
クレムソン大学（アメリカ） 研修報告書
（研修テーマ）

工学研究科 機械システム工学専攻 渡部 智弘

Fig.1

Table 1

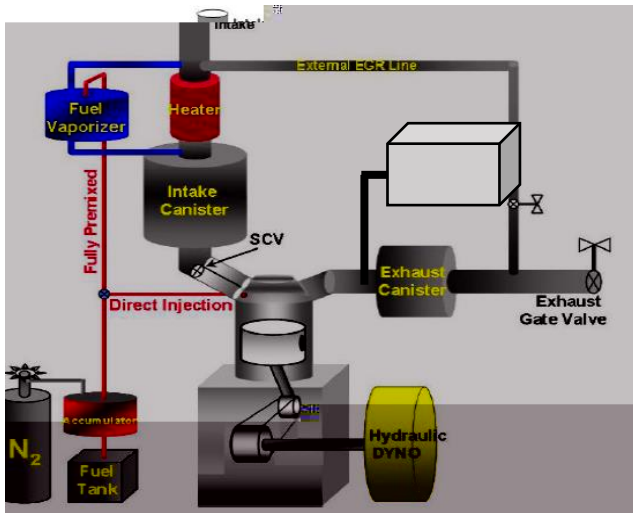


Fig.1 Schematic of Engine setup

Table 1 Experimental Conditions

| | |
|--|--------------------------------------|
| Injection Timing(deg.CA before TDC firing) | 360,355,350,340, 333,320,310,290,270 |
| Engine Speed(rpm) | 2000 |
| Piston roughness(μm) | Smooth : 0.25-0.5 Rough : 12 |
| Intake Pressure(kPa) | 105.2 |
| Exhaust Pressure(kPa) | 109.3 |
| Intake Temperature() | 88.5 |
| Fuel Pressure(MPa) | 10 |
| Fuel Mass(mg/cycle) | 11 |
| Lamda | 1.4 |

< Reference>

Powell, T., Hoffman, M., Killingsworth, N., O'Donnell, R., Prucka, R., and Filipi, Z. (2015) "Predicting the Gas-Wall Boundary Conditions in a Thermal Barrier Coated Low Temperature Combustion Engine using Sub-Coating Temperature Measurements," Int. J. Powertrains – Accepted: currently undergoing editing for final publication

Fig.2

Fig.3

Fig.1

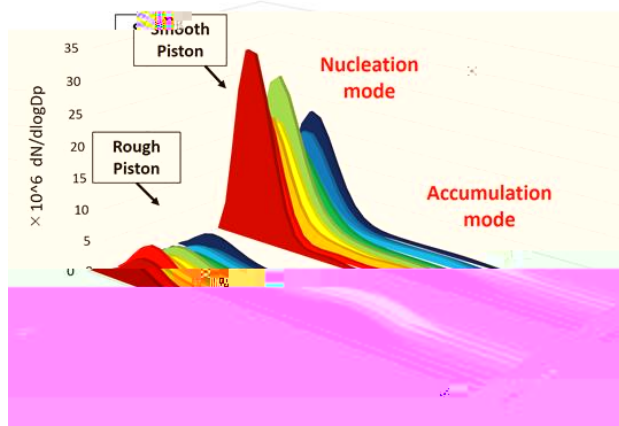


Fig.2 Soot distribution

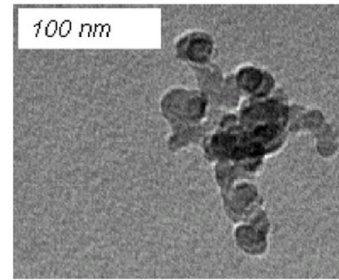


Fig.3 Accumulation mode

(1)

$$\text{Mass } (\mu\text{g}) = 5.20 \times 10^{-16} \text{ } D_p^3 \text{ (nm)} \quad (1)$$

Fig.4

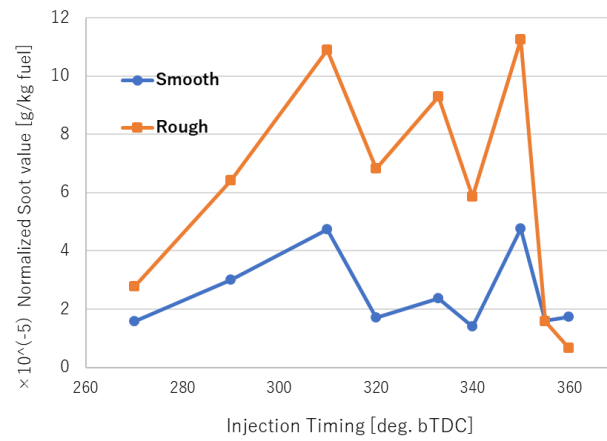


Fig.4 Normalized Soot value

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