IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
COLUMBIA DIVISION

PURE FISHING, INC., an Iowa Corporation, Plaintiff, v. NORMARK CORPORATION, a Minnesota Corporation, d/b/a RAPALA, Defendant.	C/A NO. 3:10-cv-2140-CMC **OPINION and ORDER** (partial Claim Construction ruling)

This matter is before the court for construction of specified terms of two patents, the rights to which are owned by Plaintiff, Pure Fishing, Inc. ("Pure Fishing"). Pure Fishing alleges that Defendant, Normark Corporation ("Normark") infringes these patents through products it manufactures and/or distributes. Having reviewed the parties' memoranda, the court has determined that the disputed terms of one of the two patents (U.S. Patent No. 5,749,214 (the "Cook Patent")) may be construed based on the written submissions. The court, therefore, issues this order addressing the disputed terms of the Cook Patent, leaving construction of the disputed terms of the remaining patent (U.S.Patent No. 6,174525 B1 (the "Kelley Patent")) for the hearing scheduled for November 9, 2011.

Terms in Dispute (Cook Patent). The disputed terms are included in independent Claim 1, and dependent Claims 4 and 5 of the Cook Patent. Claim 1 claims the following:

> 1. A process for increasing tenacity in a twisted or braided fishing line made of gel spun polyolefin yarns, said process comprising
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> > stretching a braided or twisted line of 3-64 gel spun polyolefin yarns, wherein each yarn is within the range from about 20 denier to about 1000 denier, at a temperature within the *range from about 110 ° C. to about 150 ° C.* and at total draw ratio within the range from *about 1.0 to about 2.0.*

Dkt. No. 74-1 at 10 (Cook Patent 15:28-35) (emphasis added). The differences in interpretation relate to the use of the term "about" in both phrases emphasized above.[1]

Meaning of "about." As the Federal Circuit Court of Appeals has explained "[t]he use of the word 'about,' avoids a strict numerical boundary to the specified parameter." *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1217 (Fed. Cir. 1995); *see also Patent Law and Practice, Sixth Ed.*, § 5.II.A.3.d.7. (BNA 2008) (stating, in summarizing claim construction guideposts, that "absent broadening language, numerical ranges are construed exactly as written"). When faced with such a term, the court should interpret the range "in its technologic and stylistic context." *Pall Corp.*, 66 F.3d at 1217 (noting this interpretation is "a matter of claim construction" for the court). As the *Pall Corp.* court explained, the court should

> consider how the term [in dispute] was used in the patent specification, the prosecution history, and other claims. It is appropriate to consider the effects of varying that parameter, for the inventor's intended meaning is relevant. Extrinsic evidence of meaning and usage in the art may be helpful in determining the criticality of the parameter, and may be received from the inventor and others skilled in the field of the invention.

Id. Despite this general directive, the Federal Circuit has, in some instances, done no more than give the term "about" its ordinary (and unclarified) meaning of "approximately." *See Merck & Co., Inc., v. Teva Pharmaceuticals USA, Inc.*, 395 F.3d 1364, 1369-70 (Fed. Cir. 2005).

Use of "about" in temperature range. The parties take quite divergent positions as to the meaning of "about" as used in the clause "a temperature within the range from about 110° C. to about 150° C." Normark argues that"about" should be construed to allow for a deviation of no more than one degree beyond the specified range. Pure Fishing argues, first, that no construction is

[1] Claims 4 and 5 modify the draw ratio ranges by narrowing them to a point that no further construction is needed. Thus, as to Claims 4 and 5, only the temperature range (incorporated from independent Claim 1) requires interpretation.

needed. In the alternative, Pure Fishing argues that the upper end of the range should be construed to allow "temperatures beyond 150° C that are within 10° C of the yarn's melting point."[2] For reasons explained below, the court is not persuaded by either party's proposed construction because neither finds sufficient support in the record. This leaves the court unable to offer any construction beyond the marginally helpful clarification that "about" means "approximately," which allows for some degree of variation.

First, the court rejects Pure Fishing's position that no construction is necessary. Given the parties significantly divergent positions as to the proper construction, and the directives in *Pall* and *Merck*, the court concludes that it should provide as much clarification of the term as is supported by the record.

The court also rejects Pure Fishing's proposed alternative construction because it ignores the language Cook chose to use and the upper limit he placed on the claim ("about 150° C.") in favor of an open-ended, functionally-defined limitation. The language in the specification on which Pure Fishing relies suggests that the claim might have been written with broader, open ended language. This is not, however, enough where the inventor, instead, chose to word the limitation more specifically. Moreover, as Normark argues, accepting Pure Fishing's interpretation could encompass temperatures so far beyond 150° C. that they could not be considered within an "approximate" range under even the most generous interpretation.[3]

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[2] Pure Fishing does not seek any construction relevant to how "about" should be construed at the lower end of the range.

[3] Pure Fishing refers to language in the Cook Patent specification as well as language in an incorporated patent which would allow its proposed interpretation to reach *at least* 159° C. Normark notes language which might go much higher. Even the nine degree variation raises concerns as it represents a nearly 22% expansion of the specified 110-150° range (on the upper end of the range) and double that if "about" is construed (as it should be) to mean the same thing on both

Pure Fishing also relies on an incorporated patent (U.S. Patent No. 4,413,110 ("Kavesh Patent")) in arguing that, by incorporation, Cook discloses use of temperatures greater than 150°. While the invention described in Kavesh is related to the invention in Cook, and its terms are incorporated, it remains a different invention.[4] It follows that temperatures referenced in the Kavesh Patent do not necessarily fall within the "approximate" range claimed in the Cook Patent. *See* Dkt. No. 79 at 6 (arguing that Claim 1 of Cook's Patent discloses temperatures above 150° C. because the incorporated Kavesh Patent "discloses a range of draw temperatures above 150° C and approaching 155° C."). In any event, the temperatures referenced there would not support the open-ended interpretation Pure Fishing now seeks.

