

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* RAYMOND R. RIVERA  
and CARL D. NEUBURGER

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Appeal 2008-1937  
Application 10/372,807  
Technology Center 1700

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Decided: September 10, 2008

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Before CHARLES F. WARREN, THOMAS A. WALTZ, and  
JEFFREY T. SMITH, *Administrative Patent Judges*.

WALTZ, *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 2-13, 56, 58, and 60-64.<sup>1</sup> The remaining claims pending in this application are claims 1, 34-42, 57, and 59,

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<sup>1</sup> This appeal was the subject of an oral hearing on June 17, 2008.

which claims stand withdrawn from further consideration (App. Br. 2). We have jurisdiction pursuant to 35 U.S.C. § 6(b).

According to Appellants, the invention is directed to a pressure sensitive adhesive magnetic material with a particular combination of materials such that the separate release lining used with prior magnetic sheet materials no longer needs to be used to protect the adhesive (App. Br. 2-3). Further details of the invention may be gleaned from independent claim 2, reproduced below:

2. A pressure sensitive adhesive magnetic sheet material, comprising:

a flexible magnetic substrate having a first major surface and a second major surface opposite the first major surface,

a pressure sensitive adhesive layer coated directly on the first major surface; and

a release layer coated directly on the second major surface;

wherein the flexible magnetic substrate is wound into a roll such that the adhesive layer directly engages the release layer, and

wherein the release layer comprises the product obtained by curing a mixture of:

silicone release agent;

adhesion promoter that contains at least one acrylate group and promotes the adherence of the release layer to the magnetic substrate surface; and

adhesion enhancer that strengthens the cohesion of the release layer and enhances the crosslinking ability of the acrylate functionality of the adhesion promoter;

wherein the mixture is cured by irradiation.

In addition to Appellants' admitted prior art (AAPA), the Examiner has relied on the following prior art references as evidence of obviousness:

Xu	US 6,306,563 B1	Oct. 23, 2001
Jung	WO 01/14486 A1	Mar. 1, 2001
Takashima (JP '234) <sup>2</sup>	JP 2001-329234	Nov. 27, 2001

*Sartomer Coating Concepts* (hereafter "Sartomer"), Vol. II, pp. 1-13, published prior to October 11, 1998 (Ans. 3).

#### ISSUES ON APPEAL

Claims 2-13, 56, 58, and 60-64 stand rejected under 35 U.S.C. § 103(a) as unpatentable over JP '234 in view of Jung, Sartomer, and AAPA, as evidenced by Xu (Ans. 3).<sup>3</sup>

Appellants contend that the applied prior art provides no motivation to substitute a heat cured release layer provided on a magnetic substrate, as disclosed by JP '234, with a radiation cured release layer provided on a plastic substrate for adhesive tape applications, as disclosed by Jung (App. Br. 5, 9-10, and 11). Appellants also contend that the desired properties for adhesive tapes, as disclosed by Jung, do not conform with the desired properties for flexible magnetic sheets (App. Br. 10). Appellants further contend that the prior art provides no motivation to combine an adhesion

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<sup>2</sup> We rely on and cite from the computer-translated version of this document, as provided by the JPO and NCIPI, previously made of record.

<sup>3</sup> We note that Xu has been substituted for Berejka, US 6,706,404, in this rejection (Berejka was applied in the Final Office Action dated Dec. 7, 2006, page 2), and the Examiner has indicated that this is a "New Ground of Rejection" in the Answer (Ans. 9 and 10).

enhancer, as disclosed by Sartomer, with a magnetic substrate as claimed (App. Br. 5, 11). Appellants contend that there is no expectation of success since Jung is designed to provide a high unwind force as opposed to a low unwind force as desired by Appellants (App. Br. 12-13).

With regard to the new citation to Xu, Appellants contend that Xu is in a completely different and unrelated art, and it is “untenable” that an artisan designing a wound magnetic sheet would ever consult such an art (Reply Br. 12).

Appellants also present reasonably specific arguments regarding dependent claims 7-9, 11, and 56 (App. Br. 6, 18; Reply Br. 19).

Appellants contend that they have submitted a Declaration by Raymond R. Rivera (hereafter the “Rivera Declaration”) relating to secondary considerations as to why the claimed invention is not obvious over the prior art (App. Br. 5-6). Appellants contend that this Declaration establishes an example of the failure of others to provide a pressure sensitive adhesive magnetic sheet without a release liner (App. Br. 14). Appellants also contend that the Rivera Declaration establishes an example of long-felt need (App. Br. 15-16) and the request by third parties for a license on the technology for the purpose of commercializing a similar product (App. Br. 17).

