



Maritime and Coastguard Agency

Human Element Assessment Tool for Ships (HEAT – S)

Assessed HEAT band: A B C D E F G H I J	Date of assessment:
Ship name:	Assessor:
Additional comments (if any):	

Level	Band	Description
Best practice	A	Exceeds industry standard – industry leader in managing human element aspects of operations.
	B	Excellent human element capability and understanding demonstrated, expertise akin to best SMS managers on comparable ships.
Good practice	C	Continuous improvement in SMS and best practice is clearly demonstrated.
	D	Well managed SMS with good practice implemented. All indicators at least satisfactory, demonstrating a sound human element capability.
Defined basis for development	E	Satisfactorily managed and implemented SMS with only minor scope for improvement in some of the indicators.
	F	A broadly satisfactory SMS in place but with scope for improvement in many of the indicators.
Weak basis, few working processes	G	Some aspects of the SMS are satisfactory and provide potential for a good foundation, but there are major shortfalls in some indicators.
	H	Several major shortfalls exist, across many of the sections. The SMS is unsatisfactory overall but it has an improvable basis.
Poor practice, no system in place	I	Many major shortfalls across all sections, however those managing the SMS acknowledge this and can provide evidence of corrective action being undertaken.
	J	Unacceptable levels of shortfalls in all indicators – the on-board SMS will not be working.

Carrying out the HEAT-S assessment

Who should make the assessment?

- Using someone from outside the ship's complement to carry out the assessment may provide a fresh perspective without preconceptions. This lack of familiarity can be useful to draw attention to potentially unsafe practices which have become routine or accepted as "the way we do things".
- An assessor who is contextually aware of shipboard life may be more likely to pick up the "weak" signals of latent failures from their own experience. The assessor will need to be able to interpret what they see, hear and feel, recording evidence on the HEAT form where appropriate.

How should the assessment be made?

- Evidence should be gathered by the assessor against each relevant indicator when on board the ship. It may be most efficient to combine it with an internal audit or preparation for an ISM audit – many of the areas will be similar, but looked at in a different way or in greater depth.
- The assessment could be made during one session or over several days. The important thing is to build up a balanced picture of the overall SMS as it relates to the human element.
- All available sources of information should be used to inform the assessment:
 - Objective, e.g. documentation, observable drills or activities.
 - Subjective, e.g. responses of employees to questions.
- To encourage the most accurate and open responses from people involved:
 - Consider conducting the assessment during a relatively quiet passage, rather than under the distractions of e.g. a port turnaround or docking manoeuvre.
 - Consider the likely effect on responses if the ship's complement feel threatened or in danger of reprisals for their responses.
 - The assessor should have the necessary people skills to put people at ease while gathering evidence, and while moving from one area of the vessel to another.
 - A range of officers and crewmembers should be involved.
 - Explain that the information gathered will be used to improve the safety of the vessel and themselves, not for disciplinary action, and that individual responses will be anonymous once the assessment has been made.

- The ethos of HEAT is intended as a suggestion of areas to look at rather than a specific questionnaire which must be completed systematically.
- A rating should be recorded against each indicator using the system below. It should be noted that not all indicators will apply to every vessel or trade. The principle behind the rating system is for the assessor to ask him or herself whether they would be comfortable with the present situation continuing as it is.

Rating	Meaning	Description
N/A	Not applicable.	This indicator is not relevant to the vessel being assessed.
1	Entirely unsatisfactory	Immediate and urgent improvement is required.
2	Unsatisfactory	Improvement required as a medium-to-high priority task.
3	Satisfactory	There is scope for improvement but as part of ongoing development rather than as an immediate cause for concern.
4	Good practice	Demonstration of thorough risk management as part of daily operations.
5	Best practice	Industry-leading capability at managing human element-related operational risks.

- After rating each applicable indicator, the assessor should assign an overall band to the SMS of the assessed ship with reference to the descriptions on page 1. There is no direct correlation between the numerical ratings and the final band or level, but the evidence gathered for each indicator should inform the overall impression recorded.

What should be done next?

- The final band assigned to the vessel gives an indication of overall SMS quality. This can be used to compare different vessels in a fleet, or the same vessel over time.
- The ultimate value of HEAT comes in responding to the rating and evidence against any indicators where performance is found to be improveable. This information can be used to guide continuous improvement, by highlighting underperforming areas of the SMS and identifying specific changes which may be necessary to improve.
- The required urgency of response indicated by the rating should inform the speed of reaction; either immediate or as part of ongoing risk management in future.

