

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte NORMAN C. FAWLEY

Appeal 2006-1207
Application 10/354,491
Technology Center 1700

Decided: September 20, 2006

Before GARRIS, KRATZ, and FRANKLIN, *Administrative Patent Judges*
GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 14 through 24.

We AFFIRM-IN-PART.

Independent claim 14 is representative of the subject matter on appeal and is set forth below:

A method comprising:
aligning first and second pipe segments at a first end of each respective pipe segment, each pipe segment having a core and a composite reinforcement circumferentially surrounding the core, each pipe segment further having a cut-back portion at the first ends in which the core is exposed;
attaching the first pipe to the second pipe at the first ends;
wrapping a composite joint tape circumferentially around the first pipe and second pipe at the cut-back portions; and
curing the composite joint tape to provide hoop reinforcement to the first and second pipe segments at the cut-back portions.

The Examiner relies upon the following references as evidence of anticipation and unpatentability:

Yamauchi	JP 61025673 A	Feb. 4, 1986
Betteridge	US 4,595,607	Jun. 17, 1986
Dempster	US 5,300,356	Apr. 5, 1994
Wilhelm (as translated)	WO 96/29535	Sep. 26, 1996
Funatsu	JP 2000179752 A	Jun. 27, 2000

Claims 14, 15, 17, 18, 21, and 22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wilhelm.

Claims 15, 16, 19, 20, 23 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilhelm in view of Dempster.

The Examiner entered the following new ground of rejection:

Claim 23 stands alternatively rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilhelm and Dempster and further in view of either Funatsu, Yamuchi or Betteridge.

OPINION

For the reasons set forth below, we sustain the rejections of claims 14, 15, 17, 18, 21, and 22 under 35 U.S.C. § 102(b) over Wilhelm and of claims 15, 16, 20 and 24 under 35 U.S.C. § 103(a) over Wilhelm in combination with Dempster. We will not sustain the rejection of claims 19 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Wilhelm in view of Dempster and of claim 23 over Wilhelm and Dempster and further in view of either Funatsu, Yamuchi or Betteridge.

ANTICIPATORY REJECTION OVER WILHELM

Claims 14, 15, 17, 18, 21, and 22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wilhelm.

Wilhelm is directed to “corrosion protection on the weld joints of plastic-coated steel pipes, which, however, have no coating in the area of the weld joints, whereby laminates of fiber-reinforced, cured unsaturated polyester resin are applied to the uncoated area, and whereby the laminates overlap the plastic-coated area” (Translation 2). In Wilhelm, pipes precoated with plastic and having uncoated ends are welded together (Translation 8). Once welded, “mats saturated with resin . . . [are] applied to the steel pipe and then the resin is cured” (*id.*). The resins used by Wilhelm are cold curing resins and photocuring resins (Translation 9). Wilhelm also discloses partially embedding reinforcement glass fibers in the pipe’s plastic

coating for the purpose of improving the adhesion of the curable resin to the coating (Translation 10).

According to the Examiner, Wilhelm anticipates claim 14 because:

Wilhelm is directed to a method of providing corrosion protection for steel pipes comprising welding adjacent, plastic-coated steel pipes and wrapping multiple composite joint tapes (laminates of fiber and resin) in a region where said steel pipes are uncoated (cutback portion), wherein said composite reinforcement is cured Wilhelm further teaches that the "plastic" coating 3 around the steel pipes is embedded with fibers 4 and thus constitutes a "composite reinforcement circumferentially surrounding the core" It is further noted that the benefit of improved hoop reinforcement would be expected to necessarily result in the assembly of Wilhelm. The placement of such a fibrous reinforcement structure in the hoop direction necessarily results in some degree of hoop reinforcement. It is agreed that an optimum reinforcement might occur if the fibrous structure is entirely oriented in the circumferential or hoop direction; however, the claim simply requires a tape "to provide hoop reinforcement". It is emphasized that the tape of Wilhelm is a fiber/resin composite that is wrapped over the weld region (equates to circumferential or hoop direction)- even if all the fibers are perpendicular to the hoop direction, some degree of hoop reinforcement would still be provided due to the thickness of the respective fibers [Answer para. bridging 4 and 5].

