

# Country report

## China MSA



## **1 Development of VDES star-based**

**VDES is an important support system for E-navigation in the future. China actively promotes the research and development of VDES star-based and shore-based systems, and actively participates in the development of international VDES standards.**

**China successfully launched three VDES satellites on October 14 this year, the sky-ground-sea integration of two-way communication, information broadcasting, Marine meteorological forecast and other special information communication is being verified at present.**

## 2 Development of MASS

The Zhifei is China's first coastal container ship to meet the needs of unmanned autonomous navigation testing, the total length is about 110 meters, the width is about 15 meters, the depth is 10 meters, the design speed is 12 knots. With manual driving, remote control, three autonomous navigation driving modes, the key test functions include intelligent awareness of the navigation environment, autonomous tracking, route planning, collision avoidance, automatic berthing, remote control driving.

The ship was built in June 2021 and is currently undergoing intelligent navigational function testing in Qingdao, China.

### **3 Development of e-Navigation project Green Routes System.**

**The Green Routes System is a comprehensive e-Navigation project built by CHINA MSA.**

**Based on the e-Navigation CSSA and IHO S-100 series standards, Green Routes System develops Technical Services for eight Maritime Services. It has realized the functions of ship route recommendation, intelligent navigation assistance, ship dynamic monitoring, ship-shore report, situation awareness, maritime space information service and traffic organization.**

**The Green Routes System provide public services since September 2019, projects' customers included but are not limited to navigation user, maritime authorities, port and waterway authorities and customs. The project now has 21000 active users, with more than 3300 daily active user.**

## **4 Training course for LEVEL 2 technical personnel**

**From October 12 to 17, China MSA held a training course for LEVEL 2 technical personnel at the Wenzhou training center. 40 technical personnel from China MSA attended the training.**

**The training cover module 1, 2, 3, 5,7,8 and 10 of IALA "Demonstration Course syllabus for Technical Personnel of Level 2 AtoN technician, including AtoN overview, energy, lamp, maintenance, radio AtoN, AIS, telemetry and remote control, chart knowledge and other aspects.**

# Thanks !

