

CBP Seminar: 21 (Sydney) and 27 (Melbourne) July 2016

This paper discusses three topics from the CMI Conference in New York in May 2016.

YORK ANTWERP RULES, UNMANNED SHIPS, AND CYBERCRIME

York Antwerp Rules 2016

1. As many of you will know, CMI is the custodian of the York Antwerp Rules. When industry wants to change them, CMI is asked to assist. The York Antwerp Rules 2016 and the Guidelines, were drafted by the CMI and completed at the New York Conference when they were approved at the Assembly meeting on May 6.
2. Some key points:
 - (a) They took three years to negotiate;
 - (b) They were agreed to unanimously by the representatives of both shipowners and insurers, that is the International Chamber of Shipping, BIMCO, the International Group of P&I Clubs and IUMI.
 - (c) They can best be described as being more in line with the 1994 version of those Rules than the 2004 version.
 - (d) BIMCO's documentary committee met on 10 May 2016 and decided that all new and revised BIMCO charter parties and bills of lading will refer to York Antwerp 2016.
3. In the words of the BIMCO press release they contain useful clarifications and additions such as on low value cargoes (ARTICLE XVII) , and an annual interest rate of LIBOR plus 4% (ARTICLE XXI) and the Commission of 2% on owners' disbursements has been abolished. IUMI's press release suggested that the 7% interest rate and 2% commission of the past has increased the costs of maritime casualties by 10% - 30%.
4. Salvage is back in General Average (Rule VI) as are wages and maintenance of master, officers and crew when detained at Places of Refuge (Rule XI).

Unmanned Ships

5. The CMI set up an International Working Group a couple of years ago to look at regulatory issues which will face international and domestic regulators when unmanned ships become a reality in international shipping. We invited Oskar Levander of Rolls Royce, who is perhaps the most prominent speaker on this topic, to attend the CMI Conference. He also spoke at a recent conference in Holland. The main theme of his paper was that it is not "if unmanned ships will become a reality in international shipping but when they will do so". He also mentioned the fact that ship owners who plan to operate unmanned ships are likely to obtain a saving in capital costs of about 20% of their investment and a similar saving in ordinary expenditure. As the slide shows, there will be

no need to build accommodation space on such ships. That is one reason why capital expenditure will be significantly reduced. He identified all the other areas in which unmanned vehicles are already a reality including aeroplanes, helicopters, cars, trains in subways, submarines, ROVs and offshore installations. He addressed the following topics:

- Reduced crew costs
- Better working conditions for seafarers
- Improved ship efficiency
- Improved safety

and pointed out that unmanned operation is not suited for all types of ships and there will still be seafarers at sea in the future. He opined that unmanned ships are easier to protect and more difficult to hijack, but IT security will be vital. He also discussed the piracy threat and suggested that unmanned ships would be easier to protect and more difficult to hijack by not having any seafarers. His timeline sees coastal cargo ships operating within the next 10 years, semiautonomous ocean going cargo ships in the next 15 years and autonomous ocean going cargo ships within the next 20 years.

6. Papers were also given at the New York meeting by leading maritime law academics from around the world including Eric Van Hooydonk, Professor at University of Antwerp, Henrik Ringbom, Professor, Scandinavian Institute of Maritime Law, University of Oslo and Robert Veal, Research Fellow, Institute of Maritime Law at Southampton University.
7. Eric Van Hooydonk, in a learned article published in the Journal of Maritime Law and Commerce, clarified some of the terminology by differentiating unmanned marine vehicles (UMVs) from Unmanned (Water) Surface Vehicles (USVs); Unmanned Underwater Vehicles (UUVs), as well as distinguishing between Remotely Operated Vehicles (ROVs) and Autonomous Vehicles (AVs). He also pointed out that "various countries use unmanned surface and submarine craft for surveillance, transport, espionage, mine clearance and as assault devices". For civil purposes he also referred to "undersea mapping, hydrography, scientific marine research, mineral prospecting, the maintenance and repair of oil platforms, pipelines, ships and ports, laying submarine cables and the location and examination of wrecks" being carried out by unmanned underwater craft.
8. An article in Trade Winds in May reported that the US navy had unveiled what was described as the world's first unmanned vessel. It was a 132 foot ship geared to hunting down submarines and detecting mines, and with a range of 16,000kms the "Sea Hunter" cost \$120million to construct. The article described it as a "drone ship" which will "rely on radar, sonar, cameras and global positioning systems to move around and avoid colliding with other ships" The same article referred to the Canadian coastguard already using unmanned helicopters to navigate around ice flows in the Arctic and in April Maersk Tankers completed the first drone delivery to one of its vessels off Denmark. It reported

also that Lloyds Register had convened an international panel of industry and academic experts for a two day workshop on robotics and autonomous systems. The head of strategic research projects at LR was quoted as saying "We have been looking into robotics and unmanned systems for years, not just the technology but also on design codes, policies and guidelines on safe and sustainable development". The article contained the following: "Experts from academia, DNVGL and companies such as Rolls Royce involved in the Finnish-based Advance Autonomous Waterborne Applications Initiative have predicted drone ships could be in commercial service by the end of this decade".

