

ROLE OF CHARGED SOOT GRAINS
IN COMBUSTION OF LIQUID HYDROCARBON
FUELS IN EXTERNAL ELECTRIC FIELD

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S u m m a r y

We consider the possibility to influence the process of combustion of liquid hydrocarbon fuels by applying an external electric field. The investigations were made for the typical representatives of fuels depending of the soot production rate. The mechanisms of influence of electric fields on the processes of combustion are considered, and it is shown that the mechanism of ion wind, through charged soot grains that are formed in flame, is dominant. Measurements of the flame front temperature are made.