With respect to claim 14, Appellant “disagrees with the Examiner's characterization” that “the plastic coating . . . embedded with fibers . . . constitutes a ‘composite reinforcement’” (Br. 8). Appellant contends:

Wilhelm does not suggest this technique [of embedding fibers into the plastic coating to improve adhesion] in any way provides reinforcement to the underlying core. Moreover, the partial embedding of fibers into two separate 10 cm wide regions at only the ends of a plastic coating which may be anywhere from 10 m to 25 m long, may not be characterized as a “composite reinforcement” as required in Claim[] 14 [*id.*].

The Examiner responds that “the pipe segments are defined by a core 1 and a composite reinforcement, wherein said composite reinforcement is formed of a polyethylene coating 3 and a fibrous reinforcement material 4” (Answer 8). According to the Examiner, “in an analogous manner to the claimed invention, the composite reinforcement is not present over the weld region” (*id.*).

In reply, Appellant repeats his position that the plastic coating of Wilhelm is not a composite reinforcement (Reply Br. 2) and that “the Examiner has not shown that the coating 3/ [glass] fiber 4 combination of Wilhelm suggests any sort of ‘composite reinforcement’ as the term is used within claim[] 14” (Reply Br. 3).

Appellant’s arguments question whether the coating/fiber combination of Wilhelm is a composite reinforcement. Thus, we must first address what constitutes a composite reinforcement.

Appellant describes the composite reinforcement as “made with a[n] isopolyester resin matrix with E glass fibers” (Spec. para. bridging 3 and 4).

However, Appellant also discloses “the isopolyester resin may be substituted with any resin with similar strength and elongation characteristics to support the fibers” (Spec. 4). A composite, as understood in light of the Specification, appears to be a resin coating in combination with glass fibers.

As indicated above, Wilhelm discloses partially embedding reinforcement fibers in the pipe’s plastic coating (Translation 10). We also note that Wilhelm’s disclosure consistently refers to the embedded glass fibers as reinforcement fibers or material (*id.*). Thus, one skilled in the art would interpret the term “composite reinforcement” to encompass the coating/glass fiber components of Wilhelm. For this reason, we are unpersuaded by Appellant’s argument that “the Examiner has not shown that the coating 3/ [glass] fiber 4 combination of Wilhelm suggests any sort of ‘composite reinforcement’ as the term is used within claim[] 14.”

With respect to the limitation in claim 14 regarding "curing the composite joint tape to provide hoop reinforcement," Appellant further argues that “[t]he Examiner suggests merely wrapping a reinforcement layer in the hoop direction would necessarily provide some degree of hoop reinforcement” (Br. para. bridging 8 and 9).

Regarding the rejection by the Examiner, Appellant submits “Wilhelm does not expressly teach the laminate provides hoop reinforcement. Instead, Wilhelm teaches the laminate protects against corrosion and may be used to improve adhesion” (Br. 9). Appellant additionally argues “Wilhelm further fails to suggest any particular fiber orientation, number or the strength of the fibers that may be found within the mat used to make the laminate. Still further, Wilhelm fails to indicate the tension of application of the mat layers” (*id.*).

The Examiner contends “the joint tapes of Wilhelm are fibrous layers that are wrapped in the circumferential or hoop direction of the pipe assembly. The placement of such a fibrous reinforcement structure in the hoop direction necessarily results in some degree of hoop reinforcement” (Answer 8). The Examiner further contends:

[T]he claim simply requires a tape ”to provide hoop reinforcement”. It is emphasized that the tape of Wilhelm is a fiber/resin composite that is wrapped over the weld region (equates to circumferential or hoop direction)- even if all the fibers are perpendicular to the hoop direction, some degree of hoop reinforcement would still be provided due to the thickness of the respective fibers [Answer para. bridging 8 and 9].

Appellant repeats the arguments in the Reply Brief. (Reply Br. 3-4).

Our reviewing courts have held that, if a prior art device inherently possesses the capability of functioning in the manner claimed, anticipation exists regardless of whether there was recognition that it could be used to perform the claimed function. *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). When relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *See Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Patent App. & Int. 1990).

