와전류 제동장치 프레임 설계검토를 위한 강도해석

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Static analysis of eddy current brake's frame for design evaluation

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Key Words : 구조적 요구조건(structural requirement), 와전류 제동장치(eddy current brake system), 항복강도(yield stress), 피로강도(fatigue stress), 제동하중(braking load)

Abstract : In this paper, static analysis of eddy current brake's frame, which is one of key structural components of brake system for high speed train, was performed in order to evaluate the design by computer simulation. Calculation was carried out in general for the driving modes "braking" and "frame in upper position(brakes inactive)". Several yield stress load cases and fatigue load cases were analysed for each of the driving modes. The fatigue load resulting from the Multi Body System simulation was also taken into consideration. The simulation results shows that some of structural part should be improved for more increasing reliability of frame.

KHST 차량 벽면의 투과손실값 예측

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Transmission Loss Prediction of KHST's Wall

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Key Words : KHST (한국형 고속철도), Transmission loss (투과손실), Sound Pressure Level (음압레벨), Sound intensity Level (음향세기레벨)

Abstract : Transmission loss of KHST passenger vehicle was calculated using measured acoustic data.' In order to verify the transmission loss results for KHST case, similar experiment was carried out in laboratory condition, which result was compared those by geometric acoustic method. The computational results shows good agreement with the transmission loss magnitude from experiments. This paper also mentions items to obtain more accurate transmission loss values, i. e. how to assure reverberant field condition, the selection of source speaker' location.