

# Federal Circuit Patent Bulletin: *Honeywell Int'l Inc. v. Mexichem Amanco Holding S.A. De C.V.*

August 3, 2017

*"All properties of a composition are inherent in that composition, but unexpected properties may cause what may appear to be an obvious composition to be nonobvious."*

On August 1, 2017, in *Honeywell Int'l Inc. v. Mexichem Amanco Holding S.A. De C.V.*, the U.S. Court of Appeals for the Federal Circuit (Lourie,\* Reyna, Wallach) vacated and remanded the U.S. Patent and Trademark Office Patent Trial and Appeal Board inter partes reexamination decisions that upheld the patent examiner's rejection of certain claims of U.S. Patent 7,534,366, which related to the use of 1,1,1,2-tetrafluoropropene (HFO-1234yf), an unsaturated hydrofluorocarbon (HFC) compound, and a polyalkylene glycol (PAG) lubricant in heat transfer systems such as air conditioning equipment, for obviousness under 35 U.S.C. § 103. The Federal Circuit stated:

Obviousness is a question of law, based on underlying factual findings, including what a reference teaches, whether a person of ordinary skill in the art would have been motivated to combine references, and any relevant objective indicia of nonobviousness. . . .

The Board committed legal error by improperly relying on inherency to find obviousness and in its analysis of motivation to combine the references. [T]he use of inherency in the context of obviousness must be carefully circumscribed because "[t]hat which may be inherent is not necessarily known" and that which is unknown cannot be obvious. What is important regarding properties that may be inherent, but unknown, is whether they are unexpected. All properties of a composition are inherent in that composition, but unexpected properties may cause what may appear to be an obvious composition to be nonobvious. Thus, the Board here, in dismissing

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properties of the claimed invention as merely inherent, without further consideration as to unpredictability and unexpectedness, erred as a matter of law.

Second, the Board erred in dismissing Honeywell's evidence of unpredictability in the art when it stated that one of ordinary skill would no more have expected failure than success in combining the references. The Board made what amounts to a finding that one of ordinary skill would not have had a reasonable expectation of success in combining HFO-1234yf with PAG lubricants, but then seemed to make a burden-shifting argument that Honeywell did not persuasively establish that one of ordinary skill would have expected failure. The Board rejected Honeywell's evidence, concluding that, because there would have been no reasonable expectation of success, one of ordinary skill would have arrived at the claimed combination by mere "routine testing."

Thus, the Board seems to have determined that, because stability in the art was entirely unpredictable, one of ordinary skill would have made no predictions at all, but rather would have expected to undertake efforts to find an optimal combination and thus that "routine testing" would have led the skilled artisan to the claimed combination. In an inter partes reexamination involving obviousness, the standard is not whether the patent owner can persuasively show that one of ordinary skill would have expected failure. Rather, the burden is on the Examiner to show that one of ordinary skill would have had a motivation to combine the references with a reasonable expectation of success. The Board made what amounts to a finding that one of ordinary skill would not have expected success, because Honeywell's evidence persuasively established the "overall unpredictability" in the art, but then glossed over that finding with a "routine testing" rationale because Honeywell did not persuasively prove an expectation of failure. That is reverse reasoning. Unpredictability of results equates more with nonobviousness rather than obviousness, whereas that which is predictable is more likely to be obvious. Thus, reasoning that one would no more have expected failure than success is not a valid ground for holding an invention to have been obvious. The Board erred in so holding.

Even when presenting evidence of unexpected results to "rebut" an Examiner's prima facie case for obviousness, a patent owner need not demonstrate that one of ordinary skill would have expected failure—rather, the patent owner need only establish that the results would have been unexpected to one of ordinary skill at the time of invention, or "much greater than would have been predicted." A further point regarding so-called "routine testing" is that § 103 provides that "[p]atentability shall not be negated by the manner in which the invention was made." That provision was enacted to ensure that routine experimentation does not necessarily preclude patentability. We thus conclude that the Board's analysis was legally erroneous in its consideration of inherency, in concluding that unpredictability indicates obviousness, and in rejecting Honeywell's objective evidence. Because finding a motivation to combine the references and consideration of objective evidence are fact questions, we vacate and remand for the Board to make determinations consistent with this opinion.