SUMMARY INFORMATION ON NEW FINDINGS OF DOCTORAL THESIS

Thesis title: *Research to improve the performance of the turbocharged diesel engine by an intercooler*

Training institution: Military Technical Academy.

Ph.D. Student: Duong Quoc Cuong

Major: Dynamic mechanical engineering

Code: 9.52.01.16

Supervisors: 1. Prof, Ph.D. Dao Trong Thang

2. Assoc. Prof, Ph.D. Luong Dinh Thi

SUMMARY OF THE NEW FINDINGS OF THE THESIS

1. The thesis has built a simulation model of the working cycle of the 4BD1T engine. Using GT-Suite software to assess the impact of intake air temperature on the economy, energy, and environment and calculate the pressure and temperature changes in the cylinder.

2. The heat exchanger calculation results using CFD-FLUENT software can be used to select an intercooler suitable for the temperature range of 35 ÷ 75^{o}C. These results can also be used as a basis for designing the intake air temperature control system.

Hanoi, May 19th 2020

Supervisor **Ph.D. Student**

Prof, Ph.D. Dao Trong Thang **Duong Quoc Cuong**