

Marine Safety Alert



Alert No: 21

Date: 22.02.2022

Unsafe Pilot Support Structures



See below extract from PSS Safety Alert SA/2022/02

What happened?

During Pilot boarding activity a handrail supporting the Pilot ladder gave way due to a securing pin working loose. A Pilot had just exited the ladder so no personal injury occurred but the potential for serious injury could be regarded as high / very high.

At the top of the ladder the collapsible handrail on each side was connected to an upright stanchion on the top platform by a short length of curved handrail, which held in place by means of a drop nose pin at each end. See the image above. A video demonstrating how the pin can work loose through simulated ladder vibration is available here

<https://youtu.be/jJvoeNzNJ6Q>

What went wrong?

Through examination, it was apparent that the design of the pin with the drop nose ending, is not effective at preventing the pin coming out when the handrail is vibrated transversely due to ladder use.

Whilst it would seem ill advised to stand on the ladder at mid-length to shake the handrail, of more concern in this instance was that there is every possibility that if the ladder should strike the vessel hull during adverse weather, the resulting vibration in the handrail may be sufficient for a correctly installed pin to dislodge with a resultant handrail to collapse.

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What were the causes?

The same drop nose pin arrangement was present on the other ladders on the vessel thus it was considered as a design fault. This apparent design flaw coupled with the motion induced through ladder use would be highly contributory to this incident.

What actions were taken?

Temporary solutions were considered, including . . .

- Taping up the drop nose, probably effective but tape could detach in poor weather
- Using a cable tie through the slot in the drop pin to prevent the pin being able to come fully out. The tie could even go through the slot and around the rail to prevent any movement of the pin.
- Other solutions are possible, such as wiring the drop nose on the pin or wiring both pins together through their slots. The choice is with the subject vessel at present.

Local Pilots were required to be satisfied that effective temporary solutions were in place prior to disembarkation.

The vessel master was instructed to seek a permanent solution from the ladder manufacturer. This in the hope that it would form part of a general product recall or similar whereby all such ladders (and those of similar design) could be modified to remove the risk.

What lessons were learned?

What is apparent is that this probably only covers the tip of a large iceberg and that the design is almost certainly not unique, as such this identified flaw will exist on other ladders from this manufacturer and perhaps similar ladders from other manufacturers.

This is an issue that the wider Pilot community may need to be aware of, given that it is not guaranteed the same situation could not occur on any similarly arranged ladder if the handrail experienced vibration at the necessary frequency even in relatively benign conditions.

[All Masters of Vessels calling in the Forth and Tay should check that their ladders are made safe from this potential danger ahead of Pilot boarding/Disembarking.](#)