

The Production of Biodiesel Reconstruction of a Distillery for Biodiesel Plant in Bokel



The Biodiesel Bokel GmbH was followed from a typical agricultural distillery cooperative. The former grain distillery was rebuilt to a biodiesel production with a capacity of 10,000 t of biodiesel per year. The big advantage for the investors was that many apparatus and devices could be reused or refit for the biodiesel production.

The necessary investment costs were clearly under the costs for a complete new construction. This investment advantage has a direct influence to the specific interesterification costs and lead to a competitive production of this plant compared to other big plants.

The process for the production is easy. Vegetable oil, methanol and a catalyst are mixed by a recipe

Because of the transesterification biodiesel is produced, also named as rape-methyl-ester or FAME (fatty acid methyl ester).

The raw biodiesel is separated from its by-product glycerin in a phase separation vessel. In the next process steps the raw biodiesel is refined, so that the environmental friendly fuel has the required quality according to DIN 51 606 respectively EN 14214 and it can be used for cars and trucks.

For the reconstruction of the distillery the mixing tank, the existing remaining tanks and the distillery were checked and refit for the new application. New heat exchangers and apparatus were added.



A complete new piping system and a new control and instrumentation equipment were installed.

For the chemical storage, the electrical plants and the office a new building was established. A filling place for the loading and unloading of the road tankers and a petrol station for selling of biodiesel "ex works" was also installed.

Technical Data

Used oil sorts:	cold-presses rape seed oil
Production capacity:	10,000 t/a, in two-shift operation
Spec. transesterification costs:	ca. 0.08 - 0.10 €/l

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