Module 5 - Question Set – Style- SIRE 2.0

OCIMF

Learning Objectives In This Module

During this Module we will cover the following areas:-

- Question Types –Re-cap
- Question Structure and Supporting Guidance
- Recording in the Observation Module
- Recording Negative Observations in Multiple Observation Modules
- Addressing Negative Observations To A Non-Assigned Question
- Addressing a Question under SIRE 2.0

Re-Cap on Question Types

Question Types

- **We learnt from Module 3 - "Risk Based Approach", that we have four types of questions:**

1. **CORE**
   - **Core** Questions address critical activities that maintain the health of Priority Barriers which protect against a critical threat.
   - **Core** Questions are included in every **CVIQ** where the question is appropriate to the ship type and outfitting

2. **ROTATIONAL**
   - There will be two levels of **Rotational** questions.
   - **Rotational 1** Questions with an allocation frequency of approximately every third or fourth inspection.
   - **Rotational 2** Questions with an allocation frequency of approximately double that of Rotational 1 questions.

3. **CONDITIONAL**
   - A number of questions have been developed to assess a vessel operator's level of attainment against TMSA
   - Questions are generated in response to the Operators responses made in the Pre-Inspection Questionnaire (PIQ)

4. **CAMPAIGN**
   - The concept of **campaign** questions permits OCIMF to respond to emerging industry trends and issues by modifying the way the VIQ is managed and questions are allocated to individual inspections.

CORE - Questions

Facts About Core Questions

- Approximately half of all questions per inspection are Core questions
- Core questions are only allocated to an inspection where they are applicable to the vessel type and its operations.
- If a negative observation had been raised against a core question in the **previous inspection**, due to their **criticality**, the **details of the negative observation will be inserted in the inspection editor for the inspector to read.**
- The inspector will be required to address each core question in its entirety during an inspection, but if information relating to a **previous negative observation** is provided, this would provide an area where **additional attention** should be applied to ensure that the circumstances that led to a negative observation were no longer present.
- Only Core questions will have negative data from previous inspections, as only Core questions are repeated at each inspection, and will not cause disruption to the inspection compiler process.
- The carry forward of negative observation information is intended to ensure that weaknesses in critical activities are properly resolved.
- **Campaign Questions are an exception.** These will be treated as Core questions for the duration of the Campaign. When the campaign ends, any negative observations arising from the last inspection during the campaign period will cause the question to be scheduled during first inspection after the end of the campaign.

Question Structure
and
Supporting Guidance

Question Development

Anatomy of a question

Each question and its supporting guidance has been developed using a standard template with guidelines for completing each section and element

Question number Ext - 01	ROVIQ Sequence engine control room	WG Approval Date	05/05/2019	
Time Allocation 10 minutes	Choose an item.	SME Proofed Date	Click or tap to enter a date.	
		VIP SG Approval Date	Click or tap to enter a date.	
		Batch Tested Date	Click or tap to enter a date.	
		Complete	Click or tap to enter a date.	
Question Type	Graduated			
Core ☒	Human ☒	Oil ☒	DP/shuttle ☐	
Rotational ☐	Process ☒	LPG ☒	ICE ☐	
Focused ☐	Equipment ☒	LNG ☒	STS ☐	
Existing VIQ7	TMSA Indicative	Chemical ☒	LNG bunkers ☐	
Choose an item.	Yes		Static accumulator ☐	
Question number	Reference KPI		FSRU ☐	
	5.2.1		Multiple fuel ☐	
Input material				
VPQ ☐		PSC inspection ☐		
Pre-inspection questionnaire ☒		Incident repository ☐		
Photo library ☐		Document store ☒		
Reference documents		Targeted Onboard staff		
publication name		Senior engineer officer		
Choose an item.		Choose an item.		
Choose an item.				

Question

Were the Master and navigational officers familiar with the company procedures for testing the navigational equipment / main propulsion / steering gear / thrusters / power generation plant prior to use and at critical points during a voyage / operation and did checklists and log book entries confirm they had been completed as required?

Guidance Notes

Objective

To ensure that navigational equipment and maneuvering machinery had been confirmed as fully operational prior to critical phases of operations.

Industry Guidance: ICS Bridge Procedures Guide Fifth Edition. Chapter 3.18 Periodic Checks of Navigational Equipment

Operational checks on navigational equipment should be undertaken when preparing for sea and prior to port entry (see Checklists B1, B6 & B7) and at any other time required by the SMS.

Before entering restricted or coastal waters, it is important also to check that full control of engine and steering function is available.

