INTELLECTUAL PROPERTY OFFICE

BL O/043/09

13 February 2009

PATENTS ACT 1977

BETWEEN

Dr Gareth Williams	Claimant
and	
Surface Active Solutions (Holdings) Limited	Defendant

PROCEEDINGS

Application under section 72 of the Patents Act 1977 in respect of patent number GB 2347682

HEARING OFFICER P M Marchant

DECISION

1 The claimant applied to the Comptroller on 4 April 2007 to revoke patent number GB 2347682. He stated in his letter of 26 May 2008 that he no longer wished to pursue the application for revocation.

2 In order to meet the validity issues raised, the proprietors submitted proposals for amendment of the specification. The amendments have been advertised and no notice of opposition to them has been filed. The proposed amendments, made only to the claims, are annexed to this decision. The amendments are such as may lawfully be made in these proceedings.

3 Having now considered the objections raised by the applicants for revocation, I decide to allow the specification to be amended in the manner shown in the said copy of the claims attached and make no order for revocation of the patent.

P M Marchant
Deputy Director acting for the Comptroller

CLAIMS

1. A method for the extraction of oil from waste drilling mud or waste drill mud cuttings ~~a solid by microemulsification~~ comprising an oil fraction and a particulate fraction comprising mixing the waste drill mud cuttings ~~the steps of mixing an oil-contaminated solid~~ with a water-based solution of a surfactant, absorbing the oil fraction from the particulate fraction with the surfactant, forming ~~to form~~ a single-phase Winsor IV oil-in-water (o/w) microemulsion from the surfactant and the oil fraction and separating the single-phase Winsor IV o/w microemulsion and ~~solid phases~~ the particulate fraction.

2. A method as claimed in Claim 1 further comprising the step of rinsing the ~~solids~~ particulate fraction with an aqueous solution.

3. A method as claimed in Claim 2 characterised in that the aqueous solution comprises an aqueous salt solution.

4. A method as claimed in any of Claims 1 to 3 characterised in that the single-phase Winsor IV o/w microemulsion and the particulate fraction ~~solid phases~~ are separated by centrifugation.

5. A method as claimed in any of claims 1 to 4

characterised in that the surfactant comprises ~~an~~ a single-phase Winsor IV o/w microemulsion-forming surfactant.

6. A method as claimed in any of claims 1 to 5 characterised in that the aqueous surfactant solution comprises water and a salt.

7. A method as claimed in Claim 6 characterised in that the salt comprises sodium chloride.

8. A method as claimed in any of claims 1 to 7 characterised in that the water-based solution of a surfactant further comprises a co-surfactant.

9. A method as claimed in any of claims 1 to 8 characterised in that the water-based solution of a surfactant further comprises a flocculating agent.

10. A method as claimed in any of claims 1 to 9 characterised in that the extraction steps are carried out at ambient temperature or below.

11. A method as claimed in any of claims 1 to 10 characterised in that the oil is recovered from the single-phase Winsor IV o/w microemulsion.

12. A method as claimed in claim 11 characterised in that the oil is recovered by temperature-induced phase separation.

~~13. A method as claimed in any of claims 1 to 12 characterised in that the solid is selected from the group comprising a drilling mud waste, sand, soils, metal fabrication swarf, newly manufactured printed circuit boards and fractions thereof.~~

~~14. A method as claimed in any of claims 1 to 13 characterised in that the solid comprises drilling mud wastes or oil contaminated fractions thereof.~~

~~15. A method for removing oil from drilling and mud wastes, or oil-contaminated fractions thereof, comprising the steps (1) of mixing the oil-contaminated material with a water-based solution of a surfactant which forms an oil-in-water (o/w) microemulsion; such that the oil is extracted as an o/w microemulsion; (2) of separating the o/w microemulsion and solids phases by an appropriate technique; and (3) of finally rinsing the solids with water or aqueous salts solution to remove residual o/w microemulsion.~~

13. A method as claimed in any of claims 1 to 12, wherein the amount of remaining oil in said particulate fraction following extraction is below 1% wt.