Appellant attempts to refute the Examiner’s position by arguing that “if hoop reinforcement were necessarily provided, Wilhelm would at the very least need to teach circumferential fiber orientation” (Br. 9). We note that the Examiner provides a technical reasoning of why the composite joint

tape of Wilhelm provides hoop reinforcement, “even if all the fibers are perpendicular to the hoop direction” (Answer 9). The Examiner’s technical reasoning in support of the inherency position regarding the “hoop reinforcement” characteristic under consideration is adequate to establish a *prima facie* case for the following reason.

Appellant’s invention addresses the problems related to “stronger steels [that] tend to suffer from increased brittleness, corrosion, and difficulties associated with welding, bending and laying during installation” (Spec. 1). Like Appellant, Wilhelm’s invention is directed to “corrosion protection . . . of steel pipes” (Translation 1). We also note that both disclose the use of a joint tape comprising a resin curable matrix reinforced with fibers wrapped around the pipe joint (Translation 8; Spec. 6-7). Appellant and Wilhelm, thus, are directed to at least one common problem (i.e., corrosion) with steel pipes and employ what appears to be the same type of joint tape to solve this problem. Thus, if wrapping the joint with a composite joint tape achieves the common goal of preventing corrosion, it is fair to say that it also provides “some degree of hoop reinforcement,” as urged by the Examiner (Answer para. bridging 8 and 9).

In a situation where, as here, the claimed and prior art products appear to be identical, the Patent and Trademark Office can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). Whether the rejection is based on “inherency” under 35 U.S.C. § 102, or on “prima facie obviousness” under 35 U.S.C. § 103, jointly or alternatively, the burden of proof is the same, and

its fairness is evidenced by the inability of the Patent and Trademark Office to manufacture products or to obtain and compare prior art products.

Id., 562 F.2d at 1255, 195 USPQ at 433-34.

As indicated above, the Examiner has provided an adequate technical reasoning of why Wilhelm's composite joint tape provides some degree of hoop reinforcement. On the record before us, the Appellant has submitted no evidence that proves otherwise. Thus, it is our determination and that the Examiner has established that Wilhelm anticipates the invention of claim 14 and that the Appellant has failed to successfully rebut the Examiner's reasoning that Wilhelm provides "some degree of hoop reinforcement."

Accordingly, we sustain the anticipatory rejection of claim 14.

Claim 15 requires "preheating the first pipe and the second pipe at the cut-back portion of the first ends." The Examiner contends "Wilhelm describes a preheating step in order to melt the plastic coating In this instance, heating would occur at the boundary between the coated and uncoated regions and thus, it appears that some of the uncoated region (cutback region) would be heated" (Answer 5).

Appellant argues:

Wilhelm teaches the heat is applied to melt the plastic to assist in embedding fibers within the plastic. Certainly, this is not "preheating" as the term is understood in light of Appellant's Specification, which teaches preheating the core to drive off moisture, provide a dry surface and kick off curing [Br. 10].

The Examiner responds:

[T]he heating [in Wilhelm] only occurs in the region where the coating is present. Thus, heating terminates at the boundary between the coated and uncoated regions of the pipe. As currently drafted, the claim requires "preheating at the cut-back portion". The above noted heating step would heat the cutback portion at the above noted boundary- the claim fails to require that the entire cut-back [sic, cut-back] portion is heated" [Answer 9].

In reply, Appellant counters, "neither the claims nor Appellant's Specification support the reading of 'preheating at the cut-back portion' relied upon by the Examiner" (Reply Br. 4). Specifically, Appellant argues that, while "[t]he claim language may not require preheating of the entire exposed portion of the core as noted by the Examiner, however, it certainly requires heating more than just a boundary between the core and composite reinforcement" in view of the language of claim 14 and the Specification (Reply Br. para. bridging 4 and 5).

It is well settled that a limitation of the Specification must not be read into a claim where no express statement of the limitation is included therein. *Comack Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186-87, 48 USPQ2d 1001, 1005 (Fed. Cir. 1998); *In re Priest*, 582 F.2d 33, 37, 199 USPQ 11, 15 (CCPA 1978); *In re Prater*, 415 F.2d 1393, 1405, 162 USPQ 541, 551 (CCPA 1969).