The Examiner contends that JP ‘234 discloses a roll of flexible magnetic sheet with a self-adhesive on one face and a release layer on the other face (Ans. 3). The Examiner contends that JP ‘234 teaches various conventional silicone and non-silicone polymers useful to form the release layer, while Jung teaches a silicone-based release layer and an acrylate

adhesion promoter which yields improved properties for a pressure sensitive adhesive tape (Ans. 3, 6, 7, and 10). The Examiner contends that Sartomer, the AAPA (Specification, ¶ [0124]), and Xu evidence that adhesion promoters such as CD 9051 were well known in the art as adhesion promoters or enhancers for radiation cured coatings on various substrates (Ans. 3-4 and 8-9).

With regard to claims 7-9, 11, and 56, the Examiner contends that workable ratios among the well known components for forming a release coating composition would have been routinely optimized by one of ordinary skill in the art (Ans. 5).

With regard to the Rivera Declaration, the Examiner contends that JP ‘234 is evidence that the prior art has successfully met any long-felt need since this reference discloses a roll of flexible magnetic sheet having at least the same structure as claimed (Ans. 9). The Examiner also contends that the attempt at licensing is not persuasive (*id.*).

From the record presented in this appeal, we determine the following issues: (1) have Appellants shown that the Examiner committed reversible error in combining the disclosure and teachings of the applied references to establish a prima facie case of obviousness; and (2) if a prima facie case of obviousness has been established, have Appellants submitted evidence of secondary considerations sufficient to rebut the evidence of obviousness?

From the record in this appeal, we determine that the Examiner has properly established a prima facie case of obviousness in view of the reference evidence, which prima facie case has not been adequately rebutted by Appellants’ evidence and arguments. Therefore, we determine that

Appellants have not shown that the Examiner committed reversible error, and we AFFIRM the sole ground of rejection presented for review in this appeal essentially for the reasons stated in the Answer as well as those reasons set forth below.

#### OPINION

We determine the following Factual Findings (FF) from the record presented in this appeal:

- (1) JP '234 discloses a pressure-bonding, roll-like flexible magnetic sheet with a self-adhesive layer on one face and a release layer as the outermost layer on the other face (Ans. 3; JP '234, Abstract and ¶¶ [0006]-[0008]);
- (2) JP '234 teaches that various conventional silicone and non-silicone polymers can be used for forming the release layer, with a specific teaching of using polyorganosiloxane as a principal component of the silicone system remover or release layer (Ans. 3; JP '234, ¶ [0023]);
- (3) JP '234 teaches "stoving" the release layer for 1 minute at 100°C (JP '234, ¶ [0031]);
- (4) Jung discloses a pressure-sensitive adhesive tape which comprises a backing having a first surface with a pressure-sensitive adhesive and a second surface with a release coating, where the release coating or layer is formed from a mixture of a radiation-curable polysiloxane-based release agent and an acrylate containing

adhesion promoter (Ans. 3; Jung, Abstract; 1:5-9; 3:27-31; and 5:5-30);<sup>4</sup>

- (5) Jung teaches that a desired property of the roll material is that it has a reduced level of transfer or essentially no transfer of the release coating to the pressure-sensitive adhesive layer upon unwinding (Jung 2:3-4; 4:25-26; 22:7-9; 25:2-6 and 15-26);
- (6) Jung teaches that the release coating can be cured by exposing it to actinic radiation or thermal energy (Jung 7:5-6);
- (7) The AAPA teaches that Sartomer CD 9051™ is commercially available as an adhesion enhancer, and is useful to promote the adherence of the release coating layer to the magnetic substrate (Ans. 4; Spec., ¶ [0124]);
- (8) Sartomer teaches adhesion-promoting products for radiation-cured coatings to various substrates, specifically teaching that CD-9051™ has improved properties including faster cure response, greater hardness, and enhanced water resistance (Ans. 3-4; Sartomer, Cover page and page 1);
- (9) Xu teaches that CD-9051™ is an adhesion promoter useful for plastic substrates (Ans. 4; Xu, col. 30, l. 41; col. 45, ll. 66-67)

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*

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<sup>4</sup> Appellants admit that, in one embodiment of the invention, the release coating of the invention includes the reaction product as described in Jung (Spec., ¶ [0094]).

*Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). “[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007), quoting *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282 (1976). “[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *KSR*, 127 S. Ct. at 1741. Secondary considerations, “including substantial evidence of commercial success, praise, and long-felt need, were inadequate to overcome a strong showing of primary considerations that rendered the claims at issue invalid.” *Agrizap, Inc., v. Woodstream Corp.*, 520 F.3d 1337, 1344 (Fed. Cir. 2008).

