reelektronika

Loodswezen Rotterdam-Rijnmond

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eDLoran - Enhanced Differential Loran - successful in Rotterdam-Europort

The Dutch company Reelektronika B.V. has, on request of the Dutch Pilots Corporation, developed and tested successfully Enhanced Differential Loran (eDLoran) to backup GNSS in case of jamming or spoofing the satellite system. Reelektronika is for more than 15 years specialized in developing Loran equipment.

An unprecedented but required absolute accuracy of 5 metres has been achieved at sea and in the Rotterdam Europort harbour area. A complete test system has been implemented which includes the eDLoran reference station and the eDLoran receiver for the pilots. This small and lightweight receiver can wireless cooperate with the standard software of the pilot's GPS-RTK equipment. Differential Loran data are in real-time available via the mobile telephone network. No modifications of the existing Loran transmitters are required.

The Dutch Pilots' Corporation made for this joint project facilities available, on board of their pilot station vessel Polaris and for the location of an eDLoran reference station. Reelektronika performed the research on eDLoran, and developed the equipment for the pilots and the low cost reference station. The position corrections (ASF) database will automatically be expanded and refined by any new trip the pilots make, using their collected GPS-RTK and Loran data when returning from the trip. Possible disturbing effects of new industrial installations and buildings in the harbour area are thus adaptively incorporated. This nearly continuously upgrading of the eLoran ASF database does not require any special measuring equipment or procedures.

For further information, please contact Reelektronika B.V. or the Dutch Pilots' Corporation

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