UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CALVIN T. PEELER,
AARON M. RATH,
HEINZ PLAUMANN and
JAMES F. TURNBACH

Appeal 2007-1021
Application 10/834,652
Technology Center 1700

Decided: August 21, 2007

Before BRADLEY R. GARRIS, PETER F. KRATZ, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

GARRIS*, Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the final rejection of claims 1-45. We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM.

The Appellants claim a composite structure comprising a first layer and a second layer which comprises the reaction product of an isocyanate component and a resin component reactive with the isocyanate component at ambient temperature wherein the resin component includes an isocyanate-reactive component having a nominal functionality of at least 3, an amine-based catalyst active at ambient temperature that initiates an exothermic reaction between the isocyanate component and the isocyanate-reactive component, and a temperature-activated catalyst different from the amine-based catalyst that is active at a temperature greater than the ambient temperature. The Appellants also claim the previously described resin component as well as a process for making the composite structure.

Representative claim 1 reads as follows:

1. A composite structure comprising:

(A) a first layer comprising a styrenated unsaturated polyester wherein said first layer is a show surface of said composite structure; and

(B) a second layer comprising the reaction product of:

(I) an isocyanate component; and

(II) a resin component reactive with said isocyanate component at ambient temperature comprising:

(a) an isocyanate-reactive component having a nominal functionality of at least 3;

(b) an amine-based catalyst active at ambient temperature that initiates an exothermic reaction between said isocyanate component and said isocyanate-reactive component; and

(c) a temperature-activated catalyst different from said amine-based catalyst that is active at a temperature greater than the ambient temperature.

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

Hashimoto	US 3,769,244	Oct. 30, 1973
Argyropoulos	US 5,290,602	Mar. 1, 1994
Lee	US 5,478,494	Dec. 26, 1995

Claims 1-3, 5-23, and 25-45 are rejected under 35 USC 103(a) as being unpatentable over Lee in view of Argyropoulos, and claims 4, 24, and 37 are correspondingly rejected over these references and further in view of Hashimoto.[1]

On page 10 of the Appeal Brief, Appellants characterize the issues on appeal as follows:

> The main issues in the present appeal revolve around 1.) the Examiner's interpretation of Lee et al. as disclosing, teaching, and suggesting an amine-based catalyst that is active at ambient temperature and that initiates an exothermic reaction between an isocyanate component and a resin component, as claimed in each of the independent claims on the present invention, and 2.) the erroneous position taken by the Examiner that the catalyst disclosed in Lee et al. is the same catalyst as the catalyst claimed in the present claims. Argyropoulos et al. was merely included in the rejection to remedy the failure of Lee et al. to disclose a composite article including a sytrenated polyester layer and does not factor in to the issues on appeal.

[1] The Appellants have not separately argued the dependent claims on appeal. Accordingly, these claims will stand or fall with the independent claims.

It is the Appellants' basic contention that Lee contains no teaching or suggestion of the independent claim feature "an amine-based catalyst active at ambient temperature" (claims 1, 21, 35)(Appeal Br. 10-14). In response, the Examiner finds that the catalysts of Lee are active at the ambient temperatures recited in the appealed claims and cites to lines 52-60 in column 19 of Lee as support for this finding (Answer 5). The Appellants reply to the Examiner's finding by asserting "that the Examiner has no basis for this statement, and that this statement is in conflict with the disclosure and teachings of Lee" (Reply Br. 3).

The Appellants' arguments and assertions on this matter are incorrect. In the disclosure cited by the Examiner, Lee teaches that "[t]he starting components [of his reactant-catalyst composition] may be mixed … and introduced into the open or closed mold" and that "[t]he mold temperature is expediently from 20º to 110º C., preferably from 30º to 60º C., in particular from 45º to 50º C." (col. 19, ll. 52-60). Implicit in the Examiner's above-noted finding (and not contested by the Appellants) is the fact that these mold temperatures are necessarily the temperatures at which the catalyzed reactions begin. In this regard, it is significant that the "ambient temperature" recitation of the independent claims is expressly defined as ranging "from room temperature of about 70ºF [i.e., about 21º C] to elevated temperatures of about 110ºF [i.e., about 43ºC]" (Specification 12, last line).

Therefore, the broadest and even preferred ranges of these mold/catalyzed-reaction temperatures substantially overlap the ambient temperature range claimed and disclosed by Appellants. In view of this overlap, we share the Examiner's finding that the amine-based catalyst of

Lee is active at the ambient temperature range recited in the independent claims.

Our foregoing discussion fully resolves the previously mentioned issues before us in favor of the Examiner. Nevertheless, it is appropriate to point out that the Examiner's rejection of independent claim 1 is further supported by an additional consideration. Specifically, the Examiner indicates the record contains no evidence that a different product is obtained when catalyzing the claim 1 reaction at ambient temperatures rather than somewhat higher temperatures. Thus, the Examiner has fairly raised the reasonable consideration that the claim 1 composite structure is unpatentable because it does not distinguish from the prior art even if Lee's amine-based catalyst is assumed to become active at temperatures higher than the activating ambient temperatures of the claim 1 amine-based catalyst. *See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1583, 18 USPQ2d 1001, 1016 (Fed. Cir. 1991). The Appellants' contrary view (Reply Br. 4) is not supported by evidence in the record of this appeal.

For the above-stated reasons, we hereby sustain the § 103 rejections of claims 1-3, 5-23, and 25-45 over Lee and Argyropoulos and of claims 4, 24, and 37 over Lee, Argyropoulos and Hashimoto.

The decision of the Examiner is 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)(iv)(effective Sept. 13, 2004).

AFFIRMED

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