Input paper : ENG6-9.18 v2

Input paper for the following Committee(s): check as appropriate Purpose of paper:

**□** ARM **X** ENG **□** PAP **□** Input

**□** ENAV **□** VTS **X** Information

Agenda item 9

Workplan Task Number / Technical Domain 2 1.1.2/TD#1

Working Group WG1

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Current State of Synchronisation of Lights in Korea

Related Guideline: IALA Guideline 1069('09.5) and 1116('16.12)

The Republic of Korea is operating Synchronisation Flashing System by adopting it in the light buoys marking the left and right boundaries of the sea route so that vessels entering and departing from major ports can recognize and navigate the route more easily.

The functions of lateral marks (port and starboard sides) located on the major sea route are operating in Synchronisation Flashing System, and it contributes to the safety navigation of night-operated vessels and prevention of safety accidents.

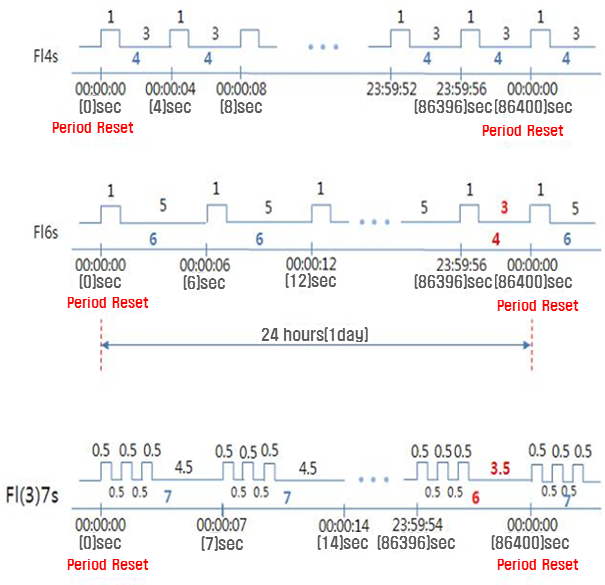
The Synchronisation Flashing System is applied to more than 200 light buoys and is operated in major ports under the jurisdiction of 11 regional office of Oceans and Fisheries such as Pusan ports. .

The Synchronisation Flashing System was applied with the range that does not change the current rhythm characteristics. Also, in the case of the sea route operating in sequential flashing system in the Straight route with the closer the buoys, the rhythm character was changed to Single-flashing light, and the character of the point where the navigator’s attention is required such as principal turning point and curve point of the route was modified to Quick-flashing light or Very Quick-flashing light.

The Synchronization flashing system has been applied and operated even in the case of lighthouses installed on the left and right breakwater in order to make pilot accurately recognize the width of the breakwater

The Synchronization Flashing of lantern applies the time synchronous flashing method using GPS, and time standard of all rhythm characteristic is 00:00:00. The time synchronous flashing check time is 0.5 per second. The time correction period using GPS should be at least 30 minutes. The method of setting the synchronous flashing time is shown in Figure 1.

It is expected to carry out an operational improvement study on effective Synchronization Flashing System utilizing Aids to Navigation simulator in the future.



1. Synchronous flashing time set-up

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1. Application case in the Republic of Korea (Pusan Port)