Liquid Special Fuels

Make a low-cost substitute fuel out of it!

Reduction of CO₂ emissions and increased prices for fossil fuels are only two reasons to look around for alternatives. Often you don’t have to look far for a solution, i.e. industrial by-products generated during production. Burning industrial by-products with low emissions saves disposal costs and expensive fossil fuels. Thermal utilization of animal fats and vegetable oils as well as of fatty acid methyl ester (FAME – better known as “biodiesel”) is constantly optimized in industrial heat generation by means of plant and burner technology from SAACKE. Development of marketable solutions for thermal utilization of glycerine, a by-product of biodiesel production, represented a technical challenge.

The solution in detail

With the SAACKE SKV-SF (Special Fuel) burner you can utilize the energy from vegetable oils or mixtures of heating and vegetable oils, fatty acid methyl ester (FAME), rape methyl ester (RME), bioethanol and biomethanol as well as glycerine.

Special fuels

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Liquid by-products e. g. animal, edible and Vegetable fat, glycerine, biodiesel</th>
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</thead>
<tbody>
<tr>
<td>Lower heating value (LHV)</td>
<td>15 – 50 MJ/kg</td>
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<tr>
<td>Auxiliary fuel</td>
<td>Diesel oil, natural gas two-fuel operation possible</td>
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<tr>
<td>Dual fuel operation</td>
<td>Simultaneous firing possible</td>
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</tbody>
</table>

Facts

- Relatively low fuel pressure and relatively low fat temperature necessary
- Reliable igniting device
- Broad control range
- No tight cross-sections or nozzles
- Precise flame geometry
- Long life service due to corrosion resistant design
The SAACKE burner consists of a special version rotary cup atomizer burner of the proven SK series. With this duoblock burner even mixed operation with two fuels is possible, and has already been implemented in a variety of cases.

Emissions similar to those of light fuel oil are produced during the combustion of the above-mentioned fats and oils, both an environmentally friendly and economical solution.

SAACKE looked into economical combustion of animal fats back at the beginning of the 1990s. In 1993 SAACKE launched operation of an animal fat combustion plant using a flame tube boiler in Bielefeld. After that SAACKE developed more than 100 plants for combustion of animal fats in liquid form, mainly in UK, Germany and other European countries. Experience on which you can build.

**Summary**

By-products are burned in a low-cost and environmentally friendly manner while generating useful energy.

SAACKE burner SKV-SF at animal carcass "TBA Walsdorf"