**LLAMA ZERO-SHOT**

On 22 December 2019[DTE], the tug vessel Svitzer Mercurius was assisting the berthing of the ultra-large container ship CMA CGM Marco Polo in Southampton Water, UK. Suddenly, the towline pennant parted and snapped back towards the tug's deck, striking the wheelhouse windows and injuring five crew members with multiple laceration injuries [MGE]. The accident occurred due to the slippage of the towing winch band brake and towline pennant failure[UGE].

The investigation found that the towline pennant had suffered mechanical damage to its outer jacket, which had been repaired, but the load-bearing core had sustained significant damage from high and/or shock loading exposure. The towline had been used for a reported 769 jobs before arrival in Southampton, which was less than the 1000 job replacement policy given as a rough guide by Svitzer for its Saturn-12 (Dyneema) pennants.

A robust rope management system, encompassing inspection, maintenance, loading history, and retirement, and residual strength testing should be implemented to prevent similar accidents. The investigation also recommended that a thorough documented inspection process should be conducted for new vessels, including inspection of towline assemblies and winch brakes.

The report highlighted the importance of maintaining towline assemblies and winch brakes in good condition, and the need for a suitable glass standard for tug wheelhouse windows that provides a measurable level of crew safety against the hazard of a recoiling towline. The investigation also noted that the risk of a towline failure and its subsequent snapback was recognised and understood, but the likelihood and consequence of a recoiling line striking the wheelhouse windows had not been assessed.

The Maritime and Coastguard Agency (MCA) has raised the need for a bridge window glass standard for tugs at the Recognised Organisations British Certification Committee meeting. The British Tugowners Association has published its towline Rope Selection, Procurement and Usage guidance document, which provides information on tug characteristics, operational and environmental considerations, rope strength, rope certification and installation, methods of connection, rope safety (including snapback), factors affecting rope usage (including elongation), rope maintenance and testing, inspection and retirement.

The investigation recommended that Svitzer Marine Limited should undertake a fleetwide risk assessment to determine the level of risk associated with towline failure and snapback and the potential for impact by a line recoiling into wheelhouse windows, and employ appropriate laminated glass or other defences to mitigate against the risk of flying glass injuring its tug crews[UGE].

**LLAMA ONE-SHOT**

The accident report S201912.txt was released by Det Norske Veritas (DNV)[NNE], revealing a tragic maritime incident that occurred on December 12, 2019[DTE]. The vessel involved was the Svitzer Mercurius, which was operating in the Southampton area. Unfortunately, at approximately 3:00 PM local time [DTE], the tug encountered an unfortunate accident while anchored off a lee shore.

The investigation into the incident revealed that strong winds of over 50 knots and low visibility [MGE] contributed to the anchor dragging, ultimately resulting in grounding on the nearby coastline. It is believed that the combination of these factors, coupled with inadequate vessel preparation and insufficient safety measures, led to the accident.

According to the report, the damage sustained by the Svitzer Mercurius included significant hull breaches and structural damage[MGE].

Fortunately, there were no injuries [MGE] or pollution reported during the incident. However, the refloating operation was a complex one, requiring coordination between local authorities, salvage companies, and harbour authorities.

An analysis of the causes of the accident reveals inadequate safety measures in place for anchor handling[MGE], poor weather monitoring[MGE], and insufficient crew training on emergency situations like this type of incident. Moreover, it also highlights importance of proper vessel maintenance, adequate provision of spare parts and supplies on board.

Based on the report, several recommendations have been made to improve maritime safety and prevent similar accidents in the future. Firstly, DNV recommended that Det Norske Veritas take into account for developing a unified requirement for wheelhouse window glazing[MGE]. Secondly, DNV recommends vessel owners to conduct a fleetwide risk assessment to identify proper glass or other defences[MGE]. Thirdly, the Maritime and Coastguard Agency is recommended that Kuzma Minin had remained at anchor off a lee shore, with strong winds forecast due to low quantity of bunkers and absence of spare engine lubricating oil[MGE].

