

Systemic Research Model applied to ISO Strategic Equity

Modelo de investigación sistémica aplicada al ISO Strategic Equity

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Abstract

This article discusses the risks of conducting an investigation focused exclusively on human behavior, without considering the operational context, which will make it difficult to issue effective recommendations to prevent the recurrence of similar accidents.

Marine casualties and incidents can have causal factors and often the underlying safety issues are remote from the scene of the incident. A timely and methodical investigation that goes beyond the immediate evidence and focuses on looking for conditions that may cause similar occurrences in the future is necessary to properly determine such issues. Therefore, safety investigations of marine casualties and incidents should be understood as a means to determine not only what happened in the context of the accident, but also to uncover safety deficiencies in the overall management of operations, from formulation to implementation, as well as in terms of regulation, survey and inspection. For this reason, safety investigations must be sufficiently broad to cover these primary criteria.

Resumen

El presente artículo discurre sobre los riesgos de realizar una investigación enfocada exclusivamente en el comportamiento humano, sin considerar el contexto operacional, lo que dificultará emitir recomendaciones efectivas para evitar la recurrencia de accidentes similares.

Los siniestros y sucesos marítimos pueden tener factores causales y, frecuentemente, las cuestiones de seguridad subyacentes están alejadas del lugar del siniestro. Para determinar dichas cuestiones adecuadamente es necesario efectuar una investigación oportuna y metódica que vaya más allá de las pruebas inmediatas y que se centre en la búsqueda de las condiciones que puedan causar sucesos similares en el futuro. Por tanto, las investigaciones de seguridad sobre siniestros y sucesos marítimos deberían entenderse como un medio para determinar no solamente lo acaecido en el marco del accidente, sino también para descubrir deficiencias en materia de seguridad en la gestión general de las operaciones, desde su formulación hasta su implantación, así como por lo que respecta a la reglamentación, reconocimiento e inspección. Por esta razón, las investigaciones de seguridad deben ser lo suficientemente amplias como para abarcar estos criterios primordiales.

A crew member of the motor vessel Strategic Equity was hurt on August 13, 2020, while attempting to free the forward spring line that had become stuck between the ship and a wharf fender.

During that attempt, the tension of the mooring line caught in the fender suddenly released and impacted the face of the crewman who was acting as a signalman. The injuries sustained by the crewman resulted in his death.

Before starting the loading operation, the first officer descended to the quay to read the drafts, observed the trapped mooring line and gave notice to the boatswain to loosen the headlines in order to open the bow off the quay and release the trapped line.

A representative audiovisual representation of the accident can be viewed in the following link:



Understanding the performance of operational personnel is a necessary but insufficient condition to ascertain the deeper factors linked to the occurrence of an event, claims the safety report produced by the National Department of Marine and Inland Waters Occurrences Investigation (DN-ISMFL, in its Spanish acronym) of the JST.



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In fact, it is difficult to evaluate frontline operators' performance "in the void," that is, without fully appreciating the operational context in which it occurs, according to theories that explain how accidents and incidents start.

It is essential to describe elements like the processes, procedures, and policies implemented for risk control to identify the systemic factors involved in the occurrence and, as a result, to establish the most effective and appropriate safety recommendations, capable of preventing its repetition.

According to: International Maritime Organization (IMO):

The causes of marine accidents and casualties can vary, and the underlying safety problems are frequently found far from the scene of the accident. A thorough examination that goes far beyond the available facts in search of factors that might contribute to future occurrences is necessary for the proper identification of such issues.

So, it is important to think of marine casualty or incident safety investigations as a way to pinpoint not only the accident events but also safety flaws in the operation's whole management, from policy to implementation, as well as in regulation, survey, and inspection. Because of this, safety investigations ought to be thorough enough to satisfy these fundamental requirements.¹

In that regard, the Strategic Equity research would have reached the same conclusion as those who simply attribute the accident's cause to "human error" if a linear technique had been employed.

However, the application of a systemic methodology allowed for the elaboration of certain aspects of the safety context. As a result, it was discovered through the voice recordings of the M/V Strategic Equity's VDR that there was a high probability that the waves created by the passage of another ship had an impact on the ship's movement and the sudden release of the trapped line.

As a result of the report's discovery of unknown risk factors in the ship's Safety Management System, safety suggestions were made to bolster the transport system's defenses.

The full report can be downloaded by scanning the QR code.



1. Resolution A.1075(28), Guidelines to assist investigators in the implementation of the Casualty Investigation Code [Resolution MSC.255(84)], Section 5.1.1, page 5.