TMSA KPI 5.1.2 requires that comprehensive procedures to ensure safe navigation are in place which include, actions upon equipment failure and supporting checklists

SOLAS Chapter V Regulation 26

1 Within 12 hours before departure, the ship's steering gear shall be checked and tested by the ship's crew.

5 The administration may waive the requirements to carry out the checks and tests prescribed in paragraph 1 and 2 for ships which regularly engage on voyages of short duration. Such ships shall carry out these checks and tests at least once every week.

The vessel operator will have developed procedures which will require navigational and maneuvering equipment to be functionally tested at defined points prior to, and during, a voyage or operation. The procedures will define the extent of the testing required to be carried out based on regulation, risk assessment and the vessel's operation at the time of the required test.

Where a company had developed its procedures based on an administrative waiver of repetitive steering tests, documented evidence of such a waiver will be available onboard.

The company will have developed checklists, adapted to reflect the equipment and systems fitted to vessels under management, to ensure that tests are carried out systematically.

Inspector Actions

- Sight, and review where necessary, the company procedure which defines the requirement for testing navigational and manoeuvring equipment.
- Review checklists and vessel records to verify that testing of the navigational and manoeuvring equipment for a recent voyage or, sequence of operations, had been completed as required.
- Verify that where a vessel was operating under an administrative waiver to conduct steering gear tests on a weekly basis, rather that prior to each departure, that the waiver was available onboard.
- Review an individual checklist to verify that the accompanying navigational officer was familiar with individual checks or tests that were required to be carried out.
- Verify that any defects, noted with either navigational equipment or manoeuvring machinery detected during the required testing processes, had been followed up through the onboard defect reporting system.

Expected Evidence

- The company procedure which defined the requirements for testing navigational equipment and manoeuvring machinery.
- Checklists for the testing of navigational equipment and manoeuvring machinery for recent voyages.
- Vessel operational records for recent voyages

Potential grounds for an observation

- There was no procedure that required navigational equipment and manoeuvring equipment to be functionally tested at defined points prior to, and during, a voyage or operation.
- The accompanying navigational officer was not familiar with the company procedure for testing navigational equipment and manoeuvring equipment.
- Tests required to be carried out by the company procedure had not been completed as required.
- There was no evidence that the governing administration had issued an appropriate waiver for a vessel on frequent voyages of short duration, where tests were not being carried out within 12 hours prior to departure
- Defects in navigational equipment and manoeuvring machinery identified through the testing process had not been entered into the vessel's defect reporting system.

Observation module

Human Choose an item. **Staff** Choose an item.

Process Choose an item.

Equipment Choose an item.

Photo Choose an item.

The intent of the question structure is to provide a clear understanding to all programme participants regarding:

- What a question will address.
- What industry best practice, rules and regulations and, inspection guidance should be considered. **Remember no list is exhaustive**
- What the inspector is expected to consider and assess.
- What evidence the ship may be asked to provide.
- What circumstances may lead to a negative observation.

Question and supporting guidance

1. CVIQ Chapter structure

- In general terms the overall VIQ7 chapter structure has been carried over to SIRE 2.0 with modifications to reorganise questions into named sections which will permit future growth while maintaining natural question grouping.

EXAMPLE

Chapter 5 Safety Management	**Divided into Sections** Emergency Response Plans and Drills

- The concept of variants has been retired since all inspections are bespoke based on the ship type, and ship specialisation.

- A randomisation factor for rotational question allocation has been brought in so that lower criticality activities can be monitored over a longer period of times, resulting in unique question sets for each inspection activity.

Question and supporting guidance

2. The Top Level Question

The structure has moved away from phrasing the question in such a way that a **yes or no** response is the final outcome.

However, in common with VIQ7, the question gives a clear indication of what the question is intended to achieve and in many cases consists of several parts, **each** of which is essentially a question in its own right.

Example Question :

> ***Were the Master and officers familiar with the company procedures for the safe operation of the ballast water management system (BWMS), and was the equipment in satisfactory condition and used in accordance with the company procedures and manufacturer's instructions?***

Since question identification and development has been based on a **Bow Tie Barrier** activity management model, questions are structured to consider the following aspects, where relevant:

- **Human element**: Were the appropriate crew familiar with company procedures, the associated tasks and, the use of any equipment.
- **Procedural element**: Were procedures available to manage the task, process or equipment.
- **Hardware element**: Was the machinery, equipment or structure in satisfactory condition.

We will look at this important aspect later when we look at answering questions.

Question and supporting guidance

3. The shortened question

A shortened version of the question appears in the chapter summary on the tablet screen, but as soon as the question is opened the full version is always displayed.

Example:

Ballast water management system (BWMS)

This has been introduced to ease the load on the inspector while conducting an inspection.

