ISO 9001, ISO1400, ISO13485, CE and WHO-GMP certified.

BURHANI HARDWARE & FITTINGS

Advance Continuose Biodiesel Production Plant Hydrodynamic Cavitation

Green Technology for life

BHFTECH Biodiesel production Plant is the process of producing the biofuel, biodiesel, through the chemical reactions of transesterification and esterification. This involves vegetable or animal fats and oils being reacted with short-chain alcoholstypically methanol or ethanol using state of art technology called hydrodynamic cavitation reactor

The BHFTECH hydrodynamic cavitation reactor is a prospective way for biodiesel production on industrial and commercial scales due to its easy scale-up characteristics The heart of the designed reactor in the mentioned system is a rotor rotating inside the stator at a high speed; additionally, some cavities with special geometries are machined on the perimeter of the rotor. The space between the rotor and the stator is the cavitation zone. While entering the reaction feed mixture (mixture of oil and alcohol) into the cavitation zone, because of geometry and arrangement of cavities machined on the rotor and spinning action of the rotor, local fluid pressure in the cavities is reduced to the fluid vapor pressure which leads to the fast formation of microscopic bubble formation in the rotor cavities away from the metal surfaces. The rapid formation and collapse of bubbles, due to the high rotational speed of the rotor, creates shock waves Energies which lead to intense stirring and a fast release of energy (heat). Therefore, there is no need for a heat generator source for the reaction phase of the mixture inside the reactor.

Advantages of Hydrodynamic Biodiesel Production.

1. HC showed 8 fold higher yield efficiency than mechanical stirring.
2. HC showed 6 fold less reaction time than mechanical stirring.
3. The properties of the produced fuels met EN 14214 and ASTM D 6751.
4 .Any Type of raw material can be used as input including used and raw Oils and Fatty acids.
5. No need for a heat generator source for the reaction phase
6. The quality of the biodiesel is the same as that produced from edible oils.
7. The use of BHFTECH Hydrodynamic Cavitation technology to reduce raw materials (alcohol and catalyst) as well as energy consumption

Biodiesel is a direct replacement for petroleum diesel and can be used in any diesel engine without modifications. Biodiesel blends are used in diesel cars, trucks, buses, off-road equipment, and oil furnaces across the country. The use of biodiesel can reduce a diesel engine's overall emissions up to 75 percent

The truth is, bio fuels are looked at as a means of replacing ALL of human energy needs from home heating to vehicle fuel to electricity generation. The basic concept is that if we use as much product as we grown, then our net impact on the environment should be negligible if not zero. This article covers a few of the current uses of bio fuels, a few of proposed uses, and tries to quantify (or at least mention) the environmental impact.

Model No	Capacity
BHFHC50L	**50 Litres per hour**
BHFHC100L	**100 Litres per hour**
BHFHC500L	**500 Litres per hour**
BHFHC1000L	**1000 Litres per hour**