**QWEN ZERO-SHOT**

On December 22, 2019[DTE], the tug Svitzer Mercurius, while assisting the berthing of the ultra-large container ship CMA CGM Marco Polo, experienced a serious marine casualty. The starboard towline pennant failed, snapping back and shattering the wheelhouse window, resulting in minor injuries to five crew members. The accident occurred when the tug was applying full astern thrust, and the hydraulic band brake on the towing winch slipped twice, leading to the pennant's failure. The towline pennant, which had been in use for over 769 jobs, had suffered significant mechanical damage and fatigue, making it unsuitable for continued use.

The root causes of the accident include inadequate towline management, insufficient inspection and maintenance, and a lack of robust policies for replacing worn pennants. The pennant's condition was not properly assessed before the tug's arrival in Southampton, and the winch brake was contaminated, reducing its holding capacity. Additionally, the tug's wheelhouse windows, constructed of toughened safety glass, were unable to withstand the high-energy impact of the recoiling towline, leading to the shattering of the glass and injury to the crew.

The lessons learned from this accident highlight the importance of comprehensive towline management, including regular inspections, load testing, and timely replacement of worn components. A robust risk assessment should be conducted to evaluate the potential impact of a recoiling towline on wheelhouse windows, and appropriate mitigation measures, such as using laminated glass, should be implemented. Furthermore, a formal induction process for new vessels and crew is essential to ensure that all safety procedures and equipment are properly understood and followed. These precautions are crucial for preventing similar accidents in the future and ensuring the safety of tug crews.

**QWEN ONE-SHOT**

The incident occurred on December 22, 2019, at 12:31 UTC (local time 13:31) [MGE] involving the tug Svitzer Mercurius and the container ship CMA CGM Marco Polo while operating in Southampton Container Terminal. The Svitzer Mercurius was tasked with assisting the container ship during its approach to the port. The tug had been recently handed over from Iskes to Svitzer Alma[MGE], and by noon on December 1st, a new crew from Svitzer Alma took control of the vessel.

The operations proceeded smoothly until around 10:35[DTE], when the tug was positioned correctly for towing. The starboard towline was connected, with 40 meters of line run out from the tug’s winch and secured as described. However, at approximately 12:31 UTC (local time 13:31), Svitzer Mercurius' starboard forward towline pennant failed, causing the line to break suddenly.

The sudden failure of the towline resulted in a significant impact on the tug. The broken line caused minor injuries to five crew members and damaged three wheelhouse windows while one window was completely shattered. This incident highlights the critical importance of thorough equipment inspection procedures and safe handling practices in marine operations.

The summary underscores that despite the careful handover and initial smooth operation, unforeseen failures can occur, leading to serious consequences for both the vessel and its crew. The report emphasizes the need for ongoing maintenance checks and robust safety protocols to prevent such incidents from recurring[MGE].

**CHAT GPT ZERO-SHOT**

The report investigates an incident involving the tug Svitzer Mercurius, which occurred on 22 December 2019[MGE] in Southampton. During a stern towing operation assisting the ultra-large container ship CMA CGM Marco Polo, the tug's towline pennant failed and recoiled into the wheelhouse, shattering a forward window. Glass fragments injured five crew members, causing minor lacerations to their faces and arms. Fortunately, eyewear protected the crew from more serious injuries. The incident also caused damage to the wheelhouse, including cracks in aft-facing windows.

The primary cause of the accident was the failure of the towline pennant, which had sustained significant wear and damage under its previous owner. The pennant’s residual strength had been reduced to around 52% of its original capacity due to prior exposure to shock loads and mechanical damage. Additionally, contamination of the towing winch brake with debris and grease caused it to slip, resulting in shock loads that exceeded the weakened pennant’s capacity. Inadequate maintenance and inspection following the tug’s transfer to Svitzer’s fleet were contributing factors. The lack of a robust induction process meant that the condition of the towing equipment was not fully evaluated[UGE].

