UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ULRICH HAMMON,
HEINZ F. SUTORIS,
JURGEN SCHRODER and
VOLKER SCHLIEPHAKE

Appeal 2008-1559
Application 10/451,405
Technology Center 1700

Decided: February 29, 2008

Before BRADLEY R. GARRIS, CATHERINE Q. TIMM, and JEFFREY T. SMITH, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 2-4, 6, 8-10, and 19-24. Because claims 2-4, 6, 8-10, and 19-22 are now allowed, only claims 23 and 24 remain on this appeal (Ans. 1-2). We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM-IN-PART.

Appellants claim a process comprising passing a stabilizer-containing mixture containing not more than 10% by weight of (meth)acrylic acid into a distillation apparatus (claim 23) and a process comprising passing a stabilizer-containing mixture containing not more than 20% by weight of (meth)acrylic acid and a solvent which comprises at least one compound selected from the group consisting of biphenyl, diphenyl ether, and dimethyl orthophthalate into a distillation apparatus (claim 24).

Claims 23 and 24 read as follows:

23. A process comprising passing a stabilizer-containing mixture containing not more than 10% by weight of (meth)acrylic acid into a distillation apparatus, distilling the mixture, removing a gaseous product therefrom comprising at least a portion of said stabilizer and optionally at least one of (meth)acrylic acid and a solvent, and recycling at least part of the gaseous product, as a low-boiler stream, to at least one working-up stage of (meth)acrylic acid, wherein:

the (meth)acrylic acid has been produced by catalytic gas phase oxidation,

said at least one working-up stage is one in which at least one of the following working-up processes is carried out: absorption, desorption, extraction, heating, evaporation distillation, rectification or condensation, said evaporation distillation being carried out in an apparatus different from said distillation apparatus,

said stabilizer-containing mixture is obtained from said at least one working-up stage,

said stabilizer-containing mixture contains at least one stabilizer in its active form,

said stabilizer-containing mixture contains at least one stabilizer that is volatile under the conditions in said distillation apparatus, and optionally at least one stabilizer that is non-volatile under the conditions in said distillation apparatus, and

one or more unrecycled stabilizers are optionally added to said at least one working-up stage, wherein when more than one unrecycled stabilizer is added, the stabilizers are added independently at different working-up stages.

24. A process comprising passing a stabilizer-containing mixture containing not more than 20% by weight of (meth)acrylic acid and a solvent which comprises at least one compound selected from the group consisting of biphenyl, diphenyl ether, and dimethyl orthophthalate, into a distillation apparatus, distilling the mixture, removing a gaseous product therefrom comprising at least a portion of said stabilizer, said solvent and optionally (meth)acrylic acid, and recycling at least part of the gaseous product, as a low-boiler stream, to at least one working-up stage of (meth)acrylic acid, wherein:

the (meth)acrylic acid has been produced by catalytic gas phase oxidation,

said at least one working-up stage is one in which at least one of the following working-up processes is carried out: absorption, desorption, extraction, heating, evaporation distillation, rectification or condensation, said evaporation distillation being carried out in an apparatus different from said distillation apparatus,

said stabilizer-containing mixture is obtained from said at least one working-up stage,

said stabilizer-containing mixture contains at least one stabilizer in its active form,

said stabilizer-containing mixture contains at least one stabilizer that is volatile under the conditions in said distillation apparatus, and optionally

at least one stabilizer that is non-volatile under the conditions in said distillation apparatus, and

one or more unrecycled stabilizers are optionally added to said at least one working-up stage, wherein when more than one unrecycled stabilizer is added, the stabilizers are added independently at different working-up stages.

The references set forth below are relied upon by the Examiner as evidence of obviousness:

Duembgen	DE 2 136 396[1]	Feb. 8, 1973
	3,932,500	Jan. 13, 1976
Sato	4,317,926	Mar. 2, 1982
Heida	WO 98/05622[2]	Feb. 12, 1998
	6,166,248	Dec. 26, 2000

Claims 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato in view of Duembgen or Heida.

For the reasons which follow, we will sustain the rejection of claim 24 but not the rejection of claim 23.

Claim 23 requires "a stabilizer-containing mixture containing not more than 10% by weight of (meth)acrylic acid." According to Appellants, this requirement renders claim 23 patentable because Sato "discloses a minimum acrylic acid content of 20 wt % as feed to their decomposition evaporation" (Br. 9). In rebuttal, the Examiner finds that "the claimed 'not more than 10%[']overlaps with Sato's 20%" (Ans. 5).

[1] As an English language equivalent to the DE reference, we (like Appellants and the Examiner) rely on U.S. Patent No. 3,932,500.
[2] As an English language equivalent to the WO reference, we (like Appellants and the Examiner) rely on U.S. Patent No. 6,166,248.

The Examiner's finding is clearly erroneous. The claim 23 recitation "not more than 10% by weight" means 10% by weight or less which unquestionably does not overlap with the 20% by weight content disclosed by Sato. For this reason, and because the Examiner has expressed no obviousness position concerning this claim requirement, the record before us does not support the Examiner's unpatentability determination with respect to claim 23.

Therefore, we reverse the Examiner's § 103 rejection of claim 23 as being unpatentable over Sato in view of Duembgen or Heida.

As for claim 24, the only claim feature argued by Appellants is the requirement "a solvent which comprises at least one compound selected from the group consisting of biphenyl, diphenyl ether, and dimethyl orthophthalate." Appellants believe this requirement renders claim 24 patentable because Sato "is drawn exclusively to the use of water as a solvent" (Br. 9). Appellants' belief this not well-taken.

The fact that Sato discloses only water as a solvent does not establish patentability as Appellants believe. This is because the rejection of claim 24 is based on the Examiner's conclusion that it would have been obvious for one with ordinary skill in this art to use in the process of Sato prior art solvents of the type here-claimed such as biphenyl or diphenyl ether as taught by either Duembgen or Heida (Ans. 4-6). On the record of this appeal, Appellants do not contest the Examiner's obviousness conclusion. Accordingly, we regard this conclusion as an uncontested prima facie case of obviousness with respect to claim 24.

It follows that we affirm the Examiner's § 103 rejection of claim 24 as being unpatentable over Sato in view of Duembgen or Heida.

The decision of the Examiner is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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