

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ASHOK S. KRISHNA

Appeal No. 98-0552
Application 08/357,567¹

ON BRIEF

Before SOFOCLEOUS, CAROFF, and OWENS, Administrative Patent Judges.

CAROFF, Administrative Patent Judge.

DECISION ON APPEAL

This decision on appeal relates to the final rejection of claims 1-8 and 33-52, all the pending claims in the subject reissue application.

¹ Application filed December 16, 1994, for Reissue of U.S. Patent No. 4,869,807, issued September 26, 1989. According to appellant, Application RE 08/357,567 is a continuation of Application 07/764,599, filed September 24, 1991, abandoned; which is a Reissue of Application 07/067,678, filed June 26, 1987, now Patent No. 4,869,807, issued September 26, 1989; which is a continuation-in-part of Application 06/792,718, filed October 30, 1985, abandoned.

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The claims are directed to a process for the conversion of unsegregated hydrocarbon feed in an FCC riser reactor employing zeolitic catalyst to produce gasoline under specifically recited conditions; one such condition being that the feed is split and injected into the reactor at a plurality of positions spaced along the reactor so that about 60 to 75 volume percent (see independent claims 1 and 2) or about 50 to 75 volume percent (see independent claims 33 and 41) of the total feed is injected at the lowest injection position. Claim 1 is illustrative of the claimed subject matter on appeal:

1. A process for the conversion of unsegregated hydrocarbon feed in an FCC riser reactor employing zeolitic catalyst to produce gasoline which comprises:

a) splitting the hydrocarbon feed and injecting at a plurality of positions along a length of said FCC riser reactor, wherein about 60 to 75 volume percent of said feed is injected to the lowest injection position, and the distance between said lowest injection position and the next highest injection position comprises at least 20% of the total length of said riser reactor;

b) selecting the number of feed splits and selecting said positions along said length of said FCC riser reactor, to maximize the octane number of the gasoline;

c) recycling regenerated catalyst into the bottom of said FCC riser reactor; and

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d) lifting said regenerated catalyst up said FCC riser reactor to said injection position of said hydrocarbon feed [oil] with a flow of catalytically inert gas.

The prior art references relied upon by the examiner are:

Hettick	2,938,856	May 31, 1960
Hammershaimb et al.	4,479,870	Oct. 30, 1984

The following rejections are before us for consideration:

I. Claims 1-6, 33-37 and 40-43 stand rejected for obviousness under 35 U.S.C. § 103 in view of Hettick alone.

II. Claims 7-8, 38-39 and 44 stand rejected for obviousness under 35 U.S.C. § 103 in view of Hettick as applied in the aforementioned rejection, and further in view of Hammershaimb et al.

III. Claims 45-52 stand rejected for obviousness under 35 U.S.C. § 103 in view of Hettick as applied in the aforementioned rejections, and further in view of admitted prior art.

Based on the record before us, we agree with appellant that the examiner has failed to establish a prima facie case

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of obviousness. Accordingly, we shall reverse each of the rejections applied by the examiner.

Initially, we note that the teachings of Hettick are crucial to each of the rejections before us. Accordingly, we will focus our remarks upon that reference. None of the other prior art references which have been applied in conjunction with Hettick remedies the shortcomings of the Hettick disclosure.

With regard to Hettick, the examiner relies upon general statements in Hettick suggesting optimization of the quantities of oil added at each injection point in order to establish a prima facie case of obviousness. However, we agree with appellant that the examiner has given insufficient weight to Hettick's explicit teachings (col. 2, lines 3-10) regarding the proportion of the total feed added to the riser at the lowest or first injection position. To wit, Hettick states:

Thus, the entire body of catalyst, according to the invention, first contacts only a small part of the total feed which results in a high catalyst to feed or oil ratio . . . there will be a high ratio of steam to catalyst, as well as a high ratio

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of steam to oil existing at this
initial contact. [underlining
added for emphasis]

Also, we note that the only split-feed embodiment exemplified in Hettick is a process where the total feed is divided into six equal streams so that the amount of oil added at the first injection point is only about 17 volume percent of the total feed.

In our view, Hettick's explicit teachings regarding the proportion of oil initially injected into the riser serve to qualify the general statements of Hettick concerning optimization. In other words, we agree with appellant that the Hettick disclosure, taken as a whole, would lead an ordinary artisan to conclude that optimization of the split-feed FCC process requires delivery of a portion of the total feed to the first or lowest injection point (the "initial contact" point) in an amount well below any of the ranges recited in the claims on appeal, and certainly not as much as half or more of the total.

While appellant also argues that examples in his specification demonstrate unexpected results, we find it unnecessary to consider the issue inasmuch as we have

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determined that the examiner has not made out a prima facie case of obviousness. Nevertheless, we do note for the record that the examiner's finding of no unexpected results would appear to be inconsistent with an earlier determination (during prosecution of appellant's issued patent application) that the examples in appellant's specification do indeed demonstrate unexpected results with regard to prior art references (Bryson et al; Kovach et al) of scope and content similar to Hettick. See the Office actions (Paper Nos. 3 and 6) in appellant's issued patent file, application 07/067,678.

Rejection Under 37 CFR 1.196(b)

In accordance with the provisions of 37 CFR 1.196(b), we hereby apply a new ground of rejection as follows:

Claims 33-41, 43, 44/41 and 49-52 are rejected under 35 U.S.C. § 251 as being an improper recapture of claimed subject matter deliberately canceled in the application for the patent upon which the present reissue is based. With regard to the "recapture" bar, see In re Clement, 131 F.3d 1464, 1468,

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45 USPQ2d 1161, 1163-64 (Fed. Cir. 1997); and Ball Corp. v. United States, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1989).

The original claims in appellant's issued patent application recited that "about 50 to 90 % of said feed is injected to the lowest injection position". During prosecution of that application, appellant deliberately narrowed the aforementioned range to "about 60 to 75 volume percent" in order to obviate a rejection over prior art under 35 U.S.C. § 103. In this regard, see the Office action dated November 25, 1987 (Paper No. 3, page 4) and the responsive Amendment filed April 27, 1988 (Paper No. 5, pages 3-4). Appellant admits as much in the instant reissue oath. In the instant reissue application, appellant has presented claims reciting a range of "about 50 to 75 volume percent". Allowance of such claims would amount to an impermissible recapture of a portion of the range deliberately surrendered by appellant to obtain a patent, namely recapture of that portion of the range from 50 to 60%.

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This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)).

37 CFR

§ 1.196(b) provides that "[a] new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

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

REVERSED

NEW GROUND OF REJECTION UNDER § 1.196(b)

MICHAEL SOFOCLEOUS)	
Administrative Patent Judge)	
)	
)	
MARC L. CAROFF)	BOARD OF PATENT
Administrative Patent Judge)	
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)	
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TERRY J. OWENS)	
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