Waiting in th For You

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I lurk in the shadows, waiting to strike. A chance finally comes when my doors open, a warning bell rings, and my machinery starts its slow, hypnotic motion. Because Sailors often are inexperienced and careless (two traits that are my friends and allies), I lure many of them into my grasp. My latest victim was a young man whom I slowly choked to death.

My past is notoriously gruesome; I have a long history of mutilating or asphyxiating Sailors. I attack without hesitation or remorse, snuffing out lives every chance I get. Those unfortunate people who get too close seldom live to see the results.

In case you haven't figured it out yet, I am a vertical-package conveyor, used to upload and download stores within a ship. Like the airman I recently killed, many Sailors come to know me while working as a food-service attendant (FSA) on the mess decks. Because of their inexperience and lack of training, FSAs are at great risk around me.

My vicious past is what prompted the Navy to install safety devices to protect Sailors from my deadly clutch. A safety shield, limit switches, a remote emergency-stop button, and use of the two-man rule have made it almost impossible for me to grab people. That's why I need the help of my hidden allies more now than ever. Here's how we teamed up to kill the latest victim:

Many of my installed safety features were not working. The load/unload stow-limit switches weren't wired into my safety circuit during installation (numerous technical visits didn't identify or correct this discrepancy). These switches prevent my machinery from running unless the devices are in the stowed position and the station door is shut (when operating two other stations). The door safety on the fourth deck was cheated to indicate it was shut. Once the load/unload device was moved out of the stowed position, I shouldn't have been able to operate. With all the dirt and debris covering these limit switches, however, they wouldn't have worked, even if they had been wired correctly.

The gap between the bottom of the personnel-safety shield and the tip of the conveyor's fingers on my load/unload device (in the stowed position) is 13.5 inches. The safety shield is designed to restrict access to the conveyor trunk when my load/unload device is in the stowed position. The safety shield was installed correctly, as outlined in the ShipAlt for additional conveyor-safety features, but the gap was greater on this ship than most. In this case, there was enough space for people to get their heads inside my trunk.

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Illustration by John W. Williams

The large, red, run-stop and emergency-stop buttons were missing on the fourth deck where the mishap occurred. The run-stop button on the third deck also was missing.

My allies had been working hard. The crew had cheated my door-safety switches to do unauthorized transfers of stores between intermediate stations (fourth deck to fifth deck). The operating manual specifically prohibits this type of operation. The supervisor, a PO1, knew this mode of operation wasn't authorized but didn't correct the problem.

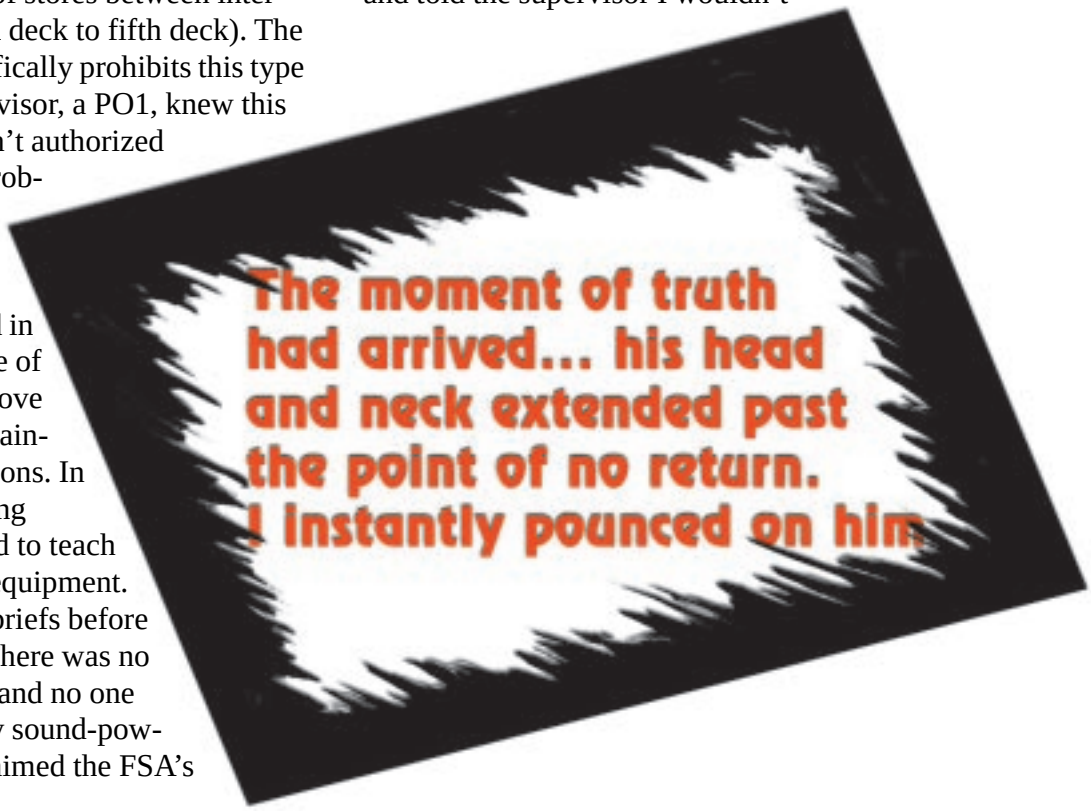
The supervisor was the only qualified conveyor operator involved in the stores transfer. None of the FSAs assigned to move stores had any formal training on conveyor operations. In fact, no conveyor-training program was being used to teach Sailors how to use the equipment.

