

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. 36

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JOSEPH S. SOLLERS, ROLAND N. FRACALOSSO,  
WALTER V. V. GREENHOUSE and GEORGE J. TOLAN

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Appeal No. 1997-3383  
Application No. 08/310,052

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ON BRIEF

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Before JOHN D. SMITH, PAK, and WALTZ, Administrative Patent Judges.

JOHN D. SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal pursuant to 35 U.S.C. § 134 from the final rejection of claims 1 through 9 and 11 through 13.

Claim 1 is representative and is reproduced below:

A process of separating and removing organic contaminants

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as water-soluble solids from air, wherein the contaminant-containing air is taken up from the immediate environment of a polyurethane foam processing line comprising passing the organic contaminant-containing air through a packed tower scrubber in the absence of an active filter material and the presence of an inert material present in said tower as packing in such a manner as to provide a plurality of tortuous channels through the packed tower, and simultaneously therewith spraying pH-adjusted water as a wash fluid down over the packing as the air passes through the packing so that each of the organic contaminant-containing air and wash fluid are caused to move through the plurality of tortuous channels in the packing so as to cause the pH-adjusted water to come into contact with the organic contaminants in the air, thereby removing the contaminants from the air as water-soluble solids.

The references of record relied upon by the examiner are:

Conyers	2,560,636	Jul. 17, 1951
Maegerlein et al. (Maegerlein) <sup>1</sup> (Offenlegungsschrift)	24 36 781	Feb. 12, 1976

The appealed claims stand rejected under 35 U.S.C. § 103 as unpatentable over Maegerlein in view of Conyers.

We reverse.

The subject matter on appeal is directed to a process of separating and removing organic contaminants as water-soluble solids from air, wherein the contaminant-containing air is taken up from the immediate environment of a polyurethane foam

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<sup>1</sup>Our reliance on this reference is based on the English translation of record.

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processing line. Specifically, in the claimed process, an organic contaminant-containing air is passed through a packed tower scrubber in the absence of an active filter material but in the presence of an inert packing material which provides a plurality of tortuous channels through the packed tower. The process further requires spraying of a pH-adjusted water as a wash fluid down over the packing as the contaminant-containing air passes through the packing. Appellants explain that prior to the present invention, scrubber units for removing organic contaminants from commercial polyurethane foam reducing or fabricating operations utilized materials such as activated charcoal to take up the organic pollutants. As a result, in the prior art, it was necessary to replace or regenerate such materials after a period of use. The presently claimed invention is said to involve the discovery that an organic contaminant-containing air may be passed through a scrubber in the absence of an active filter material, such as the prior art activated charcoal, but in the presence of an inert packing material, so long as the packing material provides a plurality of tortuous channels through the tower to affect contact between a sprayed solution which passes down over the

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packing.

Appellants correctly point out that the Maegerlein reference, the examiner's "primary reference," is directed to removing organic contaminants such as isocyanates from gases and vapors through the use of materials such as activated charcoal, or activated alumina for collecting the contaminants. Accordingly, the inventive method of the Maegerlein reference provides a packed tower scrubber using an active filter material, rather than excluding such an active material, as required by the presently claimed process. However, as the examiner makes clear in his answer, the portion of the Maegerlein reference relied upon to support the stated obviousness rejection is comparative Example 18 of Maegerlein which does not use an active filter. The examiner argues that all disclosures in the prior art including this comparative example must be considered in the determination of the question of obviousness.

Essentially, for the reasons set forth in appellants' brief, we do not sustain the examiner's stated rejection of the appealed claims for obviousness. Appellants' claimed invention, as emphasized above, involves a process of

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separating and removing organic contaminants (such as organic diisocyanates) as water-soluble solids from air, wherein the organic-contaminant-containing air "is taken up from the immediate environment of a polyurethane foam processing line" (appealed claim 1, lines 2 through 4 and appealed claim 8, lines 2 through 4). According to appellants' specification at page 6, line 20 to page 7, line 6, a foam processing line can "either be a line where the polyurethane foam is initially manufactured or where the finished polyurethane foam is subsequently treated, for example laminated by heat treatment to textile." The limiting "polyurethane foam processing line" claim language supports appellants' argument that the present invention "relates to the need for a scrubber unit for use in a commercial polyurethane foam producing or fabricating operation" (brief, page 4). This is a significant claim limitation, when one considers that the crux of the examiner's prior art rejection is based on Example 18 of Maegerlein, a "control test" which uses a rather small test unit scrubber to demonstrate that the use of inert packing material (Raschig rings) alone results in the shut down of the operation because of polyurea build-up. While the examiner correctly points out

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that the "Raschig rings" control Example 18 achieves significant reduction in diisocyanate concentration, the indication by Maegerlein that substantial amounts of polyurea deposition required "the test to be stopped" is a teaching that cannot be overlooked when considering whether or not one of ordinary skill in this art would have been motivated to modify the "control test" Example 18 for treatment of "contaminated-containing air . . . from a polyurethane processing line" as required by the claimed process. Arguably, while the above may not constitute an express "teaching away" from appellants' claimed process, the reported polyurea deposition problem is clearly relevant to the question as to whether the prior art reference contains both an adequate suggestion to practice appellants' claimed process as well as detailed enabling methodology for practicing the process and evidence suggesting that it would be successful. In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In our view, in light of the polyurea deposition problem reported for control test Example 18 of Maegerlein, there is little likelihood that a person of ordinary skill in this art would have been motivated to make any modification of

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this control test example, much less the modifications of the example required to meet the terms of the appealed claims. In this regard, we hasten to add that control test 18 in Maegerlein is not an anticipatory process of the appealed claims since both the waste gas and a pH-adjusted water (dilute aqueous sulfuric acid) is introduced at the upper end of the vertical tubular reactor. Moreover, there is no indication that the dilute aqueous sulfuric acid is sprayed down over the packing as required by the specific language of the appealed claims.

The decision of the examiner is reversed.

REVERSED

JOHN D. SMITH	)	
Administrative Patent Judge	)	
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	)	BOARD OF PATENT
CHUNG K. PAK	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES

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THOMAS A. WALTZ )  
Administrative Patent Judge )

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