

# SOLAS 협약에 의한 현측사다리 및 도선사 사다리 고정장치 개발 연구

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## An Study on Development of Pilot ladder transfer arrangement by SOLAS Convention

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### 1. Back ground

For the prevention of pilot incidents(injure, missing or death) during on board at pilot transfer arrangement, pilot ladder and(or) gangway, on board/leaving a ship, IMO MSC additional amended SOLAS chapter 5 regulation 23. this regulation to be compulsory survey(inspect) by each(every) country port state control(PSC) inspection, but IMO and most country have no standard technology data information for the make of pilot transfer arrangement, pilot ladder and gangway fixing methods and technology standards. We "international pilot association/ Korea pilot association" propose the agenda of technology standard of PTA for the guideline to manufacture(maker), port authority and port state control officer survey of PTA.

### 2. Contents of technology standard

Ship's condition

- 1) Rolling: 15degree(port and starboard)
- 2) Period of rolling: 8sec/1cycle
- 3) Weight(pilot ladder and gangway): real weight(by class society technical data)
- 4) Gangway degree to on deck: 45degree(maximum-pilot transfer arrangement Resolution A.1045(27))
- 5) Pilot weight:83kg/1person x 2person(by SOLAS)

### 3. Test content

Fixing methods of pilot ladder and gangway to be fix to

ship hull. Sample pilot transfer arrangement to be made with 1/10~ 1/20 scale compare with real ladder wide and length to be adjustable.

- 1) Fixing PTA to ship's hull
- 2) Combined PTA and ladder
- 3) Down the gangway until 45degree to on deck
- 4) Gangway to be fix to ship hull by means of tech. method(magnet, vacuum, lug etc)
- 5) Hull to be move from 0 ~ port 15 to 0 ~ Starboard 15  
Holding force to ship's hull =  $1.2 [W_g + (\text{pilot weight} \times 2) \times \sin 45^\circ]$ 
  - ▶ 1.2: safety constant,  $W_g$ : Gangway weight, Pilot body weight: 83Kg,  $\sin 45^\circ$ : 0.26
- 6) Test weight to be increase from 0Kg to object weight [Test method to be suggest as annex]
- 7) Confirm and certified safety weight to object weight

### 4. Results

- 1) In accordance with amended SOLAS chapter 5 regulation 23, Pilot transfer arrangement "pilot ladder" and "Accommodation ladder" should be secured to ship's side in use.
- 2) Until now IMO did not developed the technical standard for the performance test from test institute and survey contents from port state control officer survey.
- 3) International pilot association suggest standard test methods, test contents and test items.
- 4) This suggested items will be objective evolution and keep the safety condition of on board pilot or disembark pilot in rough sea condition.

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