The full question text is often quite long and in many cases questions are quite similar in their phrasing.

The shortened question does not allow an inspector to investigate the question subject matter in an abbreviated manner.

Question and Supporting Guidance

4. The Objective

There is always an objective statement which summarises why a question exists.

Example:

> **To ensure that ballast is always handled safely in accordance with company procedures and manufacturer's instructions.**

Objectives can be termed as small guidelines that help achieve the goal at hand.

Question and supporting guidance

5. Industry Guidance

Is used to provide a shared model reference of what should be considered when addressing the question subject matter.

Example:

IACS Information Paper. Classification societies – what, why and how?

Section B1 – The effectiveness of classification depends upon the shipbuilder, during construction, and the shipowner, once the vessel enters service, cooperating with the Class Society in an open and transparent manner on all issues which may affect its class status.

TMSA KPI 7.1.1 requires that there is a documented procedure for management of change which addresses both permanent and temporary changes which includes Installation of new equipment and modification of existing equipment.

Industry guidance is provided which includes, where relevant:

- Industry best practice guidance – Identifies industry publications and highlights the relevant guidance.
- Where OCIMF has a voice on the matter in hand, this takes precedence.
- TMSA KPI – The most relevant KPI applicable to the top level question is identified and summarised.
- Rules and regulations – The most applicable rules and regulations that apply to the to top level question are identified and the applicable sections quoted where practical and informative.

It should be understood that the information provided:
Is not intended to be an exhaustive interpretation of industry expectations.
Is only partial and where any doubt exists the source publications **must** be consulted for the full text.

Question and Supporting Guidance

6. Inspector Actions

The guidance is used to provide a basic framework for what actions the inspector should consider when addressing the top level question.

Example:

- **Sight and where necessary, review the company procedures for the operation, inspection and maintenance of the ballast water management system (BWMS).**
- **Inspect the BWMS control panel and verify that the system is operational with no apparent faults or alarms.**
- **Review available self-monitoring data to verify satisfactory operation.**
- **Inspect the visible parts of the BWMS and verify that it is intact and not modified in any respect.**
- **Where necessary, review the maintenance and inspection records of the BWMS.**

- **Interview the accompanying officer and verify their familiarity with:**
  - **Company procedures for the operation, inspection and maintenance of the BWMS.**
  - **The hazards from the operation of the equipment and the handling and storage of any chemicals used**

The inspector will be expected to use their judgement when deciding how many of the recommended actions are necessary. There are several boilerplate comments that are frequently used, for example:

Sight, and where necessary review, the procedure for…

An inspector only needs to consider sufficient recommended actions as are necessary to confirm to their own satisfaction that the top level question has been adequately addressed and the appropriate observations can be accurately entered in the response tools.

Question and Supporting Guidance

7. Expected Evidence

This section of the guidance is used to identify what evidence might reasonably be expected to be readily available when addressing the top level question.

Example:

- **Company procedures for the operation, inspection and maintenance of the ballast water management system (BWMS).**
- **The operation and safety manual for the BWMS.**
- **Inspection and maintenance records of the BWMS.**

The **lists are not exhaustive**. The inspector is at liberty to request **additional evidence** that is not listed.

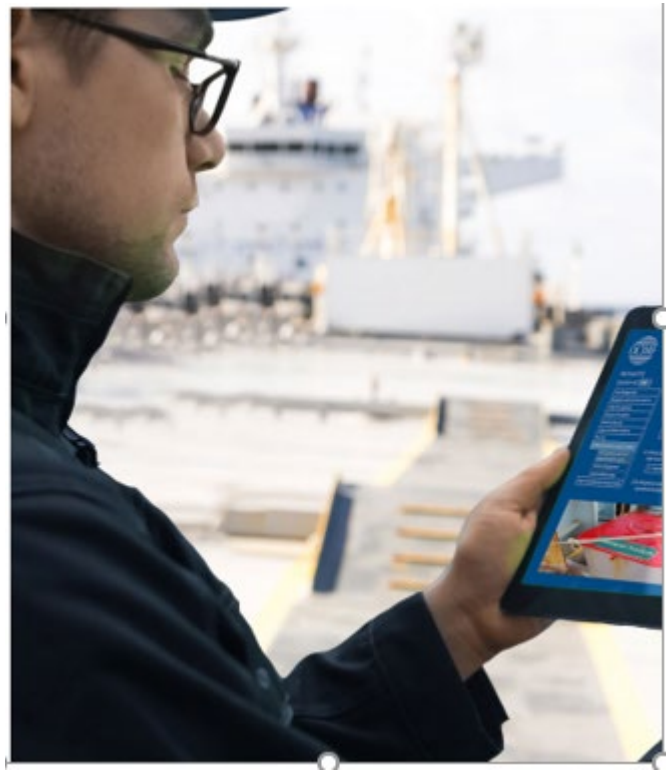
Remember that the vessel operator and vessel staff may have conducted a gap analysis of the SIRE 2.0 questions that are applicable to a vessel and, have determined which evidence would result in positive or neutral observations. Additional information may take time for the vessel staff to produce

