

PN measurement at PTI in Japan

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PN measurements at periodic technical inspection (PTI) have been already installed in several European countries. Its aim is to detect failures with a diesel particulate filter (DPF). Some researchers reported that almost 10% of tested cars were found having DPF failures with PN measurement at PTI.

In Japan, differ from European countries, almost all of passenger cars have been powered by gasoline engine and diesel engine are used mainly for power sources of heavy-duty trucks. So, DPF failure ratios may differ from that in Europe. In this study, we have experimentally observed exhaust PN concentrations at PTI in Japan and estimated DPF failure ratio.

For the tests, we measured PN more than thirty vehicles at several PTI stations in Japan. PN measurements were conducted with the devices which have been adopted for PTI check in Europe.