

Digital Ship

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F-drones completes first commercial BVLOS drone delivery in Singapore

In the current COVID-19 pandemic, digital technologies and remote services are providing essential support to ships and their crews. In April this year, start-up F-drones completed the first commercial Beyond-Visual-Line-of-Sight (BVLOS) drone delivery in Singapore, providing vitamins to an Eastern Pacific Shipping managed vessel with minimal human contact.

Start-up firm F-drones is building the world's first transition drone to enable aerial deliveries to ships and offshore platforms. Such drone deliveries will have the capability to save 80 per cent of costs, time, manpower and carbon emissions, according to the start-up.

On April 20, 2020, F-drones deployed a drone to deliver 2kg of vitamins over 2.7 km in 7 minutes, to a ship managed by Eastern Pacific Shipping (EPS). EPS, which is one of the world's largest privately-owned ship managers, is F-drones' first paying customer.

In Singapore, like in most parts of the world, a BVLOS authorisation or permit is required when operating drones beyond the visual range of drone pilots, without which, commercial drone delivery services would not be viable.

F-drones is the first company in Singapore to receive an authorisation from the aviation authority, to conduct BVLOS drone deliveries to ships in Singapore. For now, this is limited to drone deliveries to ships anchored



F-drones has completed a Beyond-Visual-Line-of-Sight (BVLOS) drone delivery of 2kg of vitamins to a ship managed by Eastern Pacific Shipping (EPS).

south of the marina area. This already is a significant milestone for both F-drones and Singapore, as globally, there are only a handful that are operating commercial BVLOS drone deliveries. F-drones is already working towards expanding its area of operations.

Starting a little more than a year ago, F-drones is a home-grown start-up developing large-scale delivery drones which are fully electric and autonomous. The company's goal is

to eventually use its proprietary drones, which would be able to send 100kg loads over 100km to ships and offshore platforms. This would help alleviate the pain of sending supplies in marine and offshore applications, which rely on small boats and helicopters.

"These traditional means of transport are expensive, slow, labour and carbon intensive. F-drones' solutions can help save up to 80 per cent of the costs, time and CO2 emissions.

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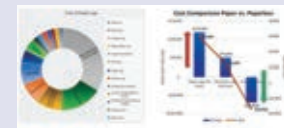
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Remote surveys in COVID-19: an interview with the MD of IRClass

Digital Ship asked Mr Suresh Sinha, managing director of IRClass how COVID-19 is accelerating the use of remote surveys and other digital technologies.

The current climate is resulting in a wider application of digital technologies to continue business-as-usual in the maritime and shipping industries. The Indian Register of Shipping (IRClass) has turned to remote surveys and inspections to help maintain validity of ships' certificates and support global trade, while ensuring the well-being and safety of its staff under the current circumstances.

These remote inspections are based on self-checks by the master or chief engineer of the ship, or senior staff, based on an IRClass survey checklist. Remote assessment of supporting documentation such as videos and photographs are checked by an IRClass surveyor.

To ensure that those carrying out the remote inspections have the right knowledge and experience to do this effectively, Mr Suresh Sinha, managing director at IRClass explained to Digital Ship that, "Self-checks based on the IRClass safety checklist are carried out only by experienced senior staff of the ship and their inputs are crucial to the success of the remote surveys.

"This is preceded by thorough survey planning meeting and interactive sessions to make the ship's staff aware of critical requirements and the main focus areas of survey and checkpoints. The filled in checklists, along with supporting documents and photographs/videos provided by the ship, are reviewed thoroughly by the surveyor to arrive at specific areas requiring further verification/checks."

According to Mr Sinha, "Remote surveys are conducted as per the relevant survey procedure for physical surveys and include check of items, by use of digital technology, to get information as normally obtained from a physical survey.

"Remote surveys are carried out by sur-

veyors who are duly qualified for the particular survey being undertaken. Detailed guidelines have been provided to the surveyors for undertaking remote surveys. Remote surveys in its present form require the use of information and communication technology, which the surveyors generally use in their day to day work and does not require specific training."

Aside from photographs and videos to help with the remote surveys, Mr Sinha said that other kinds of digital technologies for remote surveys include video conferencing and live video streaming to help visualise specific sections of the ship or its equipment. "This can be done by the use of application software and hardware such as smartphones, handheld devices, laptop computers, desktop computers, and others. Livestreaming may be possible by a tablet or smartphone with a good internet connection and suitable application software," he said. "Recorded sensor data from equipment and machinery are also used for remote verification of condition. This may also involve confirmation by the OEM."

