

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HARTMUT WAGNER and ROLAND FACH

Appeal No. 2002-1596
Application No. 09/284,701

HEARD: Feb 11, 2003

Before WALTZ, PAWLIKOSKI, and MOORE, Administrative Patent Judges.
WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the primary examiner's refusal to allow claims 1 through 3 as amended subsequent to the final rejection (see the amendment dated Aug. 24, 2001, Paper No. 15, entered as per the Advisory Action dated Sep. 24, 2001, Paper No. 18; see the Answer, page 3). Claims 1-3 are the only claims pending in this application. We have jurisdiction pursuant to 35 U.S.C. § 134.

According to appellants, the invention is directed to a new process for producing sulfuric acid from gases containing sulfur

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trioxide and nitrosyl sulfuric acid (Brief, page 2).¹ A copy of the claims on appeal may be found in the Appendix to appellants' Brief.

In addition to the admitted prior art found on pages 1-2 of appellants' specification, the examiner has relied upon the following references as evidence of obviousness:

Drechsel et al. (Drechsel '586)	3,525,586	Aug. 25, 1970
Drechsel et al. (Drechsel '900)	3,656,900	Apr. 18, 1972

The claims on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over appellants' "description of the prior art set forth on pg.s [sic] 1 and 2 in the specification" and Drechsel '586, further in view of Drechsel '900 (Answer, page 4). We reverse the rejection on appeal essentially for the reasons stated in the Brief, Reply Brief, and those reasons set forth below.

OPINION

The examiner finds that Drechsel '586 describes a process for producing sulfuric acid from sulfur trioxide containing gas leaving a catalytic oxidizer, where the sulfur trioxide and steam containing gas is contacted with sulfuric acid in an absorber 33 after the gas has been cooled to a temperature of 130°C. in a heat

¹All reference to and citation from the Brief refers to the Corrected Appeal Brief dated Mar. 5, 2002, Paper No. 21.

exchanger 8 (Answer, paragraph bridging pages 4-5, citing Figure 1 of Drechsel '586).² The examiner recognizes that Drechsel '586 fails to disclose that nitrosyl sulfuric acid is present in a gas stream in the sulfuric acid manufacturing process (Answer, pages 5 and 7).

To remedy this deficiency in Drechsel '586, the examiner cites appellants' description of the prior art on pages 1-2 of the specification which "discloses that nitrosyl sulfuric acid is a common contaminant in sulfuric acid manufacturing processes." Answer, page 5. From these findings, the examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of appellants' invention that nitrosyl sulfuric acid was a "conventional and common contaminant in sulfuric acid manufacture processes." *Id.* The examiner also concludes that "it is fully expected that the same sulfur trioxide containing gases will *inherently* contain the same nitrosyl sulfuric acid set forth in the Applicants' claims" and thus "will *inherently* also be condensed out

²The examiner applies Drechsel '900 to show a similar process to that of Drechsel '586, where the cooling temperature is recited as 140°C. (Answer, page 6, citing col. 5, ll. 20-27, of Drechsel '900). Therefore Drechsel '900 does not remedy the deficiencies in the examiner's rejection discussed *infra*.

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to the same degree" when subjected to cooling in the Drechsel '586 process (Answer, page 8, italics added).

The examiner, if relying upon a theory of inherency, must provide a basis in fact and/or technical reasoning to reasonably support a determination that the allegedly inherent feature necessarily flows from the teachings of the prior art. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. See *In re Robertson*, 167 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). On this record, the examiner has cited appellants' description of the prior art on pages 1-2 of the specification as the basis for concluding that nitrosyl sulfuric acid would have been present as a contaminant in the sulfur trioxide containing gas stream of Drechsel '586 (Answer, page 5). However, the actual passage in the specification recites

This process, however, has the disadvantage that in the catalytic conversion of SO₂ to SO₃, in dependence on the content of nitrogen oxide after the SO₂ production, there is also formed nitrosyl sulfuric acid, which likewise gets into the highly concentrated sulfuric acid and must be removed with a relatively great technical effort. [Specification, page 1, last six lines, underlining added].

Accordingly, the specification does not disclose *with certainty* that nitrosyl sulfuric acid is formed in every process for manufacturing sulfuric acid from sulfur trioxide, but only in those

processes with the requisite content of nitrogen oxide. Therefore there is no basis, on this record, for the examiner to conclude that nitrosyl sulfuric acid was inherently present in the sulfur trioxide containing gases of Drechsel '586. The examiner finds that the sulfur trioxide of the Drechsel patents comes from the catalytic conversion of sulfur dioxide in air, which in turn comes from the combustion of sulfur with air in a furnace (Answer, page 8). The examiner still relies upon the appellants' "description of the prior art" that it was known that nitrogen oxides react with the sulfur oxides to form the claimed nitrosyl sulfuric acid contaminant (*id.*). However, appellants' description of the prior art specifically teaches that the formation of this contaminant depends on the content of nitrogen oxide after the sulfur dioxide production. The examiner has failed to establish that the content of nitrogen oxide after the sulfur dioxide production of Drechsel '586 is sufficient to form the nitrosyl sulfuric acid contaminant disclosed in appellants' specification.

As appellants correctly argue (Brief, pages 4-5; Reply Brief, pages 2-3), even assuming *arguendo* that the examiner is correct that nitrosyl sulfuric acid is an inherent contaminant of the sulfur dioxide/trioxide process, the examiner has failed to show that the prior art discloses/suggests the last step of claim 1 on

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appeal. Namely, the examiner has not shown that Drechsel '586 (or '900) disclosed or would have suggested that the condensed nitrosyl sulfuric acid "is discharged" from the gas stream (see claim 1 on appeal, last two lines). Construing the term "is discharged" as broadly as reasonably possible, in light of the specification as understood by one of ordinary skill in the art, we determine that the term "discharge" means "to be removed" from the gas stream, as by discharge line 7 or line 14 (see Figure 1, Figure 2 and the specification, page 4, ll. 13-17 and ll. 32-34). See *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). The examiner finds that "Drechsel does make provision for removing the nitrosyl sulfuric acid out of the gas" because the reference teaches the same cooling temperatures as appellants require in the claims (Answer, page 10). However, the examiner fails to point out where it was taught or suggested in the applied prior art to "discharge" or "remove" the condensed contaminant nitrosyl sulfuric acid. *Id.*

For the foregoing reasons, we determine that the examiner has failed to establish a *prima facie* case of obviousness in view of the reference evidence. Accordingly, we cannot sustain the examiner's rejection.

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The decision of the examiner is reversed.

REVERSED

THOMAS A. WALTZ)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
BEVERLY A. PAWLIKOSKI)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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JAMES T. MOORE)	
Administrative Patent Judge)	

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