Potential Grounds for an Observation

8. Grounds for Raising an Observation

One of the many clear benefits for SIRE 2.0 is a list of “Potential Grounds for an Observation”. This provides clarity to both the inspector and the operator.
Example:-

- There were no company procedures for the operation, inspection and maintenance of the ballast water management system (BWMS), including guidance on:
  - Who is responsible for supervising the use of the BWMS.
  - Who is permitted to use the BWMS.
  - Identification of hazards to the crew presented by the operation of the BWMS.
  - Mitigation measures for hazards presented by the operation of the BWMS.
  - Use, handling and storage of any active substances, such as chemicals, used by the system for disinfection or neutralisation.
  - Disposal of any by-products of the process.
  - Actions in the event of the failure of the BWMS.
- The accompanying officer was not familiar with the company procedures for the operation, inspection and maintenance of the BWMS, particularly the hazards from the operation of the equipment and the handling and storage of any chemicals used.
- The Chief Officer was not aware of additional precautions required before entering/working in ballast tanks as result of the operation of the BWMS.
- There were no records of the required inspection and maintenance of the BWMS.
- The BWMS was not fully operational, including pumps, filters and back-flush arrangements.
- BWMS self-monitoring data indicated that the equipment had not operated correctly at the last ballast/de-ballast operation.
- The BWMS had been modified and/or by-passed.
- The BWMS was defective in any respect.
- There was insufficient stock of the required chemicals for injection.
- Storage and/or handling arrangements for the required chemicals were not satisfactory.



Recording in the Observation Module

Recording Inspection Responses

Reference should be made to Module 4 “Introductory chapters of the Question Set”, response variations to element types.

Each question will be assigned one or more responsive tools to record the outcome of the inspection activity related to a top level question.

Remember that three types of element exist and multiple variations may exist for each type of top level question

- **Human element:** Were the appropriate crew familiar with company procedures, the associated tasks and, the use of any equipment.
- **Procedural element:** Were procedures available to manage the task, process or equipment.
- **Hardware element:** Was the machinery, equipment or structure in satisfactory condition.

Response tools may be programmed to acquire a **binary** or a **graduated** assessment by the inspector.

Human Element Responses

These questions refer to the familiarity of vessel staff with company procedures and processes and have a graduated response as follows

- Execution of task exceeded normal expectations
  (Mandatory tagging of one or more PIF with a mandatory supporting comment to provide context.)
- Execution of task was as expected
  (no requirement or option for comment)
- Execution of task was largely as expected
  (Mandatory tagging of one or more PIF with a mandatory supporting comment to provide context.)
- Execution of task was not as expected
  negative observation required in the observation module tagging one or more PIF's

Note – Individiuals referred to in comments for both positive and negative observations should be recorded as :

- **An Observed Person (OP) or**
- **The Responsible Team (RT)**

Tagging of the Observed Person or Responsible Team should use the following group tags:-

- **Senior deck officer**
- **Junior deck officer**
- **Senior engineer officer**
- **Junior engineer officer**
- **Rating.**
- **Deck team task – historical task only**
- **Engine room team task – historical task only**

Process Element Responses

Where a top level question, or supporting guidance refers to a vessel procedure or a documented process, **the process response tool** is assigned .

There are questions that require a binary response, but most questions that refer to vessel procedures or documented processes require a graduated response, as follows:

- Procedure and / or checklist sighted
- Procedure and or checklist sighted supporting comment
- Procedure missing, inadequate, or inaccurate - **negative observation required in the observation module**

Where at negative observation is recorded in the observation module

- The missing inadequate or inaccurate procedure should be identified through the TMSA based classification code.
- The underlying reason for the defect should be identified through the standard cause analysis tree where possible.
- Text comment should be added to describe the defect as observed

Where the process element of a question is not applicable to the vessel being inspected, and not answered, the drop down menu option should be used to select the reasons

Hardware Element Responses

Where a top level question for supporting guidance refers to vessel structure, machinery, outfitting, or equipment, the **hardware tool is assigned.**

In many cases the hardware response tool assigned is binary, since if the subject is a top level level question and found to be defective in any respect the outcome is unsatisfactory.