We first note that Appellant concedes that "[t]he claim language may not require preheating of the entire exposed portion of the core as noted by the Examiner" (Reply Br. 4). In addition, as also noted by the Examiner,

claim 15 has no limitations concerning the extent of the cut-back portion of the pipe that is to be preheated (Answer 9).

We agree with the Examiner's contention, as apparently conceded by Appellant (Reply Br. 4), that the language of claim 15 does not require "that the entire cut-back [sic, cut-back] portion is heated" (Answer 9) for the following reasons.

While Appellant points to sections of the Specification to support the allegation that claim 15 "requires heating more than just a boundary between the core and composite reinforcement 140" (Reply Br. para. bridging 4 and 5), the sections relied on do not address preheating of the cut-back portion. Even if the Specification disclosed the extent of the cut-back portion to be heated, to read the claim as argued by Appellants would impermissibly read a limitation into claim 15. *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336, 1344, 76 U.S.P.Q.2d 1724, 1731 (Fed. Cir. 2006).

Further, as pointed out by the Examiner, Wilhelm's "heating [of the plastic coating] terminates at the boundary between the coated and uncoated regions of the pipe" (Answer 9). We do not envision how Wilhelm's cut-back portion would not be preheated to some extent, and Appellant has provided no evidence or pointed to no portion of Wilhelm in support of his argument. Thus, we also agree with the Examiner's conclusion that "some of the uncoated region (cut-back region) would be heated" (Answer 5).

Accordingly, we sustain the rejection of claim 15 under 35 U.S.C. § 102(b) as being anticipated by Wilhelm.

Claim 17 further requires the step of "wrapping a resin saturated reinforcement tape circumferentially around the joint tape to prevent surface cracking of the joint tape."

The Examiner contends that the structure of the resin laminates of Wilhelm “includes multiple laminates or reinforcement layers, the innermost one of which can be viewed as a ‘composite joint tape’ and the adjacent one (with respect to the innermost one) of which can be viewed as a ‘resin saturated tape’” (Answer para. bridging 5 and 6). The Examiner refers to the sole figure of Wilhelm as depicting “multiple fiber reinforced laminates 5, 6 . . . wrapped around the uncoated portion of the weld region” (Answer 6). The Examiner explains that “the innermost laminate 5, 6 can be viewed as the joint tape and the outermost laminate can be viewed as the fabric- the claims as currently drafted fail to exclude the respective layers from being the same” (*id.*).

Appellant argues that “different claim terms (‘composite joint tape’ and ‘resin saturated reinforcement tape’) [are used] to identify these elements, necessarily [suggesting] the presence of two separate elements differing in scope. Thus, identical mats of Wilhelm, regardless of how many layers are applied, may not be relied upon to teach both a ‘composite joint tape’ and a ‘resin saturated reinforcement tape’” (Br. para. bridging 10 and 11).

The Examiner states that “[t]he mere use of different claim terms does not restrict a first and second laminate formed of the same material from being viewed as a ‘composite joint tape’ and a ‘resin saturated tape.’ The claims as currently drafted fail to identify any specific characteristics or arrangements for the respective layers other than one being a composite tape and the other being a resin saturated tape- in this instance, the laminates of Wilhelm are fiber/resin composites [and] are seen to constitute either layer of the claimed invention” (Answer 10).

Appellant replies, “the resin saturated reinforcement tape prevents surface cracking of the joint tape. Such features are not recited with respect to the joint tape. Thus, not only does Appellant's use of different claim terms (‘composite joint tape’ and ‘resin saturated reinforcement tape’) to identify each layer require the presence of two separate elements differing in scope, so to [sic, too] does Appellant's identification of specific characteristics of the resin saturated reinforcement tape not identified with respect to the composite joint tape” (Reply Br. 6).

We concur with the Examiner that the language of claim 17 does not require the composite tape and the resin saturated reinforcement tape to be separate materials. The claims do not recite any structural limitations that distinguish the resin saturated reinforcement tape from the composite joint tape. Wilhelm’s tape is a cloth or fleece mat saturated with resin matrix (Translation 8). According to Wilhelm, “[l]aminates of glass mats (5) . . . saturated with resin (6), are applied to the uncoated area, whereby the upper laminate overlaps the coated area” (Figure; Translation 11). Thus, the claimed and prior art products again appear to be identical. If identical, Wilhelm’s wrapped joint tape necessarily performs the function in claim 17 of preventing surface cracking (i.e., of the underlying laminate). The Appellant has submitted no evidence proving that Wilhelm’s wrapped joint tape does not necessarily or inherently perform the function of claim 17. *Best*, 562 F.2d at 1255, 195 USPQ at 433.

