COMPLEX OF MEANS FOR ELIMINATING OIL SPILLS FROM WATER SURFACE

Description
Sorbents of repeated use intended to collect spills of oil (petroleum products) from water surface and soil, up to elimination of an iridescent film, are offered. The sorbents float and do not submerge; they reliably adsorb oil at temperatures of 0 to 10 °C. They are also used to clean water from emulsified oil. The adsorbents are produced in the form of rolls or mats. The mats are reinforced with polypropylene fibers and are intended for use as buoyant oil-adsorbing booms (trawls) of varied structure.

Technical specifications
The sorption capacity is 15-20 kg of oil per 1 kg of adsorbent. Regeneration (oil wringing) up to ten cycles reduces the capacity by 1-2 kg. The total oil collected per 1 kg of adsorbent reaches 150 kg. Spent sorbents can be employed as a fuel or waterproofing materials.

Technical appraisal and economic benefits
The sorbents:
• can be used over a wide temperature range,
• are produced from a cheap home feedstock
• are regenerated and recycled after use.

Application areas
Collection of oil, petroleum products, and iridescent films from water surfaces and soil.

Development stage
The sorbents are produced in the form of rolls, pads or mats. Up to 5 tons/year of the sorbents are manufactured at the pilot production of the Institute.

Patent situation
A patent was granted in the Russian Federation (1997)

Commercial offers
Customized manufacture;
license agreement;
joint production;
sales of finished products.

Estimated cost
The cost depends on the cost of the raw material used. In Russia, the rolls cost US$ 0.5/kg and the mats US$ 0.75/kg.

Contacts
Cand.Sc. Ida A. Savinova, Scientific Secretary
Institute of Petroleum Chemistry, Siberian Branch of the Russian Academy of Sciences
3, Akademichesky Prosp., Tomsk, 634021, Russia
Phone: (382-2) 258623, 258558
Fax: (382-2) 258457
E-mail: canc@ipc.tsc.ru
http://www.ipc.tsc.ru