

INVESTIGATION REPORT No 23U-PL0001

Tallinn, Tervise 20

13 October 2023

Investigation applicant	Karl-Eerik Unt, Aviation Casualty Senior Investigator, Safety Investigation Bureau (acting Head of the Safety Investigation Bureau).
Circumstances	Investigation of the wreck of M/S Estonia
Investigation application No	27-2/2023/3906-1
Request	Compiled on: 08.08.2023 Incoming: 08.08.2023
Presented for the investigation	<ol style="list-style-type: none"> 1. Piece of metal cut from the edge of a hole/rupture in the starboard side of M/S Estonia; 2. Ramp of M/S Estonia (observation at the ramp storage area); 3. Drawings, 3D model, videos and photos of M/S Estonia (forwarded by email on 18 August 2023 and on hard drive on 7 August 2023).
Investigation type	Explosive device and explosion investigation
Assignment	<ol style="list-style-type: none"> 1. Do the objects and/or videos and photos presented show traces characteristic of an explosion? If yes, where and which ones? 2. If traces characteristic of an explosion are present, where was the centre of the explosion and what parts could the exploded object have been comprised of? 3. If traces characteristic of an explosion are present, what could have been the amount of explosives in TNT equivalent?
Expert	Forensic expert Allan Juhe Tel 6636640, email allan.juhe@ekei.ee

Description of the investigation and evaluation of the results

The presented piece of metal cut from the edge of a hole/rupture in the starboard side of M/S Estonia was inspected by an expert at the Chemistry Department of the Estonian Forensic Science Institute on 10 August 2023. The piece of metal was corroded, elongated in shape, with one longer and one shorter straight cut edge. The other edges showed signs of tearing, but no traces characteristic of an explosion were detected on the piece of metal.

The ramp of M/S Estonia was inspected by an expert at the ramp storage area on 7 August 2023. The ramp showed signs of corrosion and numerous different deformations (crushing damage, ruptures), but no traces characteristic of an explosion were detected.

Nor were any traces characteristic of an explosion found in the photos or videos presented for the investigation. Therefore the objects of the investigation and other materials presented could not be used to confirm the occurrence of an explosion, nor to estimate the centre of the explosion, the potential exploded object or the amount of explosives in TNT equivalent.

(signed digitally)

Investigation deliverables

1, 2, 3. As a result of the investigation, no traces characteristic of an explosion were found in the objects, photos or videos presented. Based on the investigation objects and other materials presented, it was not possible to confirm the occurrence of an explosion, estimate its centre, the potential exploded object or the amount of explosives in TNT equivalent.

Note: The hard drive presented for the investigation will be returned in one package.

(signed digitally) Allan

Juhe
Expert