

**Commission of Inquiry**  
**into the Collision of Vessels near Lamma Island on 1 October 2012**

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**CLOSING SUBMISSIONS (ON SEATS)  
OF COUNSEL FOR THE COMMISSION**

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**A. Installation and maintenance of seats on Lamma IV**

1. Lo Ngok-yang of Cheoy Lee gave evidence that the passenger seats of Lamma IV were supplied and installed by it in accordance with the contract with HK Electric. The seats were pre-made, and the method of installation and the fastening used were and still are common in industry for local waters passenger launches. The seats were fastened by self-tapping screws on the upper deck<sup>1</sup>.
  
2. Tang Wan On gave evidence that seats were subject to regular checks by the crew and they would tighten up screws whenever they were found loose or when reported as being loose.<sup>2</sup> Coxswain Chow Chi Wai gave evidence to the same effect. Chow further testified that if such work could not be handled by the crew, a written request would be made to the marine officer to be referred to

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<sup>1</sup> [Lo Ngok-yang, Day 18, pp.117-119].

<sup>2</sup> [Tang Wan On, Day 29, pp.72-74].

the maintenance team for follow-up.<sup>3</sup> Internal work orders for repair of the seats on Lamma IV were produced by HKE.<sup>4</sup>

## **B. Mardep's approach to seats**

3. The Mardep has no specific requirement towards the method of attachment of the seats so long as they are "firmly secured".<sup>5</sup> Apart from the Blue Book, it is further stated in the 1995 Instructions that where seats are provided for passengers, their form, design and attachments to the deck should be adequate for the intended service.<sup>6</sup>
4. Officers of the Mardep gave evidence on how they would test the adequacy of the seats on board Lamma IV. They would first inspect the chairs visually, followed up by sitting on a few chairs and pushing them.<sup>7</sup>

## **C. Dislocation of seats**

5. The rows of chairs in the passenger cabin on upper deck of Lamma IV were dislodged in the course of sinking.

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<sup>3</sup> [Chow Chi Wai, Day 34, pp.92-93].

<sup>4</sup> [RSRB2 pp. 1369+].

<sup>5</sup> [Yu Kick Chuen Philip, Day 20, pp. 23-24]

<sup>6</sup> [MB8, p.1835].

<sup>7</sup> [Wong Chi Kin, Day 17 pp. 47-59] and [Yu Kick Chuen Philip, Day 20, pp. 23-24].

6. After the incident, all but one seat on the upper deck were detached from their mounts.<sup>8</sup>
  
7. Surviving passengers on Lamma IV had testified to the chaos inside the cabin caused by detached seats in the course of sinking. Passengers fell and collapsed onto the chairs when Lamma IV began to tilt; the chairs could not bear the load of the passengers at a larger tilting angle<sup>9</sup> and became dislodged from the upper deck. The dislodged chairs fell onto the other passengers who had already fallen into the water inside the cabin.
  
8. Some of the deceased, when retrieved by officers of Marpol and the Fire Services Department, were trapped by chairs or benches.<sup>10</sup> The Commission had also received evidence that some of the deceased had suffered injury (possibly caused by impact against hard objects) which might have impaired their level of consciousness and rendered them less capable of rescuing themselves.<sup>11</sup> One of the deceased had been identified as having died from drowning and traumatic asphyxia, for which a possible explanation is the trapping by heavy objects when the vessel started to tilt and sink resulting in compression of chest thereby causing traumatic asphyxia.<sup>12</sup> In fact,

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<sup>8</sup> [ER 1, 370]; [Police Album III p161].

<sup>9</sup> Those passenger of Lamma IV who had testified could not, understandably, tell the precise angle of tilting or timing at which the chairs inside the passenger cabin on the upper deck began to dislodge from the upper deck, but there was evidence that the dislodge began when the angel of tilting was about or more than 45° with horizontal: see Lui Chi Kin [Day 4, pp.61, 66-71].

<sup>10</sup> Deceased Nos.7, 21, 22, 30 and 32. See the evidence of Police Diver 3 [Day 12, pp.28-31]; Yuen Ka Wai (SFn 1114) [Day 11, p.9]; Leung Kin Kie (Fn 12230) [Day 11, p.48]; Yuen Kin Pun [Day 11, p.56]; and Chan Ting Fai (Fn 13666) [Day 11, pp.46 & 51].

<sup>11</sup> See autopsy reports for two deceased passengers at [J(I), 1634-1+ & 1681-1+].

<sup>12</sup> See autopsy report at [J(IV), 2768-1+].

one deceased had been identified as having died not from drowning but multiple injuries.<sup>13</sup>

9. Dr Cheng Yuk Ki had concluded that the rows of chairs in the upper deck cabin were originally secured to the fibreboard deck by screws. However, as Lamma IV began to tilt the chairs might have taken the weight of two or three passengers sitting or standing on, or holding the chairs, which caused the chairs to dislodge from their mounting screws on the deck because the fibreboard was not strong enough to grip the screws and yielded under such pulling force.<sup>14</sup>
  
10. Dr Armstrong had examined the fibreboard deck and the manner in which the chairs had been mounted on the upper deck in the cabin. He observed that before the collision, the upper deck chairs had been dislodged and reinstalled (at different locations). His opinion, which was consistent with that of Dr Cheng, was that it was only in abnormal condition where the vessel had excessive stern trim and the weight of the seated person generated an abnormal tipping force that the foundations would fail. However, Dr Armstrong remained of the opinion that the screwing arrangement for the chairs on upper deck could not be considered adequate.<sup>15</sup>

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<sup>13</sup> Severe crushing injury to upper part of the body, resulting in a gaping laceration at the front of neck opening up the windpipe, complete transection of upper thoracic spine and fractures of multiple ribs: see autopsy report at [J(IV), 3014-1+].

<sup>14</sup> Dr Cheng's Statement dated 28.12.2012 §§3.10 & 6.4 [Expert 1, 373-374 & 379]; and testimony [Day 23, pp.55-65].

<sup>15</sup> Dr Armstrong's First Report §§42-48 [Expert 1, 417-419]; testimony [Day 25, pp.89-115].

11. Mardep contends the requirement in the Blue Book that seats should always be properly secured<sup>16</sup> means only the seats should be able to withstand static loading in accordance with its intended purpose; and dynamic loading. For Lamma IV, the securing of its seats was not intended to withstand the abnormal pulling out force due to impact, tilting, excessive trim of the vessel and subsequent bending induced by the weight of seated persons in the course of tilting of the vessel.<sup>17</sup>
  
12. In our submission safe securing of seats must not only mean “safe” during normal voyage but must also cater for marine casualties. While it is not necessary for seats to be attached in such a manner as to withstand fanciful risks, loading of seats due to excessive stern trim in the course of a marine casualty cannot be regarded as fanciful. The manner of securing seats in the upperdeck is, in our submission, inadequate.

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<sup>16</sup> The Blue Book §26 [Marine 8, 1773].

<sup>17</sup> Wong Chi Kin’s statement dated 14.1.2013 §§58-66 [Marine 11, 3882-3885]; testimony [Day 17, pp.39-59].