

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KRISTEN K. POLIAFICO, MICHAEL COYLE,
MATTHEW MARELLO, and THOMAS M. FRANTZ

Appeal 2008-2762
Application 11/072,748
Technology Center 1700

Decided: June 30, 2008

Before THOMAS A. WALTZ, JEFFREY T. SMITH, and
MICHAEL P. COLAIANNI, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Primary Examiner's final rejection of claims 1-7 and 9-11.¹ We have jurisdiction pursuant to 35 U.S.C. § 6.

¹ In rendering this decision we have considered the Appellants' arguments presented in the Appeal Briefs dated May 25, 2007, and October 1, 2007.

Appellants' invention is directed to a method for regulating static charge in a fluidized bed polymerization reactor. The method comprises monitoring the static charge level in said polymerization reactor and adding an anti-static agent to said polymerization reactor. (Spec. 2). Claim 1 is representative of the invention and is reproduced below:

1. A method for regulating static charge in a fluidized bed polymerization reactor, the method comprising:

establishing an acceptable static charge level for a fluidized bed polymerization reactor;

monitoring the static charge level in said polymerization reactor;

adding an anti-static agent at a first concentration to said polymerization reactor in response to a static charge measurement outside said acceptable level to return said static measurement to said acceptable level; and

adding said anti-static agent at a second concentration to stabilize said static measurement at said acceptable level

said anti-static agent selected from the group consisting of hydroxylethyl alkylamine and derivatives of hydroxylethyl alkylamine.

..:

Claims 1-7 and 9-11 stand rejected as follows:

A) Claims 1-4, 6, and 9-11 stand rejected under 35 U.S.C. § 102(b) as anticipated by Goode, U.S. Patent No. 6,111,034 issued August 29, 2000, as

evidenced by Rotzinger, Published U.S. Patent Application No. 2006/0167146, published July 27, 2006.² B) Claims 5-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Goode.

We have thoroughly reviewed each of Appellants' arguments for patentability.³ However, we are in complete agreement with the Examiner that the claimed subject matter is not patentable within the meaning of §§ 102 and 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejections.

Anticipation under 35 U.S.C. § 102 requires that a prior art reference describe each and every limitation of a claimed invention with "sufficient specificity" to establish anticipation. *Atofina v. Great Lakes Chem. Corp.*, 441 F.3d 991, 999 (Fed. Cir. 2006). To anticipate, a reference must sufficiently describe the claimed invention to have placed the invention in the possession of the public. *See Minnesota Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1572 (Fed. Cir. 1992).

² Appellants and the Examiner have acknowledged that in the Final Rejection, claim 11 was inadvertently excluded from the stated §102 rejection. This error was corrected in the Briefs and in the Answer.

³ Appellants have not separately addressed claims 4, 6, and 11. Appellants have grouped the arguments for claim 11 with claim 10. Consequently, claims 4 and 6 will stand or fall with claim 1 and claim 11 with claim 10. When addressing the rejections of claims 5 and 7, Appellants has not provided separate arguments addressed to a specific claim. Therefore, our analysis will be limited to claim 5. As indicated below, we have considered all separate arguments for patentability of the rejected claims.

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations, if any. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966). “[A]nalysis [of whether the subject matter of a claim is obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41 (2007), *see also DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1361 (Fed. Cir. 2006)(“The motivation need not be found in the references sought to be combined, but may be found in any number of sources, including common knowledge, the prior art as a whole, or the nature of the problem itself.”); *In re Bozek*, 416 F.2d 1385, 1390 (CCPA 1969) (“Having established that this knowledge was in the art, the examiner could then properly rely, as put forth by the solicitor, on a conclusion of obviousness ‘from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference.’”).

Appellants contend that Goode does not disclose adding anti-static agents in response to a static charge level outside of an acceptable level to return the static charge level to an acceptable level. (App. Br. 6). Appellants contend that Goode does not disclose adding an anti-static agent at a first concentration followed by a second concentration. (App. Br. 6).

The issue presented is: Did Appellants identify reversible error in the Examiner's rejection of claims 1-4, 6, 9, and 10 under § 102? We answer this question in the negative. The issue turns on whether Goode describes adding anti-static agents in response to a static charge level outside of an acceptable level to return the static charge level to an acceptable level.