Indicator	Rating	Evidence or comments
Recognition of the Importance of a Safety Management System		
Do shore and ship management give praise to their subordinates, including the master and the ship's complement for working safely?	N/A 1 2 3 4 5	
Is there adequate and appropriate contact with the designated person ashore by the ship's complement and can any crew member contact them if they have a concern?	N/A 1 2 3 4 5	
Does the ship's complement feel that safety should & would always take priority over continuing the ship's work and passage?	N/A 1 2 3 4 5	
Does the master feel he/she retains control over the ship despite pressure from the shore (company and/or port) to meet operational deadlines?	N/A 1 2 3 4 5	
Does the ship's complement perceive that the master will always act in their best interests regarding health and safety?	N/A 1 2 3 4 5	
Does the ship's complement feel they can report safety issues without fear of reprisal or being sacked?	N/A 1 2 3 4 5	
Does the ship's complement generally feel security of employment?	N/A 1 2 3 4 5	
Do the ship's complement believe they all share responsibility for their own and others' safety when working?	N/A 1 2 3 4 5	
Are the ship's complement knowledgeable of the contents of the safety policy?	N/A 1 2 3 4 5	

Indicator	Rating	Evidence or comments
Crew Involvement		
Are the ship's complement kept informed of changes in safety issues that affect the management and operation of their ship?	N/A 1 2 3 4 5	
Is there communication about both health and safety issues that may affect the ship's complement?	N/A 1 2 3 4 5	
Does the ship's complement know who their safety representative is?	N/A 1 2 3 4 5	
Do the minutes of the safety meetings indicate that an effective system is in place?	N/A 1 2 3 4 5	
Do the safety representatives feel they have adequate support to enable them to do their job effectively?	N/A 1 2 3 4 5	
Are junior members of staff able and encouraged to give their opinions on senior management decisions that affect safety, and are these opinions treated seriously?	N/A 1 2 3 4 5	
Does the ship's complement feel it is better to voice concern whenever they perceive problems or conflicts than to avoid discussing differences with each other?	N/A 1 2 3 4 5	
Does the ship's complement have the opportunity to participate in social and teambuilding activities, both vertically and horizontally though the organization?	N/A 1 2 3 4 5	
Operations Validation		
Do hotel and catering staff (if carried) feel adequately trained for their emergency roles?	N/A 1 2 3 4 5	
Is the emergency response training effective?	N/A 1 2 3 4 5	

Indicator	Rating	Evidence or comments
Does the ship's complement believe that the safety rules are appropriate for the work they do?	N/A 1 2 3 4 5	
Are the number and quality of safety audits and inspections adequate?	N/A 1 2 3 4 5	
Does the ship's complement believe that the rules always describe the safest way of working?	N/A 1 2 3 4 5	
Learning from Experiences / Lessons Learned		
Is there a fair culture on board, i.e., do people report their errors or are they afraid of always being blamed and castigated?	N/A 1 2 3 4 5	
Do the crew believe that any department can comment on any safety aspects of other department's work?	N/A 1 2 3 4 5	
Is there evidence of appropriate investigation of accidents and incidents?	N/A 1 2 3 4 5	
When remedial measures are identified are they effectively followed up?	N/A 1 2 3 4 5	
Is there a system for reporting problems with any manuals and documentation?	N/A 1 2 3 4 5	
Are the crew willing to report near misses?	N/A 1 2 3 4 5	
Do the crew feel that safety improvements are implemented within a reasonable period of time?	N/A 1 2 3 4 5	
Do the crew believe the company would record accidents anyway, not just because it has to?	N/A 1 2 3 4 5	

