

# Federal Circuit Patent Bulletin: *In re Stepan Co.*

August 28, 2017

*"Absent some additional reasoning, the Board's finding that a skilled artisan would have arrived at the claimed invention through routine optimization is insufficient to support a conclusion of obviousness."*

On August 25, 2017, in *In re Stepan Co.*, the U.S. Court of Appeals for the Federal Circuit (Lourie, Moore,\* O'Malley) vacated and remanded the U.S. Patent and Trademark Office Patent Trial and Appeal Board decision that upheld the patent examiner's rejection of the claims of U.S. patent application Serial No. 12/456,567, which related to herbicidal formulations containing glyphosate salt with a surfactant system, as unpatentable for obviousness under 35 U.S.C. § 103. The Federal Circuit stated:

Obviousness is a question of law based on subsidiary findings of fact. An obviousness determination requires finding both "that a skilled artisan would have been motivated to combine the teachings of the prior art . . . and that the skilled artisan would have had a reasonable expectation of success in doing so." Whether a person of ordinary skill in the art would have been motivated to modify or combine teachings in the prior art, and whether he would have had a reasonable expectation of success, are questions of fact.

The Board found Stepan failed to provide evidence that it would not have been routine optimization for a skilled artisan to select and adjust the claimed surfactants to achieve a cloud point above at least 70°C "since Pallas teaches the surfactant component comprises any combination of surfactants" and "teaches the ideal cloud point should be above 60[°C]." It rejected evidence in Pallas that certain surfactant combinations failed the cloud point test at 60°C because it concluded that these failures did not involve the claimed surfactants.

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It found Stepan failed to establish the criticality of its claimed range of surfactants, showing neither that a 70°C cloud point was unexpectedly good nor that the prior art was silent on the connection between optimizing surfactants and cloud point. Because the Board failed to adequately articulate its reasoning, erroneously rejected relevant evidence of nonobviousness, and improperly shifted to Stepan the burden of proving patentability, we vacate the Board's decision that claims 1–31 of the '567 application would have been obvious.

The Board failed to explain why it would have been "routine optimization" to select and adjust the claimed surfactants and achieve a cloud point above at least 70°C. "The agency tribunal must make findings of relevant facts, and present its reasoning in sufficient detail that the court may conduct meaningful review of the agency action." Stating that a person of ordinary skill in the art would have arrived at the claimed invention through routine optimization falls short of this standard. Missing from the Board's analysis is an explanation as to why it would have been routine optimization to arrive at the claimed invention. Similar to cases in which the Board found claimed inventions would have been "intuitive" or "common sense," the Board must provide some rational underpinning explaining why a person of ordinary skill in the art would have arrived at the claimed invention through routine optimization. Absent some additional reasoning, the Board's finding that a skilled artisan would have arrived at the claimed invention through routine optimization is insufficient to support a conclusion of obviousness. . . .

"[T]o have a reasonable expectation of success, one must be motivated to do more than merely to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result." Reciting Pallas' teachings that "any combination" of surfactants may be used and that a cloud point above 60°C is desired fails to illuminate why a skilled artisan would have selected the claimed combination of surfactants and reasonably expected a cloud point above at least 70°C.

Moreover, the Board undisputedly erred to the extent that it concluded the failures in Pallas did not involve the claimed surfactants. Stepan presented evidence demonstrating that none of the examples in Pallas include all three of the claimed surfactants and that the closest examples failed to achieve a cloud point above at least 70°C. . . . We do not reach in the first instance what weight these examples ought to be afforded in the Board's obviousness analysis, but instruct the Board to consider this evidence on remand.

Lastly, the Board erred when it shifted the burden of proving patentability to Stepan. The PTO bears the burden of establishing a *prima facie* case of obviousness. "Only if this burden is met does the burden of coming forward with rebuttal argument or evidence shift to the applicant." . . . Stepan's '567 application does not merely claim a range of surfactants that is within or overlaps with the range of surfactant systems taught by Pallas. The claimed surfactant system contains four elements. The first three elements describe the surfactants, and their respective ranges, that comprise the surfactant system. The fourth element limits the combination of those surfactants to only those combinations that produce a cloud point above at least 70°C or no cloud point at all. The cloud point thus limits and defines the scope of what surfactant combinations satisfy the claimed composition. It therefore may be that not all compositions that contain the claimed combination and range of surfactants fall within the claims. As an element of the composition claims, it was the PTO's—not Stepan's—burden to show that achieving a cloud point above 70°C would have been obvious to

a person of ordinary skill in the art. To the extent the Board shifted the burden to Stepan to show the criticality of the cloud point element, the Board erred.