Pure Fishing's argument that case law supports allowing variances of at least 5-10° is also not persuasive. *See* Dkt. No. 79 at 8-9 (discussing *Fisher-Barton Blades, Inc. v. Blount, Inc.*, 2006 WL 6274603 (E.D. Wis. 2006). In *Fisher-Barton*, the court considered temperature ranges relating to the processing of metal and held that a 5-10° variation was allowed by use of the word "approximately" as it related to the following three temperatures: 300° F., 500°F., and 1560° F. In reaching this determination, the court considered extrinsic evidence (a "handbook") which

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ends of the range. While such a broad interpretation might be possible, it is not supported by anything in the present record.

[4] The Kavesh Patent focuses is directed to the *production of fibers*, and claims a process for strengthening those fibers by stretching them at increased temperatures. *See* Dkt No. 74-3 at 2 (Kavesh Patent Abstract – referring to production but not stretching at increased temperatures); *id.* at 12 (Kavesh Patent 6:35-39 – referring to stretching at temperatures between about 120° C. and about 160° C.) While the Cook Patent also uses stretching at increased temperature to increase the tenacity of fibers, its focus is on strengthening a bundle of braided or twisted fibers (presumably fibers previously produced under processes such as those discussed in the Kavesh Patent). Given this distinction, it would not be apparent that every temperature used, tested or claimed by the Kavesh Patent in the stretching portion of its process should be read into the Cook Patent's claimed range of temperatures for stretching braided or twisted bundles of multiple fibers.

addressed the effect of temperatures (and temperature variations) on metals. No similar evidence is offered in this case and the court sees no basis for assuming that the significance of temperature variations in the production of metal products would be the same for processes involving polyolefin fibers.[5]

Normark's arguments fare no better. Normark focuses, in part, on the accuracy of commercial ovens which, it maintains, are accurate within a single degree. While such ovens are a technology *used by* the patented invention, this does not make them the technology *to which the invention is addressed*. The issue is not whether the ovens can be set with single-degree accuracy, but at what point variations in temperature are sufficiently significant in the processing of polyolefin fibers (as described in the Cook Patent) that the variation falls outside of the specified range as modified by "about."

Normark also relies on intrinsic evidence including the variations in temperatures disclosed in the examples found in the Cook Patent's specification. Some of the examples involve comparative tests in which the heat settings varied by only one or two degrees. Normark argues that this demonstrates that such a small variation is "significant" and, consequently, sets an outer limit on the degree of variation allowed. While this is one possible interpretation, it is not the only one, particularly as many examples involve much greater variations in temperature between test batches. Thus, this intrinsic evidence does not persuade the court that the permissible variation should be limited to a single degree of variation. That no example involves a temperature of more than 150°

[5] Even if the court accepted that, as a general rule, the use of the term "approximately" authorizes a five to ten degree variation from 300 degrees *Fahrenheit*, regardless of the industry at issue, it would not support allowing the same numerical variation from 150 degrees *Celcius*. This is because 300° F. translates to 148.9°C., while temperature variations of 5-10° F. translate (using a 5/9 factor) to variations of roughly 2.8 to 5.6° C.

C. is somewhat more persuasive, but only that the upper limit should not deviate significantly from that limit. What constitutes a significant deviation remains an open issue.

In short, what intrinsic evidence is available is not sufficient to give any greater meaning to "about" than is supported by general case law, that "about" means "approximately." Some of the intrinsic evidence may suggest that variations as small as one or two degrees are significant, while other intrinsic evidence may suggest a variation of at least five degrees or more is necessary for a temperature variation to be significant. Under these circumstances, some extrinsic evidence, such as the industry handbook offered in *Fisher-Barton* would be necessary to provide a more specific definition. As no such evidence is offered, the court defines the disputed term by replacing "about" with "approximately."

Use of "about" with reference to total draw ratio. The evidence as to the meaning of "about" as it modifies the range for the total draw ratio is more helpful and supports the interpretation offered by Pure Fishing. Normark argues that the range of "about 1.0 to about 2.0" should be read to include *precisely* 1.0, which would place the range in conflict with the requirement for stretching. While this may seem reasonable looking at the clause in isolation, it makes no sense in the context of the full claim, the first word of which requires stretching. Thus, the court declines to accept Normark's construction.

As with the temperature range, Pure Fishing argues no construction is necessary, but alternatively argues that the court should construe the term as requiring stretching at a ratio of at least 1.01. This would be consistent with the requirement for stretching. It also reflects an earlier statement in the specification which reveals the same error in understanding as to what is meant by a ratio of 1.0. Specifically, under the "Detailed Description of the Invention," Cook states as follows: "Such stretching is performed at a total draw ratio within the range from about 1-100% (*i.e.*,

draw ratio of 1.0-2.0)[.]" Cook Patent 2:66-3:1. Reading the claim language "stretching . . . at a total draw ratio within the range from about 1.0 to about 2.0" in light of this description, the court concludes that the minimum draw ratio intended by "about 1.0" requires stretching of at least 1% (or a ratio of 1.01).

CONCLUSION

For the reasons set forth above, the court construes the use of "about" in defining temperature to mean "approximately," and finds no basis in the record for any further clarification. The term "about 1.0 to about 2.0" in defining total draw ratio is construed as "about 1.0, but no less than 1.01, to about 2.0."

IT IS SO ORDERED.

s/ Cameron McGowan Currie
CAMERON MCGOWAN CURRIE
UNITED STATES DISTRICT JUDGE

Columbia, South Carolina
October 26, 2011