In cases where the hardware response tool assigned is graduated, the inspector is required to make a qualitative judgement of the observed condition, based on the following categorisations:

- Free from obvious defects or deterioration
- Slight superficial deterioration - no supporting comment
- Slight superficial deterioration- **supporting comment and / or photograph**
- Observable or detectable deficiency – Negative observation required in the **Negative Observation Module**.

Where a negative observation is recorded in the **Negative Observation module.**

- The deficient vessels structure, machinery, outfitting, or equipment should be identified through the standard classification coding
- where possible the underlying reason for the deficiency should be identified through the standard cause analysis tree
- A text negative comment should be added to describe the deficiency observed
- A photograph should be taken and appended to the report to show deficiency as observed of possible

Where the hardware element of a question is not applicable to the vessel being expected the not answered drop down menu should be used

Photo Comparison Questions

A top level question refers to one of the standard photographs provided by the vessel operator prior to the inspection, a P**hotographic Comparison Response Tool** is assigned.

The inspector will be required during the inspection to compare photographs provided by the vessel operator with the actual condition of the vessel observed at the time of the inspection. The intention of photographic questions is to permit the reader of the final report to assess the physical and cosmetic condition of the vessel being inspected.

The photographs provided should be representative of the general condition of the similar areas if the area in the photograph had been upgraded while still remaining similar areas have not, then the photograph cannot be considered being a representative of the general condition.

All photograph comparison tools require a graduated response as follows:

- Photo provided representative.
- Photo representative- item to be highlighted - comment
- Photo reasonably representative- **additional photos required / added- comment.**
- Photo not representative- negative observation required in the **negative observation module**

REFER to the Introductory chapters of the Question Set once published for more guidance on Photographs

Recording Negative Observations in Multiple Observation Modules

Recording Negative Observations in Multiple Observation Modules

It was described in Module 3 – Risk Based Approach, that SIRE 2.0 is based on barrier management with the purpose of identifying when a human, procedural, or Hardware, has resulted in a potential weakening of a barrier.

- The identification of an apparently isolated negative observation can potentially identify multiple weaknesses, or failures across other systems, or processes.

- It is an important concept to understand, that:
  - Multiple Observations under a single Question can exist.

Case Study Example

6.6.1 – Rotational 1 question – Oily water separator

Were the Master and engineer officers familiar with the **company procedure** for the use of the oil filtering equipment and, was the **oil filtering equipment in satisfactory condition** and **used in accordance with the company procedure**, manufacturer's instructions and MARPOL Annex I?

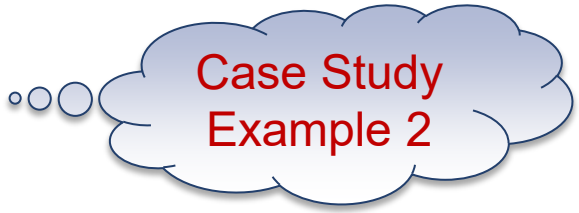
Hardware – Oily water separator was defective.

Human – The accompanying officer was not familiar with the actions to take if the oily water separator was defective.

Process – Maybe – there was no company procedure to describe what had to be done in the event of an oily water separator break down.

Recording Negative Observations in Multiple Observation Modules

Potentially multiple observations could exist over numerous questions for the same observation :



5.6.3 Cargo pump room fixed gas detecting system

Question - Were the Master and officers familiar with the operation and maintenance of the cargo pump room fixed gas detecting system and, was the equipment fully operational with sensors calibrated and alarm activation points set in accordance with company procedures and manufacturer's instructions?

Observations:- The fixed LEL sensor was defective, upon questioning the officer, he was unfamiliar with the operation and testing process, and was not familiar with the defect and defect reporting process.

Hardware - One or more hydrocarbon gas, toxic gas or oxygen sensors were out of service.

Human- The accompanying officer was unfamiliar with the operation and maintenance of the pumproom gas detecting system.

However we also potentially have another observation under:

2.4.1 Defect Reporting system

Human – The accompanying officer was unfamiliar with the company defect reporting procedure

Hardware- Defects were evident onboard the vessel during the inspection that were required to be entered in the defect reporting system but were not

Recording Negative Observations in Multiple Observation Modules

Important Concepts to Note

SIRE 2.0 - Each top level Question is addressing a safeguard

The inspector **must consider the guidance under each assigned CVIQ question** and **provide observations within the assigned response tools.**

Decide whether the guidance provided will result in a negative observation **from the Human, Process and/or Hardware perspective.**

The inspector **must carefully consider whether a defect or substandard condition** is linked to another question

The process described above is not the same as what was known as ‘double dipping’ in the original SIRE Programme as within SIRE 2.0 each top level question is addressing the **safeguards or activities required to be in place to prevent the weakening or failure of a specific barrier to prevent an undesirable event**.

