene Awareness

Face to Face Appraisal



When recruiting crew that will have responsibility for food preparation the interview process should include 'attitude' questions designed to show a willingness to be trained and/or an existing ability to take good food hygiene decisions.

This needs to be linked directly with the requirements of MLC 2006 Regulation 3.2 - Food and Catering.

Standard A3.2 requires an approved training course covering practical cookery, food and personal hygiene, food storage, stock control, and environmental protection and catering health and safety.

When recruiting crew that will have responsibility for food preparation the interview process should include 'attitude' questions designed to show a willingness to be trained and/or an existing ability to take good food hygiene decisions.

# 13. Common Language On Board

Verbal Test



There will also be pastoral issues to consider during crew recruitment. Getting the right crew might mean a multinational mix that can communicate socially as well as effectively for the safe operation of the ship.

See also filter 6 Online test. Apart from the minimum mandatory requirements it should be part of the selection and recruitment policy to ensure that bridge watch keepers and engine watch keepers can communicate effectively for the safe operation of the ship.

There will also be pastoral issues to consider during crew recruitment. Getting the right crew might mean a multinational mix that can communicate socially as well as effectively for the safe operation of the ship. Crew who cannot communicate effectively when not working can become isolated and introverted leading to poor performance and resistance to training.

Our most recent crew data analysis showed that for North Members the average number of crew nationalities on board was 3 to 4. Some fleets in particular large fleets are employing 12 or more nationalities.

An accident investigation of a collision in open seas in good visibility (MAIB Report 17/2005) found that one ship was manned by a single nationality - so shared a common working language - whilst the other was manned by a total of six different nationalities: Korean, Yugoslavian, Romanian, Bulgarian, Ukrainian and Turkish. None of these nations has English as an official language.

The Master and each of the officers interviewed demonstrated knowledge of English sufficient to conduct interviews. This level of communication was satisfactory when one party - the interviewer - spoke good English. But on board the ship the mix of accents and the 'extra effort' required to communicate in a common language meant there was no social talk just minimum for job instructions and in some cases this was by sign language. In the collision investigation - this was identified as a major causative human element.



# 14. Enhanced PEMe

Physical/Mental Check

The average cost of a personal illness claim is currently about US \$30,000. The North PEMe schemes provide fixed fee enhanced medicals ranging from US \$75 to US \$85. On that basis - avoiding one average claim would be the equivalent of paying for over 350 enhanced medicals.

The policy requirements for pre-employment medicals should include the following minimum:

- 1. Determine whether the seafarer meets the statutory medical standards and is fit for the work for which they are to be employed at sea.
- 2. Identify any other medical conditions which may cause a risk to the seafarer, others on board or to the safety of the vessel, and to make a judgment informed by the rationale underlying the statutory standards, as to whether this condition affects the seafarer's fitness for work at sea. Particular attention should be given to conditions which may worsen or recur during periods of work away from medical care.

Every crew member will require a national administration or Flag State mandatory medical. These are often routine in nature. If the statutory medical is routine it may meet policy requirement 1 but may not meet policy requirement 2.

One of the most effective loss prevention initiatives is to require an additional and enhanced 'company' preemployment medical which is guaranteed to meet policy requirements 1 and 2. This will discover pre-existing conditions which could mean the crew member can get treatment but also means the crew member is not employed with a preexisting condition that could result in declining performance and an expensive claim later. It can also mean that crew can be employed with a known pre-existing condition – where there is a programme to manage the situation whilst the crew member is on board ship.

The average cost of a personal illness claim is currently about US \$30,000. The North PEMe schemes provide fixed fee enhanced medicals ranging from US \$75 to US \$85. On that basis - avoiding one average claim would be the equivalent of paying for over 350 enhanced medicals. A 'free to crew' regular medical check-up combined with 'family' medical cover can be a very effective crew retention tool.

For the benefit of all Members - **North has pre-employment schemes** operating in the Philippines and Ukraine, and worldwide guidelines for use elsewhere.

For chemical tanker crew the pre-employment medical must include a blood test to establish levels of exposure to harmful chemicals. This initial blood test will benchmark levels of harmful chemicals in the blood and recruited crew must be provided with a biomonitoring programme – regular blood tests to establish exposure levels.

Often psychological and psychiatric testing is omitted. Conditions such as anxiety and depression affect judgment, attention, personality, general well-being, and physical reactions. This needs to be considered in relation to all crew but especially those with responsibility for the safe operation of the ship.

#### Disclaimer

The purpose of this publication is to provide a source of information which is additional to that available to the maritime industry from regulatory, advisory, and consultative organisations. Whilst care is taken to ensure the accuracy of any information made available no warranty of accuracy is given and users of that information are to be responsible for satisfying themselves that the information is relevant and suitable for the purposes to which it is applied. In no circumstances whatsoever shall North be liable to any person whatsoever for any loss or damage whensoever or howsoever arising out of or in connection with the supply (including negligent supply) or use of information.

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