The incident highlights several lessons for future operations. First, towline management systems need to include stricter inspection, maintenance, and replacement criteria, particularly for high-risk components like pennants. Damaged or heavily used pennants should be replaced rather than repaired or end-for-ended. Second, tug wheelhouse windows should be better designed to withstand high-energy impacts, such as recoiling lines, using laminated or high-strength glass to prevent injuries from shattered fragments. Third, induction procedures for new vessels must be formalized and comprehensive, ensuring all safety-critical equipment is assessed and fit for purpose. Lastly, operators should conduct risk assessments that consider the potential for towline snapback to impact the wheelhouse.[OGE]

Adopting these measures, including improved towline management and window standards, could significantly enhance crew safety and prevent similar accidents in the future.

**CHAT GPT ONE-SHOT**

On 22 December 2019[DTE], the UK-flagged tug Svitzer Mercurius was involved in a serious marine casualty while assisting the ultra-large container ship CMA CGM Marco Polo in the Port of Southampton. During the towing operation, the tug’s towline pennant parted and snapped back, striking the wheelhouse and causing significant injuries to five crew members [MGE], as well as extensive damage[MGE] to the vessel’s wheelhouse windows and internal equipment. The accident occurred in calm weather conditions with good visibility, as Svitzer Mercurius was acting as the stern tug for berthing operations.

The accident unfolded when the towline pennant failed under load after the tug was instructed by the pilot to apply full astern thrust. In the moments prior to the failure,[MGE] the tug's towing winch brake slipped twice, releasing several meters of towline before regaining hold. The resulting shock loads on the towline caused the pennant, which had already been weakened by previous use, to part. The recoiling towline struck the forward starboard wheelhouse window, shattering it and causing flying glass fragments to injure the crew inside. The injuries included multiple facial and upper body lacerations, although none were life-threatening. The tug subsequently swapped positions with another assisting tug and returned to its berth, where the injured crew were taken to the hospital for treatment.

The investigation revealed that the towline pennant’s residual strength had been significantly reduced due to prior mechanical damage, wear, and exposure to high loads during its previous operations in the Netherlands. Additionally, the towing winch's band brake was found to be contaminated with debris, likely a combination of brake dust and grease, which reduced its holding capacity and contributed to the slippage. These factors combined to create the conditions for the towline failure. Further analysis highlighted deficiencies in the vessel's induction process into the Svitzer fleet. The tug had been recently acquired and brought into service with insufficient inspection and preparation. The towline assembly, which did not conform to Svitzer’s standard configuration, was not replaced or thoroughly assessed for suitability before operations commenced. The crew, who were operating under mixed safety management systems from the previous and current owners, were not adequately trained or familiarized with Svitzer’s procedures.

In response to the accident, Svitzer took several corrective actions, including a review of its towline inspection and maintenance procedures, a reassessment of its vessel induction processes, and improved training and familiarization for crews. The company also implemented a fleetwide review of towing equipment and operational practices. The Maritime and Coastguard Agency (MCA) raised concerns about the strength and safety standards of wheelhouse windows on tugs and has initiated discussions on updating related regulations [UGE].

To prevent similar incidents in the future, several recommendations have been made. Towing companies should ensure that towline assemblies, particularly pennants, are regularly inspected, tested, and replaced when there is evidence of damage or wear. A robust towline management plan should be implemented, incorporating manufacturer guidelines for inspection, maintenance, and discard criteria. Additionally, tug operators should adopt laminated or impact-resistant safety glass for wheelhouse windows to protect crews from injuries caused by recoiling towlines. Clear and thorough induction processes for new vessels entering a fleet are essential, including detailed inspections of towing equipment and adherence to standardized configurations. Finally, enhanced training on towline safety, snapback risks, and equipment maintenance should be provided to all crew members to ensure safe operations during towing.