Addressing Negative Observations When No Assigned Question

Addressing Negative Observation To None Allocated Questions

Hardware

What if I notice a piece of Hardware that is defective, but not selected for review under the inspection?

Clarification:- The Philosophy of SIRE 2.0 is based around addressing **high risk Core** Questions every inspection, and **lower risk** issues on a **rotational basis** so that a complete evaluation of all aspects of a vessel's activities within the scope of SIRE 2.0 are covered over time.

It is Feasible that the inspector in inspecting all areas of the ship, will from time to time, come across situations where a negative observation may be warranted, but where the appropriate question is not included in the CVIQ, Possibly due to the item being a rotational question.

In SIRE 2.0 -The Master is required to provide a list of all open defects entered in the defect reporting system at the opening meeting. Defects are covered under **Core question 2.4.1** .

TMSA KPI 4.1.2 requires that a defect reporting system is in place for each vessel within the fleet and covers all onboard equipment

Action :-

- If the defect has not been entered in the defect reporting system a negative observations should be raised under **2.4.1.**
- Similarly if any defects existed that would require notification to the classification Society and/ or flag administrations, and have not, then an observation should be raised under **2.4.2**

We will look at 2.4.1 in the next Section

Addressing Negative Observation To None Allocated Questions

Procedure and Human Based Processes Lacking

What if I find a member of the ships staff unfamiliar with a process, procedure or human response, but not associated with a question I am asking?

Clarification: If the inspector conducts the inspection in accordance with the overall VIQ and individual question guidance, it is unlikely that a specific substandard human response will be identified which is not dealt with by the core or rotational questions allocated to the inspection.

However, If an officer or rating is unfamiliar with a duty or process that they are observed to be undertaking to such an extent then an observation should be considered.

Action:-

Core Question 3.5.1 should be considered for such an event.

3.5.1	Had the company developed an effective familiarisation program that covered the personal safety and professional responsibilities of all onboard personnel, including visitors and contractors, and were records available to demonstrate that the familiarisation had been completed as required?
Objective	To ensure that all onboard personnel, including contractors and visitors, are fully familiarised with their onboard duties, responsibilities and the equipment and machinery fitted to the vessel relevant to their role.
TMSA KPI	3.1.4 requires that formal familiarisation procedures are in place for vessel personnel, including contractors.

What if I find a Safety related condition that cannot be identified to a specific question ?

Clarification: A series of questions have been developed which reflect that safety inspections of all areas of the vessel should be carried out by a designated officer to identify, record, and verify rectification of any developing hazards or substandard conditions that arise on board.

These questions ensure that the inspector inspects all areas of the vessel to verify compliance. Any defective items noted within these areas, that have not been recorded by the ships staff, indicate that the system used to capture safety items may not be robust.

Action:-

- If the defect has not been identified by the ships staff, and no specific question is assigned to address the deficiency in the CVIQ, the inspector can use the following generic questions:-

5.7.6	Cargo Pumproom Safety Inspections
5.7.7	Machinery space Safety Inspections
5.7.11	Ballast or bunker pump room safety inspections
5.7.12	Forecastle Castle space safety inspections
5.7.13	Accommodation safety inspections
5.7.14	Main deck safety inspections

Addressing a Question Under SIRE 2.0

(This section of the Module is to Introduce you to the process of working through a question)

Question 2.4.1

Question Summary

Question	Response Type	Question Type
2.4.1	Human - Graduated Process – Graduated Hardware - Binary	Core

Question:

Were the senior officers familiar with the company procedure for reporting defects to vessel structure, machinery and equipment to shore-based management through the company defect reporting system and was evidence available to demonstrate that all defects had been reported accordingly?

Objective

To ensure that defects to vessel structure, machinery and equipment are documented and reviewed by management.

TMSA KPI 4.1.2 requires that a defect reporting system is in place for each vessel within the fleet and covers all onboard equipment

Notes

The Master will be required to provide a list of all defects to the inspector, and demonstrate the defect reporting system

Q2.4.1

Actions and Evidence

Inspector Actions

Review the Procedure, Defect reporting system, make notes, review the process by sampling:

- Sight, and where necessary review, the company procedure which described the management and operation of the defect report system.
- Review the entries in the defect reporting system and verify that they had been entered in accordance with company expectations, communicated to the shore management within the time frame specified and, had been acknowledged.
- During the balance of the inspection note any obviously defective structure, machinery or equipment that was not subject to a defect report for inclusion as an observation under this question.
- Review a sample defect report and confirm that a timeline for corrective action had been assigned and any mitigating actions had been conducted as directed by shore-based management.

