

# KR Maritime Cyber Security

News from KOREAN REGISTER

Vol. 021

---

January 2020

---

## KR Announcement

- KR's new CEO, Hyung-chul Lee announces future priorities

---

## [Back to 2019] KR Maritime Cyber Security Activity

- International Activities to raise maritime cyber security awareness
  - The Development of Maritime Cyber Security Technology
    - KR Cyber Security Service Status in 2019

---

## [Plan to 2020] KR Maritime Cyber Security Activity

- A Plan for Enhancing KR Cyber Security Service in 2020
  - KR Maritime Cyber Security newsletter preview



## ● KR's new CEO, Hyung-chul Lee announces future priorities

The Korean Register (KR) has appointed Hyung-chul Lee as its 24th Chairman & CEO. His term began on December 23, 2019 when he was elected at KR's General Assembly meeting and will run for three years until December 22, 2022. Hyung-chul Lee joined KR in 1988 and has until now held the position of Executive Vice President of KR. He was elected as Chairman & CEO at KR's General Assembly meeting held on December 23. During his 30 years with KR, Hyung-chul Lee has held many senior roles, including head of Statutory Service and head of Overseas Business Development Team, he has also run key regional offices, as head of KR's London branch office and head of KR's Seoul branch office. Speaking in a New Year's address setting out his priorities, Hyung-chul Lee said: "We will be enhancing the quality of our inspections in order to secure more ship registrations. Safety is our priority, and we will be working to help prevent serious accidents by increasing the monitoring of ship safety, verifying reports and strengthening inspector job capability training. We need to eliminate the risk of marine accidents through intensive inspection of special management vessels, ensuring the quality of certificates and reports and final result of the inspection, is significantly improved". Chairman Lee also highlighted the importance of digitalisation and strengthened ship technology, particularly the development of 3D drawing approval technology, condition-based maintenance, big data inspection infrastructure, remote survey and cyber security technology, and the digitalization of all inspection data. He added that: "We will work to ensure our advanced technological competitiveness by developing technological rules for eco-friendly ships, including LNG, ammonia and hydrogen fuel propulsion ships, and upgrading our drawing approval technology." Chairman Lee also increase efforts to reinforce ship owner sales and to identify new growth engines.





## ● International activities to raise maritime cyber security awareness

KR continues to raise awareness of cyber security across the global shipping industry, by holding technology seminars at trade fairs, and forums at home and abroad. In 2019, we held technical seminars at komarine, SEA ASIA 2019, NORSHIPPING 2019, and participated in Maritime Cluster Norddeutschland (MCN) in Germany and the European Maritime Cyber Resilience Forum in the UK. Shared ideas.



<SEA ASIA 2019, Singapore>



<NORSHIPPING 2019, Norway>



<MCN 2019, Germany>



<European Maritime Cyber Resilience Forum-England>

In addition, KR regularly attends the International standardization meetings such as International Association of Marine Aids to Navigation and Lighthouse Authorities(IALA) and International e-Navigation Underway, to contribute towards the digitization of ship`s navigational and communication systems and resulting cyber security measures. In 2020 KR will continue to work to strengthen cyber security across the port industry, shipping industry, and maritime authorities by participating in standardization, policy, and technical discussions for international purposes.

## ● Marine cyber security technology development activities

In 2019, KR entered into an MOU with representatives from the IT companies, the ship management companies, and the cyber security solution companies to develop maritime cyber security solutions that can be applied to existing ships, new building ships, and naval ships. KR will continue its research so that applicable cyber security solutions and systems for those ships

Company Name	Contents	Date
Seedgen	Cyber security E-learning training service	`19.3.15
Hanwha system	Naval ship's cyber security guidance research	`19.3.15
LIG Nex1	Marine unmanned system R&D and certification service support	`19.3.21
Penta security	Ship cyber security solution development	`19.8.15
Hyundai LNG shipping	Application, verification and advancement of cyber security guidance for new building ship	`19.12.4

<MOU status with KR for maritime cyber security>

## ● 2019, KR cyber security service status

Service	Company Name	Division	Nationality	Date
<b>Certificate service (Company, Ship)</b>	Songa Ship management	Company, Ship	UK	2.12
	T1IT	Company	Korea	3.21
	Orange security	Company	Korea	11.15
<b>Training service</b>	Sansho ship management	In-house	Korea	7.9
	VL Enterprise PLC	In-house	Thailand	9.19
	Diamond Ship Management	In-house	Singapore	11.14
	MSI Ship Management	In-house	Singapore	11.15
	National human resource development consortium	Regular	Korea	6.10(1 day) 6.27~28(2 day) 10.8(1 day) 10.29~30(2 day)
<b>Type approval service</b>	Hyundai Heavy Industry- ISCS	Product	Korea	6.5
<b>AIP</b>	Yokogawa electric Korea	Product	Korea	7.5



## Maritime Cyber security **technical training service**

Following the IMO's MSC 428(98) resolution, the demand of many flags and shippers for the cyber security risk management is expected to increase from 2021. Therefore, KR has a plan to strengthen the global service of maritime cyber security



## Newbuilding ship's Cyber Certification **service**

Following the IMO's MSC 428(98) resolution, the demand of many flags and shippers for the cyber security risk management is expected to increase from 2021. Therefore, KR has a plan to strengthen the global service of maritime cyber security



## Ship cyber security response **solution development**

KR will develop cyber security solutions that can be applied to existing ships and new building ships. In particular, a ship cyber security response solution that can monitor the cyber asset management and cyber vulnerability of the ship and inform the abnormal data of the OT system.



## Maritime Software conformity certification **service**

KR will launch Maritime S/W quality conformity certification service for applied software installed in a ship or used for ship development based on its own software conformity certification guidelines developed in 2019.



## ● [2020]KR Maritime Cyber security newsletter preview

Month	Subject
February	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Wireless communication principles and types of wireless communication
	Guidelines for Type Approval of Maritime Cyber Security
March	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Technical Security Vulnerabilities and Countermeasures of Wireless LAN(WIFI)-1
	Guidelines for Type Approval of Maritime Cyber Security
April	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Technical Security Vulnerabilities and Countermeasures of Wireless LAN(WIFI)-2
	Guidelines for Type Approval of Maritime Cyber Security
May	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Technical Security Vulnerabilities and Countermeasures of Wireless LAN(WIFI)-3
	Guidelines for Type Approval of Maritime Cyber Security
June	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Technical Security Vulnerabilities and Countermeasures of Other Wireless Networks (Bluetooth, Zigbee, etc.)
	Guidelines for Type Approval of Maritime Cyber Security
July	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Kinds of Marine Communication, cyber security vulnerabilities and countermeasures
	Guidelines for Type Approval of Maritime Cyber Security
August	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Understanding of KR Software conformity certification Guidelines
	Guidelines for Type Approval of Maritime Cyber Security
September	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Understanding of KR Software conformity certification Guidelines
	Guidelines for Type Approval of Maritime Cyber Security
October	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Understanding of KR Software conformity certification Guidelines
	Guidelines for Type Approval of Maritime Cyber Security
November	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Understanding of KR Software conformity certification Guidelines
	Guidelines for Type Approval of Maritime Cyber Security
December	Understanding Cyber Threats(OWASP Top 10 Internet of Things)
	Understanding of KR Software conformity certification Guidelines
	Guidelines for Type Approval of Maritime Cyber Security