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Kolodnytska R.V., Karimi K., Crua C.,. Heikal M.R, Sazhina

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A model for spray penetration in diesel engines is suggested.

It is based on momentum conservation for a realistic

mass flow rate transient profile. The modelling approach is

based on tracking of centre-of-fuel-mass (COFM) of injected

diesel fuel. The model was validated for Bosch and Delphi

injectors using the data obtained at Sir Harry Ricardo automotive

centre, University of Brighton, UK. The model is shown to

produce a good agreement with the experimental data until

major spray instability (such as cluster shedding). It has been

found that the dispersion time (the adjustable model parameter)

is increasing when injection pressure is decreasing. This follows

the known tendency for spray breakup time. Il.5. Bibliogr.

10 names.