

All-Natural Hydrophobic Oil Adsorbent Powders and Granules for Environmental & Industrial Purposes

Our partner a Hungarian company with an advanced technology for turning materials into hydrophobic oil adsorbent powders or granules is looking for possible business partners interested in licensing or purchasing the technology/product.

ABSTRACT:

The technology consists of an original industrial process by which natural materials can be turned into products with hydrophobic oil adsorbent properties. During the process there is no additional artificial or synthetic material, it is an environmentally friendly, low energy cost and fully automated process. The captured oil can be extracted and recycled, and the product can be reused several times over. These products can be developed as powders or granules with varying levels of hardness, water resistance, size, and density for diverse set of applications. Based on raw material products can be further enhanced to inherit additional properties for heavy metal adsorption, gas adsorption, protein adsorption, and more.

THE TECHNOLOGY HAS TWO DIFFERENT AREAS OF USE:


1. Industrial and environmental water purification, Gas capture, emission control (focus on filtering solutions)

The material is hydrophobic, meaning it does not absorb water or other water based fluids, does not form lumps in the presence of moisture. It can also be produced from widely available raw materials. Depending on the size and the set properties, it is suitable for both water (surface or settling solutions) and air filtering. The intended use is mainly to remediate surface water and soil after oil spills, also as a base material for water and air filters. With the application there are no harmful substances formed, the oil can be detached from the adsorbent and may be used as a fuel. There is no significant change in the water's pH level following the application as a general rule. However, if pH change is desirable, e.g. a strong basic quality is useful for antiseptic purposes, that can also be achieved for certain applications.

The technology is compact, needs little space, can be operated independently and requires no training. The production is space-saving, energy-saving, scalable, fully automated with minimal human resource requirements.

2. Cleaning industrial capillary systems (mainly in the food industry)

In food, oil, and cosmetic industry the mandatory cleaning protocols require regular production breaks, outages and an intense use of chemicals. With capillary systems



the oils and greasy materials are piped through tight tubes which as time goes get clogged and become useless. These parts then need to be either thoroughly cleaned or changed, both of which require a great deal of time and effort.

With the use of the mentioned oil adsorbent granulates (with right size and hardness) the clogging problem can be solved easily. The material can simply be injected with water flow into the oil-contaminated piping systems. This can completely clean up the greasy deposits without using detergents or disassembling, which saves a lot of time and money by lowering the time of outages.

The company offers a cost effective, water saving, cheap and environmentally friendly treatment that requires fewer downtime. This means a great alternative for current solutions.

MAIN ADVANTAGES:

- Versatility: diverse, easily accessible raw materials, adaptable product properties, fine-tunable solutions
- Ecological: natural ingredients, low consumption, recycled materials, emission control, no harmful residue
- Adsorbs oils and TPH components from liquids, surfaces, soil
- Some versions adsorb gas emissions e.g. CO₂.
- Water resistant on its own or makes other materials water resistant as an additive
- Multiple application fields in various industries
- Diverse models: On its own as technology, as part of production technology, ingredient/additive to materials, ready to use product range, etc.
- Fully automatized, scalable production technology
- Supporting technical tools, on-going R&D

POTENTIAL AREAS OF USE:

- Industrial filtering solutions for liquids and gases, emission control, waste management and cleaning, adsorbents.
- Technological cleaning, capillary systems cleaning for food, seed oil, cosmetics industry

STAGE OF DEVELOPMENT:

Trial production, Working prototype

INTELLECTUAL PROPERTY STATUS:

Patent pending



TYPE OF COLLABORATION:

Exclusive license, Non Exclusive license, Assignment of right, Joint development, Joint Venture, Product & production equipment sales

If you are interested, please respond to:

Ms Katarína Nagyová
Technology Transfer Manager,
Head of TT Department
LC Innoconsult International

innovacio@lcinnconsult.com
nagyova.katarina@lcinnconsult.com