Indicator	Rating	Evidence or comments
Do the crew believe that as minor accidents cause their supervisors hassle, both in terms of time and paperwork, they are often hushed up?	N/A 1 2 3 4 5	
Responsibility		
Is there evidence of the on board management acting promptly on safety concerns?	N/A 1 2 3 4 5	
Is the general housekeeping of a good standard?	N/A 1 2 3 4 5	
Do supervisors give clear and appropriate instructions to subordinates?	N/A 1 2 3 4 5	
Does the ship's complement believe they are responsible for pointing out safety regulations that are broken?	N/A 1 2 3 4 5	
Do the ship's complement trust their direct supervisor to act in their best interests?	N/A 1 2 3 4 5	
Would crew members inform team members from other disciplines that something is wrong, that they are doing something wrong, or that they need to take action?	N/A 1 2 3 4 5	
Competence		
Would the more junior members of the ship's complement rely upon their supervisors to tell them what to do in critical situations?	N/A 1 2 3 4 5	
Does the ship's complement believe they work better without safety rules?	N/A 1 2 3 4 5	
Does the ship's complement believe that their supervisors have good people management skills?	N/A 1 2 3 4 5	

Indicator	Rating	Evidence or comments
Does the ship's complement believe there is ever conflict between the master and the pilot or senior officers?	N/A 1 2 3 4 5	
Does the ship's complement believe that they can do their job better by ignoring some rules?	N/A 1 2 3 4 5	
Does the ship's complement feel that all members of their team are qualified to provide them with appropriate feedback?	N/A 1 2 3 4 5	
Risk Screening		
Is there adequate communication at watch handovers and crew changes?	N/A 1 2 3 4 5	
Is there good communication between ship staff hired by different manning agencies?	N/A 1 2 3 4 5	
Does the ship's complement feel that safety shortcuts or risks must be taken to get the job done when under pressure?	N/A 1 2 3 4 5	
Does the ship's complement feel the manning levels are always appropriate to work safely?	N/A 1 2 3 4 5	
Do the bridge personnel work well as a team when berthing and leaving port?	N/A 1 2 3 4 5	
Do the bridge personnel communicate well with the pilot & harbour vessel traffic services?	N/A 1 2 3 4 5	
Understanding of the Operational Context		
Are individual personalities and preferences taken into account when setting tasks and teams, to help crew members work better together?	N/A 1 2 3 4 5	

Indicator	Rating	Evidence or comments
Are the ship's complement involved in planning and deciding work activities and safety issues?	N/A 1 2 3 4 5	
Are the written safety rules and instructions easy and appropriate for the ship's complement to understand and implement?	N/A 1 2 3 4 5	
Are the operating company's procedures adequate and are the ship's complement content to challenge them if a problem is identified with them?	N/A 1 2 3 4 5	
Does the ship's complement feel that working conditions and pressures prevent them from working within the set rules and regulations?	N/A 1 2 3 4 5	
Assumptions and Constraints		
<p>Is there any evidence of any incentives for breaking rules?</p> <ul style="list-style-type: none"> • Explicit (e.g. bonuses, extra time off) • Implicit (e.g. supervisor praise for getting job done however it is done) 	N/A 1 2 3 4 5	
Will the crew break the rules if they believe there is no or little risk?	N/A 1 2 3 4 5	
Does the ship's complement feel they have to break rules due to supervisor pressure?	N/A 1 2 3 4 5	
Does the ship's complement believe that the supervisors would stop them working if there were safety concerns?	N/A 1 2 3 4 5	
Does the ship's complement always ask if they feel they do not understand a task they have been given, or how to carry it out safely?	N/A 1 2 3 4 5	

Indicator	Rating	Evidence or comments
Human Requirements		
Where there is a heavy workload do team members discuss and share responsibility for prioritising activities and for safety issues?	N/A 1 2 3 4 5	
Does the ship's complement feel that people work well in teams on this ship?	N/A 1 2 3 4 5	
Are opportunities provided for non-statutory training and development, and/or mentoring?	N/A 1 2 3 4 5	
Does the ship's complement have sufficient time for their personal or family life?	N/A 1 2 3 4 5	
Does the ship's complement have good working (light, ventilation, temperature, etc.) conditions?	N/A 1 2 3 4 5	
Does the ship's complement have good living conditions and facilities, including food, leisure and recreation facilities, and emotional support such as pastoral care or counselling?	N/A 1 2 3 4 5	
Are the ship's complement given the opportunity to have an element of variety in their job?	N/A 1 2 3 4 5	
Operational Feedback		
When a new piece of equipment and/or new activity is introduced is the experience reviewed and procedures adjusted accordingly?	N/A 1 2 3 4 5	
If a permit to work system is operated does it get reviewed to establish any difficulties and conflicts for rectification?	N/A 1 2 3 4 5	

Left intentionally blank for further comments:

If you have any feedback or queries on HEAT-S please contact human.element@mcga.gov.uk