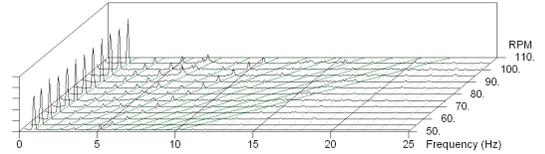




- Design draft /zero pitch: 50 ~ 105 rpm
- Ballast draft /full pitch: 89 ~ 102 rpm



b) zero pitch 조건 waterfall plot(Design draft)

Fig. 2 Pitch 조건별 waterfall plot

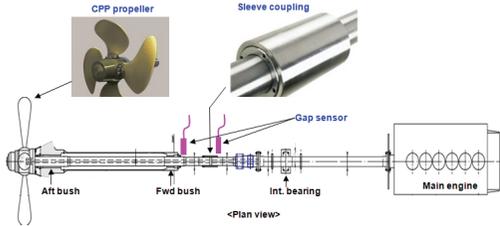
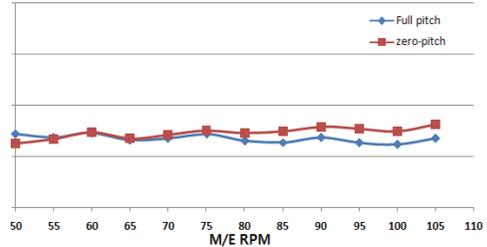
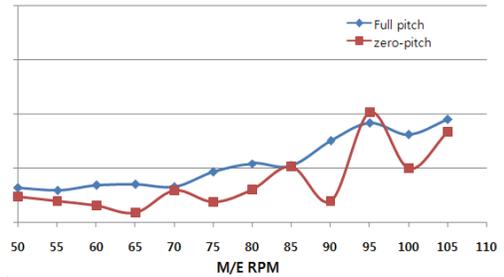


Fig. 1 CPP 장착 선박 주추진 축계 배치도



a) 회전수 1 차 성분 진동 응답 비교



b) 날개수 1 차 성분 진동 응답 비교

Fig. 3 피치에 따른 기진 차수별 진동 응답 비교

2.2 whirling

Fig.2~Fig.3

whirling

rpm 가

rpm

1

whirling 가

run-out

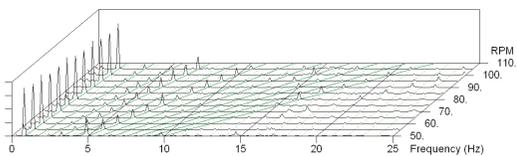
1

rpm

가 . 가

whirling rpm 가

가



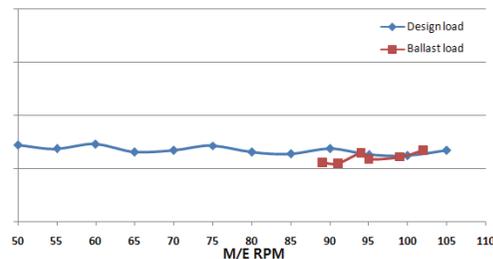
a) full pitch 조건 waterfall plot(Design draft)

2.3 Loading whirling

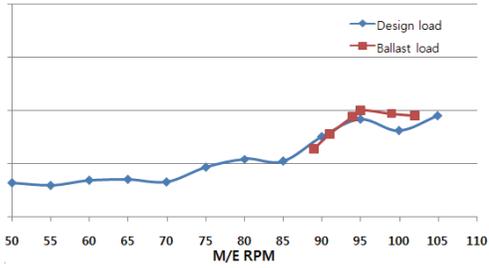
Full pitch design ballast draft Fig.4

1

1



a) 회전수 1 차 성분 진동 응답 비교



b) 날개수 1 차 성분 진동 응답 비교  
**Fig. 4** Loading 조건에 따른 기진 차수별 진동 응답 비교

3.

CPP 가

whirling

1) loading 1 가 , rpm

whirling  
 run-out gap sensor  
 whirling 가

2) loading 1 가 , rpm  
 가

가 가