

# 선박 및 해양플랜트 PAGA Coverage Rule Study 및 해석 사례 The Study for PAGA Coverage Requirements and Analysis Procedure

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**Key Words : PAGA, Audio Coverage**

## ABSTRACT

PAGA System

Coverage, PAGA 가 Audio Coverage, PAGA Audio 가

PAGA : Public Address & General Alarm  
SIL : (Speech Interference Level)  
STI : (Speech Transmission Index)  
 $L_{Ambient}$  : (Ambient Noise A-weighted SPL)

PAGA Audio Coverage 가

### 1.

PAGA Audio Coverage

PAGA(Public Address & General Alarm)

System

, Flash Light . PAGA

### 2.

#### 2.1 PAGA Coverage

가 PAGA System Audio Coverage

PAGA System (A&B) System

System

System

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Noise Control Audio Coverage  
A&B System, A System B System  
가

International Standard IMO

- ◆ PA(Public Address)
  - : 75 dB(A) & SIL+20dB(A)
  - : 80 dB(A) & SIL+20dB(A)
- ◆ GA(General Alarm)
  - : 80dB(A) &  $L_{Ambient} + 10$  dB(A)
  - Cabins : 75dB(A) &  $L_{Ambient} + 10$  dB(A)

Operation

가

Norsok Standard

- ◆ PA(Public Address)
  - ( $L_{Ambient} < 65$ dB(A)) : STI  $\geq 0.7$
  - ( $65 \leq L_{Ambient} < 85$ ) : STI  $\geq 0.35$

85dB(A)

Masking

Noise Protection

가, Audio Coverage

Emergency

, PAGA Yellow Flash light가

, IMO PA SIL 가

Severe 가

$L_{Ambient}$  가

SIL  $L_{Ambient} - 7$  dB(A)

## 2.2 가

PAGA Coverage 가

Fig. 2.1

, PAGA

Ray tracing

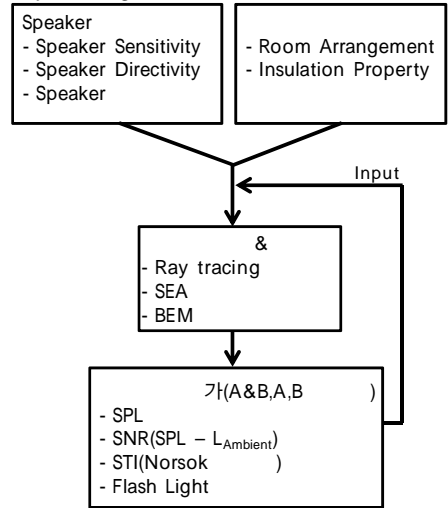


Fig. 2.1 Schematic Diagram for PAGA Coverage Study

Ray tracing PAGA Coverage  
Cadna A Software  
가 Fig. 2.2

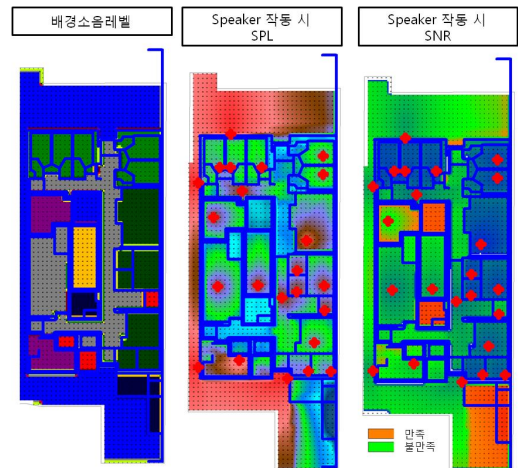


Fig. 2.2 Example Figures of PAGA Coverage

가, Dominant

가

### 3.

Coverage PAGA System Audio

가

PAGA System

Audio Coverage

(1) MSC.48(66), 1996, International Life-Saving Appliance(LSA) Code.

(2) Norsok Standard T-001, 2003, Telecom Systems.

(3) Norsok Standard T-100, 2004, Telecom Sub-systems.

(4) Han Sung-Kyu, Yoo Kyung-Jin and Kim Jae-Soo, 2009, Optimum Design of Broadcast System in Span Class, Proceedings of the KSNVE Annual Autumn Conference, pp.823 ~ 824.

(5) Randall F.Barron, 2001, Industrial Noise Control and Acoustics, Marcel Dekker, Inc., New York.