**LLAMA FEW-SHOT**

On 22 December 2019 at 1231, a serious marine casualty occurred on the foredeck and wheelhouse of a vessel [NNE]in Southampton, resulting in significant damage and potential risks to the crew[MGE]. The accident took place while the vessel was operating in internal waters, with a crew of 7 on board. According to the report, the incident involved a towing operation that went awry, highlighting the importance of proper risk assessment and safety control measures.

The damages sustained during the accident were substantial, with the report noting that the vessel's structure and equipment were severely impacted. [MGE]The consequences of the incident could have been even more severe if not for the prompt response of the crew and emergency services. An analysis of the causes of the accident reveals that a lack of adequate risk assessment and safety protocols may have contributed to the incident. The International Association of Classification Societies (IACS) emphasizes the importance of recognizing and addressing specific risks associated with particular ships, operations, and trade, rather than simply relying on generic statutory and class requirements. [UGE]

In response to the accident, the company responsible for the vessel has taken steps to review and revise its safety management objectives, including establishing appropriate safeguards to prevent similar incidents in the future. The report highlights the need for companies to prioritize risk assessment and implement effective safety control measures, particularly when it comes to towing operations. To mitigate the risks associated with such operations, it is essential to identify potential hazards, such as towline failure, and take steps to minimize their impact.

To prevent similar accidents from occurring in the future, it is recommended that shipping companies prioritize thorough risk assessments and implement robust safety protocols. This includes providing crew members with comprehensive training on towing operations and emergency response procedures. Additionally, vessel operators should ensure that their safety management systems are regularly reviewed and updated to reflect changing operational requirements and industry best practices. [MGE]By taking a proactive approach to safety, the shipping industry can reduce the likelihood of accidents and minimize the risks associated with complex operations like towing. Ultimately, the goal should be to create a culture of safety that prioritizes the well-being of crew members and the integrity of vessels, while also promoting efficient and effective operations.

**QWEN FEW-SHOT**

On December 8, 2019, [DTE] an unfortunate incident occurred involving Svitzer Mercurius, a tug assisting in the berthing of the ultra-large container ship CMA CGM Marco Polo at the port of Southampton. The accident took place when the towline pennant suddenly parted and recoiled towards the deck, striking five tug crew members and causing multiple laceration injuries due to shattered glass from one of the vessel's wheelhouse windows.

The accident stemmed from a failure in the towing winch band brake system, which allowed the towline to slip. This event led to the pennant snapping back forcefully, shattering the window and sending fragments towards the crew on deck. [MGE]The causes underlying this incident were multifaceted, with safety management systems being criticized for their shortcomings. [MGE] Specifically, while Svitzer's risk assessments had identified a towline failure as a hazard and required certain safeguards, there was no clear formal induction process for new crew members, [MGE]which contributed to less-than-ideal reaction times in handling unexpected events.

Following the incident, Svitzer Marine Limited undertook several actions aimed at preventing future occurrences. These included commissioning a detailed examination of the failed pennant to fully understand its failure mode and conducting a comprehensive internal investigation with nine actions taken forward. Key among these were reviews of the HMS 06-005 Towlines procedure and change management processes for new vessels, with a focus on enhancing safety protocols and ensuring better induction practices.[UGE]

To recommend future measures in shipping, it is crucial to emphasize the importance of robust safety management systems that go beyond compliance with generic statutory and class requirements. Safety should be viewed as an ongoing process requiring continuous assessment and improvement. Additionally, clear and structured induction processes for new crew members should be implemented to ensure they are well-prepared to handle unforeseen circumstances on board. Enhanced ergonomics in the wheelhouse design and improved Electronic Chart System capabilities would also contribute significantly to better situational awareness and safer navigation practices.In response to this accident, Seatruck Ferries Limited implemented several measures aimed at improving safe navigation practices. These included enhancing bridge ergonomics, updating Electronic Chart Systems to ensure more accurate situational awareness, and promoting effective Bridge Resource Management (BRM) training for all personnel involved in pilotage operations. Aberdeen Harbour Board also reviewed its vessel traffic service procedures and introduced a graded system of pilotage exemption certificates along with enhanced training programs.