As shown by FFs (1) and (2) listed above, we determine that JP ‘234 discloses a pressure sensitive adhesive magnetic sheet material with a pressure sensitive adhesive layer on one surface and a release layer coated directly on the second surface, where the release layer is wound into a roll, and the release layer may include conventional silicone materials such as polyorganosiloxanes. As shown by FF (4) listed above, we determine that Jung discloses the use of the product obtained by curing a mixture of a polysiloxane-based release material and acrylate-containing adhesion promoter to form a release layer for a pressure sensitive adhesive tape. As shown by FF (5) listed above, we determine that Jung teaches that the release layer of his invention has the desirable property of having a reduced

level of transfer or essentially no transfer of the release coating to the pressure sensitive adhesive layer upon unwinding. Accordingly, we agree with the Examiner that it would have been prima facie obvious to use the release layer taught by Jung instead of the conventional release layer disclosed by JP '234 for the desired low level of transfer upon unwinding of the roll in JP '234. *See KSR*, 127 S. Ct. at 1741 (if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious). As shown by FFs (7), (8), and (9) listed above, we determine that the use of well known adhesion promoters such as CD 9051™ for their known function in the pressure sensitive adhesive magnetic sheet material of JP '234 would have been well within the ordinary skill in the art. *See KSR*, 127 S. Ct. at 1741 (when a patent simply arranges old elements with each performing the same function that it had been known to perform, and yields no more than one would expect from such an arrangement, the combination of old elements is obvious). Although JP '234 discloses curing of the release layer by heating (FF (3)), we determine that curing by heating or irradiation was well known in the art (*see* FF (6)).

With regard to claims 7-9, 11, and 56, we agree with the Examiner that the amounts of each ingredient in the release layer composition would have been easily optimized by one of ordinary skill in this art, depending on the particular properties desired (Ans. 5). *See In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990), and cases cited therein (“The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. [Citations

omitted]. These cases have consistently held that in such a situation, the applicant must show that the particular range is *critical...*”). With regard to Appellants’ argument that the amount required by claim 56 is outside the amounts taught by Sartomer (Reply Br. 19), we note that the amount claimed is very similar to the lowest amount disclosed by Sartomer (2.8% vs. 3%) and Appellants have not provided any evidence of unexpected properties. *See Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 781 (Fed. Cir. 1985).

Appellants’ principal arguments concern the motivation to combine the JP ‘234 and Jung references, namely the substitution of a heat cured release coating on a magnetic substrate by the radiation cured release layer on a plastic substrate (App. Br. 5, 8-9, 10, and 11). These arguments are not persuasive for reasons discussed above, namely that Jung teaches the desirability of a release layer having reduced or no transfer of material to the pressure sensitive adhesive layer during unwinding of the roll. We determine that one of ordinary skill in this art would have recognized that this improvement could be applied to any release layer rolled upon a pressure sensitive adhesive layer, regardless of whether the substrate was plastic or a magnetic sheet. We have also determined that the prior art teaches the relative equivalence of heat curing and radiation curing for the release layer taught by Jung (*see* FF (3)).

For the foregoing reasons and those stated in the Answer, we determine that the Examiner has properly established a prima facie case of obviousness in view of the reference evidence. In view of the Rivera Declaration (App. Br. 14-17), we begin anew and consider all the evidence

for and against obviousness. *See In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

Appellants contend that the Rivera Declaration shows failure of others to provide a pressure sensitive adhesive magnetic sheet without a release liner, presents evidence of a long-felt need, and shows licensing opportunities as a result of the claimed invention (App. Br. 14-17). We find the Rivera Declaration unpersuasive. We determine that the statement by Mr. Rivera that he has no knowledge of any other company that has successfully produced and commercialized a pressure sensitive adhesive magnetic sheet without a release liner is not substantial evidence of the failure of others or a long-felt need (Rivera Declaration, ¶ 13). We find no basis in the Rivera Declaration for Appellants' contention that JP '234 is evidence of a long-felt need (App. Br. 16). Additionally, as discussed above, we determine that Jung, not JP '234, is evidence that the prior art presents and solves the problem of transfer of material from the release layer onto the pressure sensitive adhesive layer during unwinding of a roll of tape. We determine that the statement that the assignee has been approached by unnamed third parties requesting a license on the "technology" is not substantial evidence of commercial success, nor has any nexus been established between the purported licensing of "technology" and the claimed subject matter (Rivera Declaration, ¶ 15). Finally, we note that substantial evidence of these secondary considerations would have to be presented to overcome the strong prima facie case of obviousness. *See Agrizap, supra*.

Based on the totality of the record, including due consideration of Appellants' evidence and arguments, we determine that the preponderance

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of the evidence weighs most heavily in favor of obviousness within the meaning of § 103. Therefore, we affirm the decision of the Examiner.

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

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