Accordingly, we sustain the anticipatory rejection of claim 17 over Wilhelm.

Independent claim 18 differs from independent claim 14 in that the curing step need not “provide hoop reinforcement to the first and second

pipe segments at the cut-back portions.” Appellant’s argument directed to claim 18 mirrors the argument made with respect to claim 14 concerning the composite reinforcement. The argument is unpersuasive for reasons discussed above.

Claim 21, dependent from claim 18, was not separately argued and, therefore stands or falls with claim 18.

Claim 22 is essentially of the same scope as claim 17. The argument raised against claim 22 is the same as the argument directed to claim 17. This argument also is unpersuasive as discussed above.

Accordingly, we sustain the anticipatory rejections of claims 18, 21 and 22 over Wilhelm.

OBVIOUSNESS REJECTION OVER WILHELM AND DEMPSTER

Dempster is directed to “[a] tape wrap system adapted for protecting metal tubular articles, particularly pipes, from corrosion comprising in order, a primer coating covering the surface of the article, an innerwrap over the primer coating and an outerwrap placed over the innerwrap” (Abstract). Both the innerwrap and the outerwrap comprise heat fusible materials (Abstract). Dempster also discloses:

The general process of producing the tape wrap system of this invention includes well known plant tape coating methods. By way of illustration, pipe may initially be cleaned by any of the conventional ways known in the art such as by shot or grit blasting and preheated, *e.g.* to 125°-200 °F. Primer is then applied to the pipe by way of well known processes such as spraying or brushing [col. 4, lines 42-47].

Under 35 U.S.C. § 103(a), the Examiner presents the following alternative rejection of claim 15 as well as a first rejection of claims 16, 19, 20, 23 and 24:

While Wilhelm fails to expressly describe the processing of the steel pipes prior to receiving the composite joint tapes, there are a series of well known processing steps such as blasting, pretreatment (primer application), and pre-heating (residual heat would be expected to contribute somewhat to curing of resin) that are extensively used in the application of protective tape wraps or laminates to steel pipes, as shown for example by Dempster (Column 4, Lines 42-50). It is emphasized that Dempster is directed to the application of a tape wrap system (to steel pipes) in order to provide corrosion resistance and while the reference fails to expressly describe a pipe weld region, a fair reading of Dempster suggests that the above noted techniques are applicable to individual pipes or a welded pipe assembly. Absent any conclusive showing of unexpected results, one of ordinary skill in the art at the time of the invention would have found it obvious to process the steel pipes in a conventional manner, such as shown by Dempster, prior to applying the respective composite tapes in the method of Wilhelm. It is additionally noted that Wilhelm does suggest the use of a blasting technique in order to clean the weld region (Page 11, Example 1 of translation) and thus, Wilhelm expressly discloses one of the conventional processing techniques [Answer para. bridging 6 and 7].

Appellant argues that “one of ordinary skill in the art would understand the materials used, such as resin mixtures, to be specific to the type of cure desired” (Br. para. bridging 11 and 12) and that “a resin mixture

suitable for cold curing or photo curing such as that of Wilhelm, would not necessarily be interchangeable with a heat curing system as taught by Dempster” (Br. 12).

The Examiner contends:

Dempster . . . [evinces] a heating step as representing a common technique in the treatment of metallic pipes prior to the application of a reinforcement material [T]he treatments are carried out to provide a clean surface for the application of a reinforcement material and would have been practiced on any metallic pipe surface prior to the application of a reinforcement material” [Answer 9].

In reply, Appellant repeats the arguments made in the Brief (Reply Br. 5).

Claim 15 recites the limitation of “preheating the first and the second pipe at the cut-back portion of the first ends.” According to Appellant’s Specification, “preheating [of the metal core] drives off moisture and provides a dry surface for subsequent welding and reinforcement adhesion” (Spec. 5). Appellant’s Specification also indicates that “[t]he [steel] core 130 may be preheated . . . to remove excess moisture and to kick off the cure of the composite reinforcement 140 during subsequent application” (Spec. 8).