Expected Evidence

- The company procedure for managing defects to vessel structure, machinery and equipment through the defect reporting system.
- The defect reporting system or the planned maintenance system where the systems were integrated.
- Shore based acknowledgement of each defect entered into the defect reporting system.
- A printed list of all open defects reports entered into the defect reporting system.

Q2.4.1

Potential Grounds for an Observation

Potential Grounds for an Observation

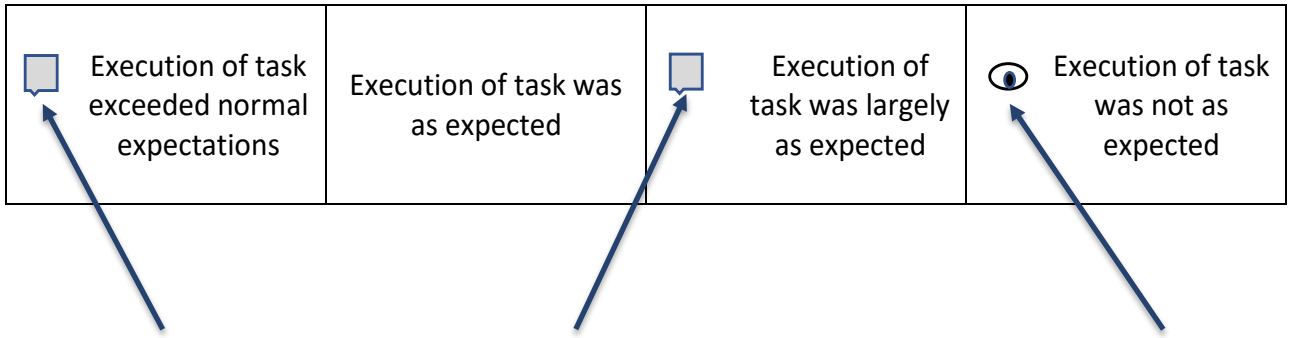
- There was no defect reporting system.
- There was no company procedure for managing defects to vessel structure, machinery and equipment through the defect reporting system.
- The accompanying officer was unfamiliar with the company defect reporting procedure.
- Defects entered in the defect reporting system had not been acknowledged by shore management.
- Defects were evident onboard the vessel during the inspection that were required to be **entered in the defect reporting system but were not.**
    - In such cases identify the defective equipment under the **hardware dropdown** in the **observation module**.
    - To be limited to items listed on the supplements to the statutory certification or subject to class survey.
- Defects which had either caused an incident or were caused by an incident that had **not been reported through the company incident reporting system** for further investigation.

Where defects were properly recorded in the defect reporting system and acknowledged by shore management such defects should not be listed under this question.

Q 2.4.1

Notes

- This is a **Human Graduated** response and therefore requires questioning of selected officers, into their understanding using Human Response type Questioning. The responses required to the tablet include :



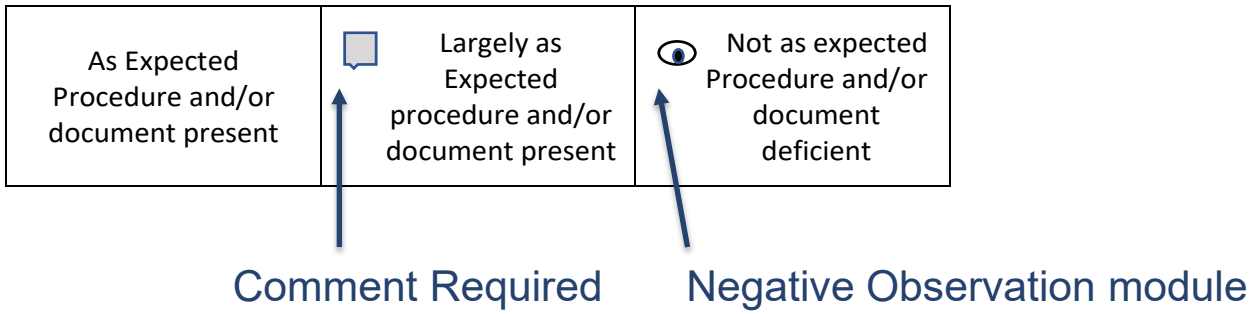
NOTE –

- Rank Grouping or Responsible Team to be Tagged
- Where a negative observation is recorded in the negative observation module.
  - The most appropriate PIF should be identified and tagged.
  - A text observation should be added to provide context as to why the task or activity was not executed as expected.
- Text comments should not identify an individual. Written observations should only refer to the **Observed Person (OP)or Responsible Team (RT)**

