

[54] **OXIDIZED PETROLEUM PITCH**

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[58] Field of Search 208/4, 5, 6, 22; 106/273

[56] **References Cited**

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[57] **ABSTRACT**

A binder pitch derived from an aromatic petroleum feedstock by batchwise oxidation of the aromatic petroleum feedstock, preferably in the presence of a residue of previously oxidized feedstock wherein the combined feedstock-oxidized feedstock charge is heated to about 600°–700°F., then oxidized with an air flow rate of up to about 0.2 cubic feet per minute oxygen per barrel (c.f.m./bbl.), the exothermic and applied temperature being controlled during oxidation between about 680°–750°F., with concurrent distillation of light ends. The polymerization-oxidation is continued in this temperature range until a binder pitch having a desired softening point with a high Conradson Carbon and a high benzene insoluble content is reached. The product containing a softening point of about 210°–250°F., a benzene insolubles of about 25–35% and a Conradson Carbon in excess of about 48%, is particularly useful as an electrode binder pitch. Binder pitches for use as foundry binder pitch, fiberboard pitch, and pipe saturates, can be made by the present invention.

7 Claims, No Drawings

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mating and enclosing engagement with said carrier lid.
 8. The apparatus as set forth in claim 7 and further comprising separable hinge and fastener components for said container whereby the carrier lid alone can be used in said cell structure as the specimen supporting carrier structure.

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9. The apparatus as set forth in claim 8 and further comprising a gel solution applied to the specimen surface of said carrier lid for contact with said wick elements.

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We claim:

1. A binder pitch obtained from a feedstock of aromatic petroleum hydrocarbon bottoms derived from the thermal processing of petroleum hydrocarbons, by the batchwise oxidation-polymerization of said aromatic petroleum feedstock in the presence of a residue of previously oxidized aromatic petroleum feedstock, at a temperature in the range of 680°-750°F., while passing a source of oxygen through said feedstock at the rate of about 0.01 to 0.2 cu.ft./min. oxygen/bbl., at substantially atmospheric pressure.

2. A binder pitch as defined in claim 1, wherein said oxidation-polymerization is carried out using air as the source of oxygen.

3. A binder pitch as defined in claim 1, wherein said oxidation-polymerization is carried out using 0.1-0.15 cu.ft./min. oxygen/bbl.

4. A binder pitch as defined in claim 1, wherein the previously oxidized aromatic feedstock is present at a

concentration in the range of about 5-50% by weight.

5. A binder pitch as defined in claim 1, wherein the previously oxidized aromatic feedstock residue is present at a concentration in the range of 25-30% by weight.

6. A binder pitch as defined in claim 1, wherein the previously oxidized aromatic petroleum feedstock is derived from an aromatic petroleum feedstock having been oxidized at a temperature in the range of 680°-750°F., while passing a source of oxygen through said feedstock at the rate of 0.01 to 0.2 cu.ft./min. oxygen/bbl., at substantially atmospheric pressure.

7. A process for oxidizing an aromatic petroleum feedstock consisting essentially of passing a source of oxygen through said aromatic petroleum feedstock at the rate of about 0.01-0.2 cu.ft./min. oxygen/bbl. and within a temperature range of about 680°F. to 750°F. for from about 10 minutes to 3 hours.

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