Like Appellant, both Wilhelm and Dempster are directed to protecting metal pipes from corrosion (Wilhelm Translation 2; Dempster col. 3, lines 7-10). Both Wilhelm and Dempster also address protection of welded joints (Wilhelm Translation 8; Dempster col. 5, lines 12-13). In addition, Wilhelm and Dempster teach cleaning at least a portion of the pipe surface prior to

application of the reinforcement material. Specifically, Wilhelm teaches cleaning at least the weld joint by sandblasting (Translation 11). Dempster discloses “conventional ways known in the art [to clean pipe surfaces] such as by shot or grit blasting and preheat[ing], *e.g.* to 125°-200 °F” (col. 4, lines 46-47).

Based on these disclosures and the common purpose of corrosion prevention, we agree with the Examiner’s conclusion that one of ordinary skill in the art at the time of the invention would have found the disclosure of Dempster regarding the preheating step applicable to the process of Wilhelm as “a conventional manner [to treat steel pipes] prior to applying . . . composite tapes” (Answer 7).

Accordingly, we sustain the alternative rejection of claim 15 under 35 U.S.C. § 103(a) over Wilhelm in view of Dempster.

Claim 16 recites “priming the first ends of the cut-back portions.” The Examiner relies on the combination of Wilhelm and Dempster to meet this limitation for the reasons expressed in the above quotation from the paragraph bridging pages 6 and 7 of the Answer.

Appellant argues “the adhesion mechanism of Wilhelm is not facilitated by priming, thus one of ordinary skill in the art would not be motivated to add a useless or redundant step to the process of Wilhelm” (Br. 13).

According to the Examiner:

A fair reading of Dempster suggests that the disclosed treatment techniques are generally applicable to methods in which a reinforcement material is applied to a metallic pipe surface. This is further supported by the suggestion of one of the treatment techniques by Wilhelm in a method

involving a weld region of adjacent, metallic pipes
[Answer 10].

We are unpersuaded by Appellant's argument that the adhesion mechanism of Wilhelm is not facilitated by priming. Appellant has pointed to no disclosure in Wilhelm that supports this argument. On the contrary, Wilhelm offers an alternative manner to apply the joint tape that includes "first paint[ing] the . . . resin onto the weld joint, then lay the fiber form on top, press it into the resin and cure this" (Translation para. bridging 8 and 9). This step is suggestive of a priming step.

As noted above, Wilhelm and Dempster are directed to protecting metal pipes from corrosion, particularly welded joints. Dempster teaches applying primer to the surface of the pipe for the purpose of "provid[ing] better adhesion at both the pipe/primer interface and the innerwrap/primer interface and also to coat any irregularities which may be present on the pipe surface" (col. 1, lines 31-34).

In view of the aforementioned common objective of Wilhelm and Dempster, we agree with the Examiner's contention that "one of ordinary skill in the art at the time of the invention would have found it obvious to process the steel pipes in a conventional manner, such as shown by Dempster, prior to applying the respective composite tapes in the method of Wilhelm" (Answer para. bridging 6 and 7).

The arguments concerning claim 20 correspond to the arguments concerning claim 16, which are unpersuasive for reasons given above.

Accordingly, we sustain the rejection of claims 16 and 20 under 35 U.S.C. § 103(a) over Wilhelm in view of Dempster.

Independent claim 24 differs from independent claim 14 in that it requires a priming step and further requires “wrapping a fabric over the wrapped joint tape to provide hoop reinforcement to the first and second pipe segments at the cut-back regions” prior to the curing step.

The Examiner contends that “the innermost laminate is seen to constitute a joint tape and the adjacent laminate is seen to constitute the fabric” (Answer 7). This rationale for the rejection over Wilhelm and Dempster parallels the rationale presented against claim 17.

Appellant’s arguments also parallel the arguments and are unpersuasive for reasons analogous to those discussed previously.

Accordingly, we sustain the obviousness rejection of claim 24.

Claim 19 requires “heating the metallic core to kick off cure of the resin in the composite joint tape.” The Examiner again relies on the combination of Wilhelm and Dempster to meet the recited limitation.