Q 2.4.1

Notes

- This is a **Process Graduated** response on the standard of the defect reporting conducted. The response is required to the tablet:



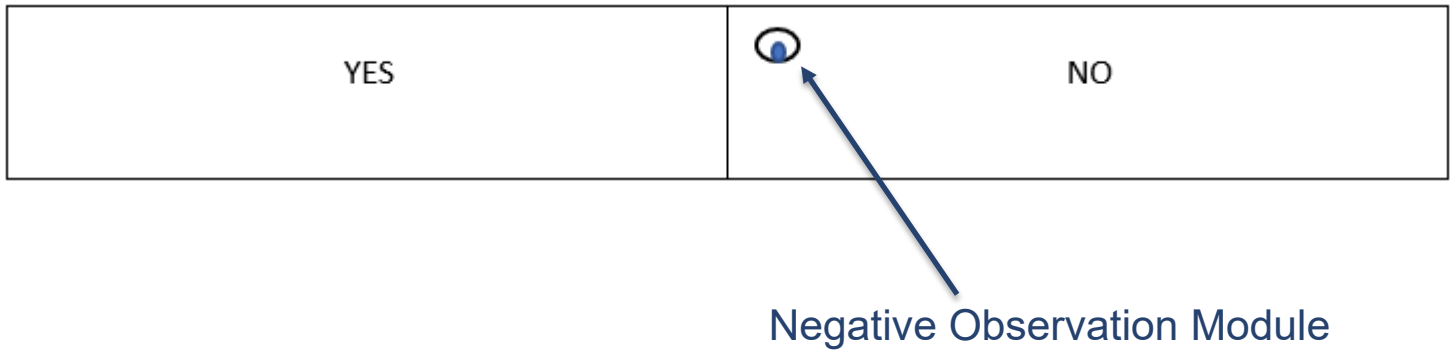
NOTE

- The Deficient Procedure or document should be identified via the TMSA based classification coding
- Where possible the underlying reason for the negative observation should be lidted in the standard cause identification tree
- A Negative comment shall be added to describe the negative observation as observed.

Q 2.4.1

Notes

- This is a **Hardware Binary** Question which is verifying that no further defects were found during the inspection that were not included on the defect reporting. Or if to the contrary an observation raised with comments.



- **NOTE:-**
- **A negative Observation shall include entries in the negative observation module**
  - The deficient vessel structure, machinery, outfitting, or equipment should be identified though the standard classification coding.
  - Where possible, the underlying reason for the deficiency should be identified through the standard cause analysis tree.
  - A text negative comment should be added to describe the deficiency as observed.
  - A photograph may be taken and appended to the report to show the deficiency as observed.

Inspection Time Duration

Overall Inspection Duration

Creating a balanced, bespoke inspection questionnaire

- The standard inspection will be based **on 8 hours onboard the vessel**. Questions will be allocated to the following inspection areas based on the overall inspection plan and the notional time allocation for each question:
- Due to circumstances encountered during the inspection, the overall inspecting time may be longer, but should in no circumstances exceed 10 hours.

Opening meeting	0.25
Documentation	1.5
Chief Engineer's office	0.5
The bridge	1.5
Internal and External decks	0.5
Mooring decks	0.5
Main deck & pumproom	1.0
Cargo control room	1.0
The engine and steering compartments	1.0
Closing meeting	0.25

- Where campaign questions have been created which are applicable to a vessel, the notional time for these questions will be in addition to the standard 8 hours.
- The question allocation strategy has been developed to ensure each inspection provides a balanced report with all rotational questions applicable to any given vessel completed over a series of inspections.
- **The overall inspection timing strategy will be validated during trial inspections.**

SUMMARY

You should now have an understanding and be able to describe:

1. **The differences between Core, Rotational, Conditional and Campaign questions**

2. **How questions are structured**

3. **Recording Requirements in the Observation Module for each type of Question**

4. **Potential to record multiple observations for each question**

5. **In the unlikely event that a Negative Observation needs to be made with no defined question assigned for the inspection being conducted, then the following can be used:**
   a) For Hardware Items not on the defect list Q 2.4.1 or 2.4.2 For class items
   b) Procedure and Human Factors Q 3.5.1
   c) General Areas of the vessel
      I. 5.7.6 Cargo Pumproom Safety Inspections
      II. 5.7.7 Machinery space Safety Inspections
      III. 5.7.11 Ballast or bunker pump room safety inspections
      IV. 5.7.12 Forecastle Castle space safety inspections
      V. 5.7.13 Accommodation safety inspections
      VI. 5.7.14 Main deck safety inspections

6. **Navigating and Responding to a Question**

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