Challenges

There are various challenges tied to conducting remote surveys and inspections. Mr Sinha explained further: "Challenges include the availability of infrastructure on ships to conduct remote surveys. Appropriate software or digital devices may not be available on board for video conferencing or livestreaming. For ships anchored far from shore and intending to use mobile phone data for video conferencing or livestreaming, the availability of network can be an issue.

"To overcome these, in case where livestreaming is not possible, videography/photographs and teleconferencing are being utilised. These may be transmit-

ted over satellite networks, using infrastructure available on board.

COVID-19

To date, IRClass has conducted around 200 remote surveys. According to Mr Sinha, "Most of which are for postponement of statutory or class surveys, have been undertaken so far and a physical survey is required to be carried out subsequently.

"Remote surveys are being carried out in circumstances arising out of force majeure, such as present lockdowns due to COVID-19, when it is not possible for a surveyor to physically attend a ship. The number of remote surveys over the next several weeks will depend on how the global lockdown situation develops. In the present scenario, we expect to conduct 100 surveys by the end of May, mostly for postponement of statutory or class surveys.

In addition to surveys, IRClass is using and adapting digital tools to help cope with the current COVID-19 situation.

"At IRClass we were already using digital tools for various functions in the organisation. We have introduced electronic class and statutory certificates. Plan approval is being carried out by web-based portal, where the plans can be submitted, reviewed and approved electronically. Survey requests and survey reporting are available online from our website. Certain training modules for our surveyors are available on our website by e-Learning."

Mr Sinha went on to say that, "The current situation therefore does not have much impact on these functions. In view of lockdown and travel restrictions, the relevant personnel are working from home to ensure that these functions continue to run as usual.

"Meetings with IACS members, flag Administrations and within organisation



Suresh Sinha, managing director at IRClass.

are also being held by video conferencing.

Mr Sinha said that at IRClass, they expect the industry's accelerated application of digital technology to continue as the pandemic eases. "With COVID-19 and lockdown imposed by governments, we have seen how digital technology can help us continue with our work in these times.

"We think that in addition to classification societies, shipping companies, manufacturers, ports and administrations may increase their use of digital technology and remote operations.

"To name a few, some of the aspects could include remote monitoring of machinery and ships by shipping companies; smart shipping systems and digital servicing of machinery by manufacturers; e-certification of crew and ship certificates by administrations; and electronic port entry permits and gate management systems by ports."

DS

Oceanis flies the flag for maritime start-ups

www.oceanis.io

Oceanis, the Hamburg-based digital ship finance platform, has been selected as one of ten international startups to join Plug and Play's 'Fintech Europe' program.

After screening applications from all over the world and intensive weeks of reviewing preselected start-ups with the partners, the final group of ten companies have been accepted into Fintech Europe. The program aims at facilitating pilots, POCs, and business development opportunities for the participating startups and financial institutions.

Now into its fifth-round of company selection and support, Oceanis is the only

maritime-focused company to have been accepted into the Fintech start-up program. The program seeks to support innovation in the world of Financial Services.

Maximillian Otto, Oceanis CEO commented: "It's a great honor to be selected for the Fintech Europe program. This shows that the ideas coming out of the shipping industry, in whatever form they may take, are finally receiving the attention and interest of the wider innovation landscape that is required to build scalable products.

"Shipping often portrays itself as traditional and very 'niche'. Whereas, in reality, good ideas get strong support quickly and innovative business models from other

industries can be adopted successfully. Oceanis, and our concept of reshaping the ship finance sector through digitisation, is a great example of this. If we had not already received strong industry support, we would not have been selected into a program of Fintech Europe's caliber."

Fintech Europe aims to facilitate pilot projects, introductions, and business development opportunities for some of the world's leading fintech start-ups. As part of this program, Oceanis will be introduced to Plug and Play's corporate partners and will have the chance to run projects and explore investment opportunities with these companies.

Plug and Play's fintech-focused innova-

tion platform is based out of Frankfurt and includes partner companies such as Deutsche Bank, TechQuartier, BNP Paribas, Nets Group, Nexi, UniCredit, Aareal Bank, Abanca, Danske Bank, DZ Bank, Elo, UBI Banca, and Raiffeisen Bank International.

"We've created a digital tool for shipowners that assists in sourcing and securing their required debt funding in an efficient and fast way. There is a real need for the shipping industry to diversify funding channels and attract new capital providers into the asset-backed ship finance market. We hope that our involvement in Fintech Europe will help achieve this," Otto said.