No one held safety briefs before this operation started. There was no two-man rule in effect, and no one was communicating (by sound-powered phones) when I claimed the FSA's life.

My doors and controllers had been left unlocked for some time. Sailors from auxiliaries division were responsible for maintaining control of the keys so they could do operational checks on me before use. Those practices fell by the wayside during deployment, and the unauthorized operations started.

All the right circumstances had slipped into place, and the stage now was set for a murderous conclusion. As my fourth-deck roller doors opened, and the light shined into my gaping maw, I saw the FSA. The teeth of my load/unload device were poised for feeding. My waiting almost was over.

After quarters that fateful morning, the supervisor and his assistant, a PO2, decided to consolidate stores for the upcoming inventory. The PO2 sent the FSA to the fourth deck to load stores, while he went to the fifth deck to receive them. The FSA opened my door on the fourth deck and pulled my load/unload device out of the trunk (an unauthorized position for this operating station) to gain access to my carrier trays. He then pushed the down button, but I didn't start. The FSA went to the third deck and told the supervisor I wouldn't operate. The PO1 went to the first deck to check out the problem.



My circuitry will not work unless the main-control station door on the first deck is open, along with another door at a lower station. The supervisor saw the "control relay energized" light wasn't on, so he opened my door on the first deck to energize my circuitry. This action sent a false door-closed signal from the fourth deck because of the jury-rigged door-interlock switch. With everything appearing normal, the supervisor shouted, "Stand clear" down my trunk (another violation of procedures) and pressed the down button. My carrier trays began to descend into the shadows.

On the fourth deck, the FSA started loading boxes on my descending carrier trays. On the fifth deck, the PO2 was busy unloading the boxes. With each Sailor working alone (no two-man

rule) and no formal means of communications between them, I looked on in anticipation. I knew the FSA soon would be mine.

After sending down the last box, the FSA tried to restow my load/unload device in the vertical (stowed) position, while my trays were moving in a continuous down mode. He ignored the warning sign attached to the safety shield, telling him to keep his body out of my trunk during operations. The moment of truth had arrived. As the FSA locked my load/unload device into place, his head and neck extended past the point of no return. I instantly pounced on him.

The FSA cried out in horror as my descending carrier trays grabbed the top of his head and squeezed his neck into the thin gap between two teeth of my vertical load/unload device. My carrier tray kept pushing his head down. Just before it reached the bottom of my load/unload device, Sailors finally stopped me by pushing the emergency-stop buttons on the first and fifth decks. The FSA yelled frantically, "Get it off me," and tried desperately to free himself. By now, the compression on the front of his neck caused by my crossbar was making it difficult for him to breathe, and the teeth of my load/unload device were cutting off the blood supply to his head.

The supervisor, his assistant, and other FSAs in the area were in a state of panic. They repeatedly pushed the up-travel button on all decks, but I wouldn't let go. My circuit wouldn't energize as long as one of the emergency-stop buttons was depressed. In this case, the buttons on both the first and fifth decks were pushed in. The FSA was all mine—no one could save him from my death grip. In a few moments, his cries and struggles stopped, and his life slipped away.

How can you prevent this tragedy from happening again? Follow these suggestions:

Establish a thorough training program for conveyor operation. Ensure everyone involved with operating conveyors is PQS-qualified. The departments maintaining the conveyors should initiate, monitor and maintain this program. Never operate a conveyor without using the two-man rule. Use operational risk management to assess the hazards and hold safety briefs before operating conveyors.

Control conveyor operations. Lock all conveyor controllers and doors when not in use[1]; maintenance personnel should control the keys. Check the conveyor manufacturer's technical manual for accuracy and the latest updates. Ensure people do required PMS on the conveyors; verify that the maintenance requirements fit your conveyors. Use the checklist[1] to run safety checks before any conveyor operations.

Check the material condition of conveyors. The trunk and safety-limit switches should be free of dirt and debris. Make sure all safety features work. Check the posted operating instructions and warning signs for accuracy and clarity.

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For More Info…

[1]Chapter 572 of the NSTM outlines the requirement to lock all conveyor controllers and doors when not in use. The same chapter contains the checklist and advance change notice dated 10 December 1998 that you should use to assess conveyor operational safety. Also refer to Chapter C2 of OpNavInst 5100.19C (with change 2) and NavEdTra 43111-B for more information.