The slurry hydrocracking pilot plant at Energy Technology Center is an open research infrastructure where academia and innovative businesses can carry out research and pre-commercial projects.

Description of the pilot plant
The plant can operate continuously. A 2 dm³ stainless steel CSTR reactor constitutes the heart of the plant. Associated equipment upstream of the reactor are two vessels for catalyst preparation and activation, one slurry/feedstock storage vessel (30 dm³), one vacuum residue storage vessel (30 dm³), two feeding pumps, and hydrogen supply (200 bar) from a hydrogen compressor.

Operating conditions
The reactor operating pressure and temperature are limited to 180 bar and 500°C, respectively, with a LHSV of 0.5 - 2 h⁻¹. A heavy product fraction (containing the catalyst), a light product fraction, a water fraction and gas are separated using two different separators, one operating at high pressure and temperature followed by a second separator operating at lower pressure and temperature.

Examples of research topics
- Co-refining of various bio-oils with VGO/vacuum residue
- Slurry catalyst development
- Reactor modeling

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