The Examiner, Ans. 3-4, found that Goode discloses adding anti-static agents along with water to a gas phase olefin polymerization in a fluidized bed reactor. Goode discloses the anti-static agent is added to counter the positive static voltage in the reactor. (col. 9) Regarding the addition of an anti-static agent at a first concentration follow by a second concentration, the Examiner found that Goode (col. 3) discloses adding a first concentration of anti-static agent follow by adding a second concentration of anti-static agent. The Examiner found that Goode discloses that the use of Atmer 163 (a hydroxylethy alkylamine) antistatic agent. Appellants have not disputed the Examiner's finding that Atmer 163 is a hydroxylethyl alkylamine antistatic agent.

Contrary to Appellants' arguments (App. Br. 4), Goode (col. 9) discloses that water and an antistatic agent, are added continuously or intermittently to a polymerization reactor in response to changes in a measured static charge. Further, Goode (col. 9, l. 68, to col. 10, l. 28): states:

The role of the catalyst activator must also be considered when evaluating the effectiveness of water addition with an anti-static agent. If, for example, the anti-static agent requires water to function, and the water added to the reactor is consumed by the

catalyst activator, the anti-static agent may be non-effectual. Also, if the anti-static agent reacts with the catalyst activator prior to contacting water or contacting the fluid bed, it may also be of reduced effectiveness in controlling the static voltages. It is not unusual to find that the antistatic agent appears to be more effective in the first day or two of operation than at later times. Provided these guidelines, the practitioner skilled in the art will be able to add water, anti-static agent and/or catalyst activator in a manner that controls the static voltages in the fluid bed. In one embodiment, the anti-static agent may or may not be humidified and is added directly to the fluid bed or to the cycle gas pipe below the bottom head. In another embodiment, the anti-static agent and water are added to the cycle gas line below the reactor bottom head and the catalyst activator is added directly to the fluid bed. In yet another embodiment, the amount of anti-static agent and water are adjusted in response to changes in the catalyst activator feed rate. In yet another embodiment, the anti-static agent is added to the expanded section of the reactor above the fluid bed in such quantity that sufficient agent passes through the cycle gas cooler to achieve anti-static performance in the fluid bed (the agent may also fall from the expanded section directly into the fluid bed), and water is added either with the anti-static agent or before or after the cycle gas cooler.

Consequently, Goode placed a person of ordinary skill in the art in possession of adding an antistatic agent in response to a static charge measurement outside of an acceptable level to return the static charge measurement to the acceptable level.

Regarding claims 2, 3, and 9, Appellants contend that Goode does not disclose adding a first concentration of hydroxylethyl alkylamine antistatic agent up to about 100 ppm (claim 2) or less than 20 ppm (claim 3) or a second concentration of about 10 ppm (claim 9). (App. Br. 7-8). In support

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of this position, Appellants (Reply Br. 4-6) also present calculated concentrations of the antistatic agent present in Goode.

Appellants' arguments are not persuasive because Goode discloses the use of Atmer 163 (a hydroxylethy alkylamine) antistatic agent to control the static charges in a polymerization reactor. This disclosure provides for varying the amount of antistatic agent utilized in the polymerization reactor in response to the static voltage.⁴ (Note col. 11). The amounts provided by Goode exhibit that a person of ordinary skill in the art is in possession of the claimed amount of the antistatic agent to control the static charges.

Appellants have not established that the amount of antistatic agent specified establishes a patentable distinction from the Goode disclosure.

Regarding the rejection of claims 5-7 under 35 U.S.C. § 103(a), we affirm this rejection advanced by the Examiner. Appellants' argument for separately rejected claims 5-7 essentially repeats the arguments presented for claim 1 addressed above. (App. Br. 10-13). Appellants also contend that the Examiner has utilized hindsight as a basis for the obviousness rejection (App. Br. 13). However, Appellants have not provided analysis to support this argument. Because we do not find Appellants' arguments persuasive as to independent claim 1, it follows that these arguments are unpersuasive as to claims 5-7.

For the foregoing reasons and those stated in the Answer, we affirm all grounds of rejection presented in this appeal.

⁴ Goode exemplifies the use of Atmer 163 in amounts ranging from zero to 6 lbs/hr.

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ORDER

The rejections of claims 1-4, 6, and 9-11 under 35 U.S.C. § 102(b) and claims 5-7 under 35 U.S.C. § 103(a) are affirmed.

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

PL Initial:
sld

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