Graduation Project, Mobilising heavy hydrocarbons with Sub Critical Water

where:	Technical University Eindhoven, Mechanical Engineering, Dept. Combustion Technology, Eindhoven
subject:	Mobilising heavy hydrocarbons with Sub critical water
type:	Experimental project
how:	Implement sample box in set up, which extract sample from the expelled gas flow.
why:	During the depletion of an oil well, approximately 30% crude oil remains behind. The crude oil that remains, has a high viscosity and consequently quite hard to extract from the well. By using sub critical water, the heavy hydrocarbons (crude oil) can be broken down and creating a lower viscosity, during this process it is not clear if there is hydrogen formation. Investigate whether hydrogen is formed during mobilization of heavy hydrocarbons, and if so, is it an interesting extra energy source or is it a problematic occurrence.
when:	starting date, negotiable.
keywords:	Heavy oil – Kerogen – Subcritical water – Solution – Cracking - Hydrogen

first weeks action:

- literature study, reading into subject
- Assist regular experiments, to learn to use Set-up
- Investigate sample box possibilities, available
- Implement improvement into set up
- Experiments
- Analyses

skills: Hands on mentality, experimental interest, matlab for analysing

contact: Michel Cuijpers, m.c.m.cuijpers@tue.nl