“Error of Navigation or Unseaworthiness on the grounds of crew performance?”

Trends in the use of ECDIS from an English Law perspective

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The Trends and the Corresponding Legal Issues

- Between 2008 and 2018, the MAIB investigated numerous groundings where the way in which ECDIS was configured and utilised was found to have contributed to the casualty.
- Common themes included:
  - Voyage plan not being adequately checked visually or by automatic route scan
  - Safety settings not matching the navigational context
  - Passages being planned across un-navigable water
  - Audible alarms being disabled
- In September 2021, the MAIB issued their report which contained findings on both the trends on board ships and in relation to training.
- At the same time, in May 2011, the CMA CGM Libra ran aground off Xiamen, China, giving rise to decisions at every level of the English Court system between 2019 and 2021.

The scope of the MAIB report

- The MAIB concluded that the above trends called into question the knowledge and performance of those OOWs involved.
- In 2018, the MAIB and DMAIB agreed to investigate and report with a view to generate an understanding of the application and usability of ECDIS and, in particular, to develop best practices.
- Interviews and observations over a six-month period in 2018 carried out on sea passages of up to four days, on 31 ships of all different types.
- 155 different ECDIS users: 24 different nationalities, all aged between 21 and 62 years old.
- 8 different ECDIS types (NB. There are 46 manufacturers of ECDIS with numerous types of ECDIS each).
- Interviews were also held with pilots, ship managers and operators, ECDIS manufacturers and trainers.

The MAIB's findings

- Benefits in terms of reducing the navigator's workload were identified but the challenges and their consequences outnumber the benefits.
- 'Challenges':
  - The number and type of alerts generated during automatic route scan diminished the value of this facility for many of those interviewed with the result that many did not use it at all. Planners who did use the auto route scan reported that it was possible to miss safety critical alerts among the many less critical alerts.
  - The distraction of alerts and alarms is leading to the alarms being not set, ignored or disabled for the voyage monitoring phase.
  - The pictorial depiction of 'safe' and 'unsafe' waters is seen as impractical in some instances, which leads to 'work arounds' or the safety contour being ignored altogether.
  - Interface and menu complexities of some ECDIS sets increased cognitive workload resulting in users becoming focused on ECDIS to the detriment of other sources of information.

MAIB findings on ‘Training and Competency’

- A broad range of competence found. Most reflected that the route plotting was simpler and quicker but beyond that competence varied widely.

- Users found to be confident in using the basic ECDIS functions relating to monitoring ship’s position but majority found to have far less understanding of how to set up the ECDIS for different navigational contexts.

- Watchkeepers are on standby to manually perform navigation should the system fail, but paper based navigational skills are eroding. (NB. Primary navigation by ECDIS requires a back-up ECDIS system. Only in areas where there are no ENCs are paper charts folio required. UKHO aims to withdraw all paper charts by 2030.)

MAIB findings on ‘Training and Competency’

“The development of best practices was found to be in its early stages. The variety of navigational practices found during the study suggests that the ECDIS is still in an implementation phase, in terms of how the ECDIS is to be used on board, making a standardised training regime difficult to define.”

“It is questionable whether the current generic IMO model course and type-specific familiarisation are sufficient for users to reach **proficiency** across a range of navigation tasks that include: voyage planning, voyage plan approving, passage monitoring, system updating and trouble shooting. Further, some type-specific familiarisation involving on-the-job training and computer based self-tuition, while expedient, is not providing the training required to become an **expert** user across the spectrum of system configurations and navigational contexts.”

Key English Cases

The Clan Gordon [1924]

The Makedonia [1962]

Star Sea [2001]

Eurasian Dream [2002]

Torepo [2002]

CMA CGM Libra [2019 - 2021]

Competence – the bench marks

- ***Standard Oil -v- Clan Line Steamers [1924]***

  'Disabling' lack of skill or knowledge - each renders the Master unfit and unqualified to command and therefore makes the ship he/she commands unseaworthy.

- ***The "Makedonia" [1962]***

  Addressed '*Disabling lack of will'* and '*disabling lack of skill'* and found there to be no material difference, as the end result is the same.

  On the facts, found that there were many things ***'of importance'*** which were ***'wholly unexplained or wholly unsatisfactorily explained'.***

Implications – competence issues

- ***The "Star Sea" (CA) [1997] 1 Lloyds Rep 360****:*

  Incompetence is a question of fact. An officer may be incompetent even if he/she has no history of the behaviour in question but, equally, a history of more than one mistake does not necessarily point to incompetence.

- It follows from the above, and cases like *The "Makedonia" [1962]*, that having valid certificates is not, of itself, sufficient to establish a finding of competence in court.

- See the five characteristics that may lead to a finding on incompetence, *the "EURASIAN DREAM".*

Implications – competence issues

- ***The "Eurasian Dream" [2002] EWHC 118***
  - Would a prudent ship owner have required it (the defect in question) to have been made good before sending his ship to sea had he known of it (see *F.C.Bradley & Sons -v- Federal Steamship Navigation (1926) 24 Ll Rep 446*).
  - Seaworthiness must be judged by the standards and practices of the industry at the relevant time, so long as those standards and practices are reasonable.
- Incompetence may derive from :
  (a) An inherent lack of ability
  (b) A lack of adequate training or instruction
  (c) A lack of knowledge of a particular ship type and / or its systems
  (d) A disinclination to perform the job properly
  (e) A physical or mental disability or incapacity

Conclusions

- We have seen for some time that “CMA CGM LIBRA” has emboldened cargo interests in particular to scrutinise passage plans and VDR data to a new level.
- It is probably only a matter of time before we see the next similar case go to court and it is likely that the competence aspects will play a larger role – partly because the issues span the planning and execution / monitoring phases.
- The MAIB’s points that (a) best practices are hard to define, and (b) making a standardised training regime difficult to define, are double edged swords:
    - On the one hand that may give scope for argument as to what the standards of the day are, but
    - On the other hand, the MAIB also expressly doubts whether the current generic IMO model course and type-specific familiarisation are sufficient for users to reach proficiency across a range of navigation tasks.
- This raises difficult questions about competence and due diligence.
- https://www.gov.uk/government/publications/application-and-usability-of-ecdis-safety-study

Questions