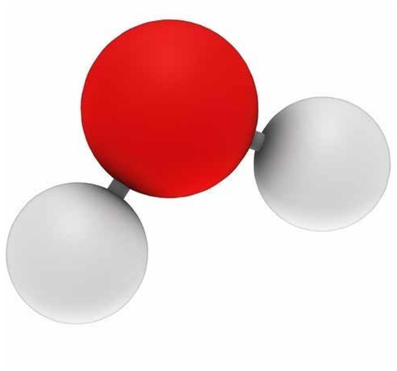
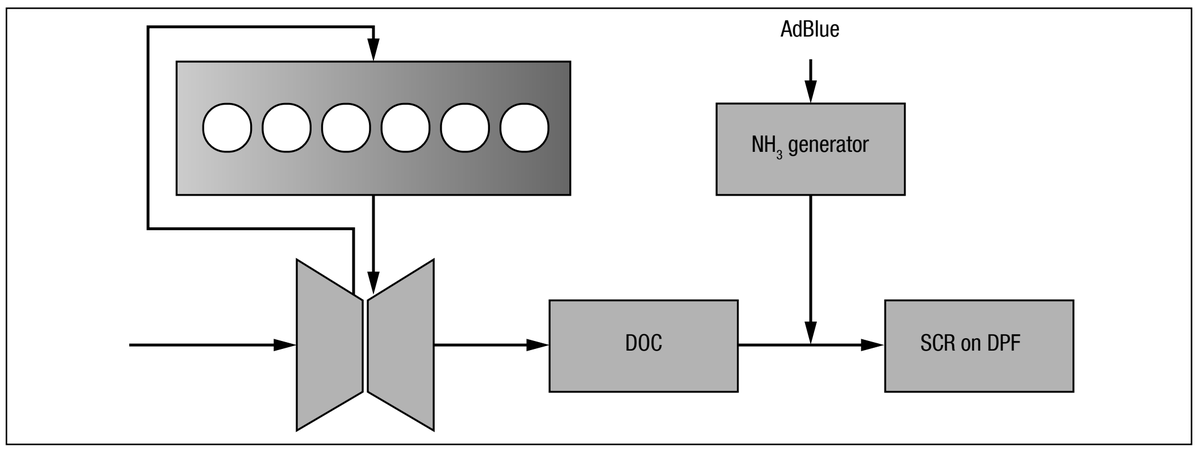


WP8 Engine Integrated SCR and Combined DPF and SCR

WP OBJECTIVES

Two-stroke objectives are to investigate the various HP SCR processes with the aim of designing compact SCR system for improved engine integration and reduced footprint.

Four-stroke objectives are to investigate LP SCR processes when combined with DPF, with the aim of reducing the total necessary installation space for a combined use of compliant DPF and SCR systems.



Schemativs of 4-stroke engine with combined SCR and DPF

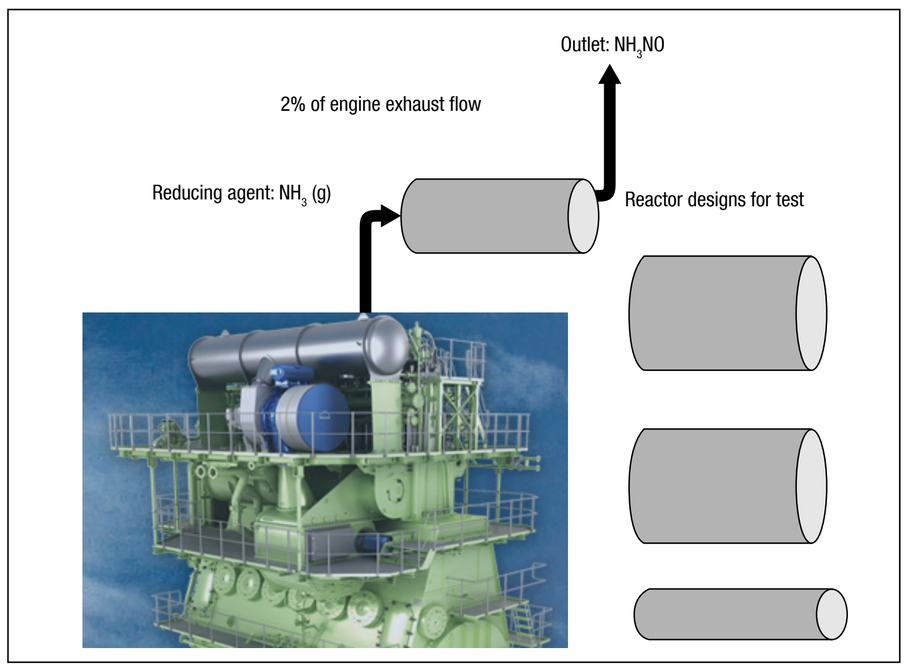
EXPECTED OUTCOME

- Engine integrated SCR design and test on 4T50ME-X test engine in Copenhagen
- High performing sub-processes (injection, mixing, decomposition etc…)
- High performing NH_3-slip control and measurement techniques
- Combined DPF and SCR with low engine room footprint
- Evaluation of optimal SCR catalyst and filter material/coating for combined DPF and SCR technology

Hot exhaust gas flow rig for invetigstion of urea injection, evaporation and mixing

PROGRESS AND PLANS

- NH_3 measurement equipment tested for basic functionality, to be used to mature engine control system for NH_3-slip (MDT-CPH)
- Concept for mini-SCR reactor for test of compact SCR performance established. To be designed, build and tested at 4T50ME-X within Q3-2016 (MDT-CPH)
- Basic comparisons between trace component flow profile and CFD calculations performed, to be expanded (MDT-CPH + DTU)
- Design of synthetic gas test bed in progress for build-up (MDT-AUG)
- Procurement of first DPF substrates and measurement equipment performed (MDT-AUG)
- Set-up of the hot exhaust gas flow test rig in progress (MDT-AUG + LUH)
- Development and verification of the measurement equipment for hot exhaust gas flow rig on track (MDT-AUG + LUH)



Concept for mini-SCR reactor for testing of compact SCR, aimed at testing at 4T50ME-X Test Engine in Q3 2016

WP PARTICIPANTS

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