**Numerical simulation on effects of nozzle hole cone angle on combustion and emissions in a diesel engine 2011**

The combustion procedure and emission traits in diesel engine specially rely on the mixture formation in cylinder. Spray function is a crucial factor which affects the combination formation and combustion process. In addition, nozzle hollow cone angle of the gasoline injector at once impact the spray characteristic. In this paper, float evolution manner, spray distribution, fuel/air ratio equivalence ratio distribution, temperature distribution and emissions formation are analyzed. The results display that: combination formation pleasant may be stepped forward if selecting the nozzle hole cone angle accurately, and consequently combustion manner could be advanced, and emissions can be decreased.