9. There are, as you would imagine, considerable regulatory issues relating to the current international regimes. Henrik Ringbom, for example, looked at the Law of the Sea Convention as well as IMO Conventions, such as SOLAS. Robert Veal looked at the International Regulations Preventing Collisions at Sea (COLREGS) 1972, SOLAS and the STCW Convention.
10. By way of example, how does an unmanned ship comply within the principles of minimum safe manning requirements under IMO Resolutions (A1047(27) and A890(21)), the SOLAS Convention and the STCW Convention. The latter specifically refers to "watch keeping" service on board ship and safe manning. The SOLAS Convention refers to communications between bridge and engine room, for the availability of human control of the ship's steering where there is high density traffic or reduced visibility. What about pilotage? We are all familiar with the term "con" or "conning" but does that term apply to somebody who is controlling the ship from the shore? What about keeping a look out under the Collision Regulations (rule 5)? SOLAS Regulation 14 requires governments to maintain and adopt measures to ensure that ships are sufficiently and efficiently manned. Regulation 24 requires vessels in high traffic density to be able to establish manual control of the ship's steering immediately and an officer in charge of the navigational watch must have available the services of a qualified helms person "who shall be ready at all times to take over steering control". The STCW Code Part IV Regulation 18, in relation to watch keeping arrangements says "at no time shall the bridge be left unattended". The STCW Convention Article 3 says that it shall apply to "seafarers serving on board seagoing ships". Much work needs to be done in the regulatory area.

Cybercrime

11. On 17 June the UK P&I Club sent out a bulletin in relation to fraudulent activity in relation to bogus cargo, emanating from Turkey. These involved criminals purporting to be shipbrokers and port agents and non-existent cargoes offered to shipowners/managers at attractive rates on the general market. They include cement, boilers and phosphate. The terms are always "liner in" meaning that the owner must pay upfront for any stevedore and berthing costs and requires that the broker's own port agents must be used. The money is then paid into the agent's Turkish bank account and is immediately withdrawn from the bank and a new account opened for the next victim. When the vessel arrives

there is not only no cargo but the agent does not exist. The fraudsters use the names of reputable companies as the charterer but they have no knowledge that their details are being used.

12. The CMI, in New York, devoted a couple of sessions to cybercrime. The keynote speaker was Peter Singer, Strategist and Senior Fellow at the New America Foundation, author of "Cyber Security and Cyber War-What everyone needs to know". His main theme was "we will all get hacked at some time, it's how you deal with the problem that is so critical". The CMI also secured the services of the Bloomberg journalist, Michael Riley, who told the fascinating story of how a container terminal at the Port of Antwerp was hacked by two IT geeks, allegedly under duress from criminal elements.
13. The story of the Antwerp Port cyberattacks needs to be read by anyone involved in the shipping industry (Google Antwerp Port hacking:"The Mob's IT Dept."). The following has been taken from Riley's article. Davy Van de Moere and his friend Filip Maertens were computer geeks who were carefully groomed by what appears to have been a combination of European and Turkish underworld figures and South American mobsters.
14. Singer in his address posed the question : "Why do robbers rob banks?" Which he answered: "Because that's where the money is." The Port of Antwerp handles 200 million metric tonnes of cargo a year. It is the number one transit point for South American fruit. It's Europe's largest port of entry for Colombian cocaine. Singer referred to it as "low hanging fruit." Port officials had been the subject of bribes which enabled the drug dealers to get access to those containers. A crackdown had minimised those activities. The smugglers then found a way around the Port's security system which assigned each container a unique code available only to the shipper and consignee. MSC then started to have problems with their computers which, on investigation, found that computer hackers were intercepting network traffic to steal the pin codes and thereby hijack the containers. Other port companies, CSAV and DP World, suffered the same fate. The mobsters and the hackers had teamed up to commence the sophisticated crime, manipulating global logistical and transportation networks for huge gains. The hackers' offence is that they became pawns of a violent group through coercion and a series of bad decisions. Maertons needed investors in a smart phone data - mining start up - and was introduced to a Turk who ran an import/export company. That Turk introduced him to another Turk who ran the Euro Spy Shop (a store full of eavesdropping gear in Arnhem). The two Turks eventually embroiled the two geeks into their business.
15. Having obtained the pin codes, drivers were notified to collect the particular containers. Sometimes the communications were somewhat lacking. In one case, cocaine was hidden inside two containers of artichokes from Peru that were picked up by the rightful owner before the smugglers could get there with their stolen pin. The truck driver was chased down the highway by attackers in Audis shooting Kalashnikovs.

16. The operation to hack the port companies, it is said, took place in a number of phases, starting with malicious software being emailed to staff, allowing the organised crime crew to access data remotely. When that breach was discovered and fire walls installed to prevent further attacks, the hackers broke into the premises and fitted key-logging devices onto computers which enabled them to gain wireless access to key strokes typed by staff as well as screen grabs from their monitors.
17. Singer stressed the need for good communications between IT departments and operational people. He referred to "cyber hygiene"-awareness and training being vital. No-one noticed the power boards that had been inserted in the shipping companies' offices in Antwerp.
18. Australia is not immune. An investigation, reported recently in the Sydney Morning Herald, revealed to Australian authorities that drug gangs were able to use public databases to track which containers in port were under inspection by police.
19. The lesson from these real life stories is that we all need to be eternally vigilant, and sadly, suspicious.

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