To prevent similar accidents in the future, it is crucial to improve navigational practices by integrating multiple sensor technologies such as radar, echosounder, and AIS (Automatic Identification System) for better situational awareness. Enhancing bridge ergonomics to provide a more effective working environment can also significantly reduce human error. Additionally, mandatory training programs focused on BRM should be reinforced to ensure all crew members are well-prepared to handle critical navigation scenarios.[MGE]

These recommendations aim to not only address the immediate aftermath of this accident but also to establish robust safety protocols that will benefit the entire maritime industry by reducing the likelihood of future incidents.

**CHAT GPT FEW-SHOT**

On 22 December 2019, at approximately 1231, the UK-flagged Azimuth Stern Drive tug Svitzer Mercurius suffered a serious marine casualty while assisting the berthing of the ultra-large container ship CMA CGM Marco Polo at Southampton Container Terminal. During towing operations, the towline pennant connected to Svitzer Mercurius parted under load and snapped back, striking the tug’s wheelhouse and shattering three windows, one of which caused flying glass fragments to injure five crew members. The incident occurred in calm weather with good visibility and sunny conditions, and the vessel was engaged in the stern tug role during the berthing maneuver.

The accident began when the towline’s loading increased as Svitzer Mercurius was instructed to provide full astern thrust. The towing winch brake, set to its full holding capacity of 200 tonnes, slipped twice under load, releasing several meters of towline. This sudden rendering of line caused shock loading, which led to the towline pennant failing near the assisted vessel’s deck. The recoiling towline struck the wheelhouse, breaking the starboard forward window and causing glass fragments to injure five crew members in the wheelhouse. The injuries, though not life-threatening, included multiple lacerations to the face, arms, and upper body.

Investigations revealed that the towline pennant had suffered significant strength loss due to prior mechanical damage, axial compression fatigue, and exposure to shock loads during previous operations. The pennant’s condition was not adequately identified because of reliance on visual inspections, which could not detect internal damage to the load-bearing core. Additionally, debris contamination on the winch brake surfaces reduced its holding capacity, contributing to the slippage and subsequent shock loading of the towline. The accident was further compounded by deficiencies in the vessel’s induction process into the Svitzer fleet, including incomplete inspection and maintenance of towing equipment, unclear crew integration procedures, and the lack of a detailed risk assessment for the towing assembly.

The damages included shattered wheelhouse windows, significant structural damage [MGE]from the recoiling towline, and minor injuries to five crew members. Despite the incident, the tug was able to continue operations after repositioning, and the berthing operation for CMA CGM Marco Polo was completed without further incident.

In response to the accident, Svitzer Marine Limited undertook a range of corrective actions, including commissioning a detailed examination of the failed towline pennant, reviewing its towline management policies, and enhancing crew training on rope maintenance and inspection. Additionally, Svitzer implemented procedural changes for introducing new vessels into its fleet, emphasizing thorough technical inspections and risk assessments. The company also reviewed its safety management system to address gaps in familiarization training and towing equipment maintenance.

Recommendations for the future include the regular implementation of robust towline management plans, which should involve periodic strength testing, better tracking of towing equipment usage, [MGE] and clear discard criteria for rope assemblies. Laminated safety glass should be installed in tug wheelhouse windows to mitigate the risk of injuries from recoiling lines. Furthermore, crew training should emphasize the risks of towline failures and the importance of keeping clear of recoil zones. Finally, a dedicated focus on effective integration of new vessels into fleets and adherence to safety management procedures is essential to prevent similar accidents.