Bachelor and Master thesis
in the field of energy and combustion technology

Topic: Investigations on the spray characteristics of atomizer nozzles

Description:
Within the scope of a public funded project, OWI develops combustion technology for the combustion of pyrolysis oil from biogenic residues. The combustion properties of pyrolysis oil differ from those of commercially available fuels. Liquid fuels must be converted into the gas phase and mixed with combustion air before the actual combustion. For this purpose, the fuel is atomised into droplets with a nozzle.
For the design of the mixture formation with pyrolysis oil, information on operating parameters is required, which is currently only available for conventional fuels. These are to be determined within the scope of this work. On a glass pipe test bench the spray characteristics at different boundary conditions shall be recorded, compared and evaluated.

Faculties:
Mechanical engineering, aerospace technology, energy and environmental technology, process engineering.
Type of work: practical
Begin: immediately
Required time: 4 - 6 month (M Thesis)
2 - 3 month (B Thesis)

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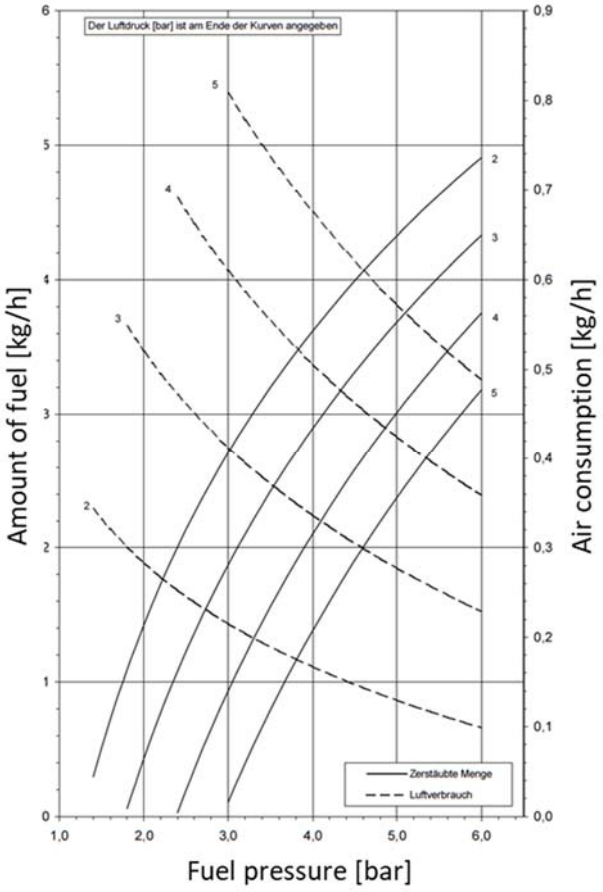
Pressure atomizing nozzle



Two substance nozzle: Characteristic curves