Appellant argues, “Wilhelm fails to teach the element of ‘heating the metallic core to kick off cure of a resin in the composite joint tape’ as recited in Claim 19. Instead, Wilhelm teaches ‘curing is carried out under radiation with UV-light or sunlight’” (Br. para. bridging 13 and 14).

While conceding that “Wilhelm discloses a method in which the resin is cured via UV light or sunlight” (Answer 10), the Examiner contends that “the above noted heated [sic, heating] steps (of the plastic coating [as taught by Wilhelm] or of the pipe prior to wrapping the reinforcement [as taught by Dempster]) would be expected to contribute a small amount to the curing of the resin- as currently drafted, the claim only requires that the metallic core is heated to kick off cure of the resin” (Answer para. bridging 10 and 11).

We disagree with the Examiner's contention. As correctly pointed out by Appellant, the resin of Wilhelm is cold cured or photocured (Translation 9). The rationale advanced by the Examiner has no support or explanation on how heating the metallic core of Wilhelm's pipe will kick off cure of the resin in a cold cure resin system or photocurable resin system of the type disclosed by Wilhelm. The Examiner's rationale is unacceptably based on assumption and speculation.

Accordingly, we will not sustain the rejection of claim 19 under 35 U.S.C. § 103(a) over Wilhelm in view of Dempster.

Claim 23 depends from claim 19, the rejection of which has not been sustained. Accordingly, we also will not sustain the rejection of claim 23 for the reasons presented above.

**OBVIOUSNESS REJECTION OVER WILHELM AND DEMPSTER,
FURTHER IN VIEW OF EITHER FUNATSU, YAMUCHI OR
BETTERIDGE**

This rejection only concerns claim 23. As indicated above, claim 23 is dependent on claim 19. Since the rejection of claim 19 has not been sustained, we again will not sustain the rejection of claim 23 for the reasons presented above.

OTHER ISSUES

We note that the subject matter of the claim 14 limitation "curing the composite joint tape to provide hoop reinforcement" is not described in the Specification as filed. "The claim or claims must conform to the invention as set forth in the remainder of the Specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by

reference to the description.” 37 CFR § 1.75(d)(1). We also note the limitation in question appears in original claim 14. Claims filed in the original Specification are part of the disclosure. Therefore, if an application as originally filed contains a claim disclosing material not disclosed in the remainder of the Specification, the applicant may amend the Specification to include the claimed subject matter. *In re Benno*, 768 F.2d 1340, 1346, 226 USPQ 683, 686-687 (Fed. Cir. 1985). Appellant should submit an amendment to correct the above-noted omission and thereby comply with 37 CFR § 1.75(d)(1).

In addition, claim 24 recites “wrapping a fabric over the wrapped joint tape to provide hoop reinforcement to the first and second pipe segments at the cut-back regions.” In our review of the Specification, we find the following disclosure concerning the step of wrapping fabric: “[a] woven fabric [can be] wrapped circumferentially around the joint to prevent circumferential cracking during subsequent cure of the [composite] reinforcement joint tape” (Spec. 2). However, the above noted claim limitation appears to lack descriptive support with respect to providing “hoop reinforcement to the first and second pipe segments at the cut-back regions.”

In any future prosecution that may occur, Appellant and the Examiner should address whether and how this limitation complies with the written description requirement of the first paragraph of 35 U.S.C. § 112.

CONCLUSION

The Examiner’s rejection of claims 14, 15, 17, 18, 21, and 22 under 35 U.S.C. § 102(b) as being anticipated over Wilhelm is affirmed.

The Examiner's rejection of claims 15, 16, 20 and 24 U.S.C. § 103(a) as being unpatentable over Wilhelm and Dempster is affirmed.

The Examiner's rejection of claims 19 and 23 U.S.C. § 103(a) as being unpatentable over Wilhelm and Dempster is reversed.

The Examiner's rejection of claims 23 U.S.C. § 103(a) as being unpatentable over Wilhelm and Dempster and further in view of either Funatsu, Yamuchi or Betteridge is reversed.

Thus, the decision of the Examiner is AFFIRMED-IN-PART.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED-IN-PART

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