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MECHANICAL ENGINEERING

BANGKOK DRIVING MODE / EMISSIONS

CHATCHAPOL CHUNGCHOO : STUDY OF BANGKOK DRIVING MODES AND VEHICLE

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For this thesis, Study of Bangkok driving modes and vehicle emissions, is to make Bangkok driving mode from collected data during November and December in 1994 and 1995. Bangkok driving modes are made by analysis the data of 12 routes in all of Bangkok areas, using the Japanese 10 mode driving cycle method. This thesis uses 3 parameters ( distance, velocity and time ).

When I compared both of them, Bangkok driving modes with E.C.E. mode ( as standard mode in TIS 1120 - 2535 ), It was found that the different between Bangkok driving mode and E.C.E. mode are

1. acceleration rate and deceleration rate of Bangkok driving modes are higher than E.C.E. mode,
2. percent idle of Bangkok driving mode is higher than E.C.E. mode.

Later, I tested 4 used cars ( without catalytic converter ) with Bangkok driving mode in 1995 and E.C.E. mode in order to measure vehicle emissions by following TIS 1120 - 2535 ( Type I test ). I found that the quantity of vehicle emissions, namely HC and CO , of Bangkok driving mode are higher than those of E.C.E. mode. Because driving along the Bangkok driving mode has higher acceleration rate and deceleration rate than the E.C.E. mode. Moreover, percent idle of Bangkok driving modes is also higher than E.C.E. mode , thus emissions from Bangkok driving modes are higher than from E.C.E. mode

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