

EU6C 규제 대응 후처리 시스템 개발 전략에 관한 실험적 연구

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Experimental Investigation of LDD after-treatment development strategy for EU6C regulation

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Abstract : Recently European Union and North America regions tighten up emission regulation. Especially EU6C regulation is not fixed yet, but we expect that especially it's too difficult to be satisfied with NOx emission regulation using current after-treatment system (NSC and DPF). Recent results from other researchers need to apply additional after-treatment system such as Selective Catalyst Reduction or SDPF.

In this study, we investigate additional NOx conversion without SCR catalyst. When LNT+DPF+SCR combined after system apply, it should need additional hardware and software such as urea dosing injector, supply pump, dosing control unit and DCU mapping. But when LNT+DPF apply, it does not need additional hardware and software. So we reduce development cost and time. So we focus on developing high performance LNT catalyst.

In this study used bench aged catalyst which were equivalent to 160k full useful life. In chassis dynamometer, we perform NEDC test cycle at first for screening test of EU6 regulation and perform WLTC version 5. test cycle for finding out optimized and high performance NOx conversion LNT. In engine dynamometer, we perform NOx storage test for checking absorption performance of low temperature. So we can develop LNT+DPF after-treatment system without SCR for EU6C regulation.

Key words : NSC(NOx 흡장 촉매), DPF(디젤 매연여과장치), SCR(선택적 환원장치), NEDC(승용디젤엔진 배기 시험모드), WLTC(EU6C 승용엔진 배기시험모드)

1. 서론

일반적으로 엔진을 구동하기 위해선 엔진오일이 필수적으로 필요하다.

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