

WASTE HUMAN HAIR-AN OIL RECOVERY MATERIAL PAR EXCELLENCE!**M.M. Samoon¹ and A.A.P. de Alwis²**¹ Post Graduate Institute of Science, University of Peradeniya.² Department of Chemical Engineering, University of Moratuwa.

The problem of oil pollution is today becoming a topical issue with two recent incidents at Colombo harbour (due to a breakdown of a CPC pipe line) and at Kirinda (due to a breakdown of a salvaging operation of a ship). These incidents sometimes cause too much reaction in some quarters. However, pollution from this source is not a new phenomena as service stations scattered all over the island release oil to surface waters, drains or land. Some of these discharges also find their way into the sea via river outfalls. Most importantly a majority of the service stations are closer to the coast as much of the economics in Sri Lanka are confined to the coastal belt. What has been realised is that in Sri Lanka yet the capability does not exist to handle a problem of this nature in an effective manner. It is also felt that there is an urgent need for a mechanism to take effective action in an event of this nature.

The study concentrates on an observation made in the United States by a hairdresser in the state of Alabama, which, was reported as a short piece of news in a US trade journal. The affinity of oil to human hair has been found to be high and this observation is subjected to some theoretical and experimental study. Results from the practical findings are presented here. It is shown that there are many ways of utilising this affinity in oil pollution control. There is potential to utilise the characteristics in a skimming device or as an adsorption system. It is found that human hair adsorbs, rather than absorbs, oil which means that instead of bonding with the hair, the oil is retained in layers on the surface of the hair stands. Few types of devices have been constructed and tested and the results are quite positive and encouraging.

As the method involves removal and recovery of oil, the potential exists in this way for oil recovery and reuse which is quite advantageous.