

Keywords: Doctrine of Equivalents, Foreseeability, Tangentiality, Prosecution History Estoppel

General: A presumption of prosecution history estoppel may be rebutted by a showing of unforeseeability of the alleged equivalent at the time of the narrowing amendment or by a showing of tangentiality of the alleged equivalent with respect to the rationale for the narrowing amendment.

Honeywell Int'l Inc. v. Hamilton Sundstrand Corp.

86 U.S.P.Q.2d 1718 (Fed. Cir. 2008)

Decided April 18, 2008

I. Facts

Honeywell International, Inc. and Honeywell Intellectual Properties, Inc. (collectively, "Honeywell") own the related U.S. patents numbered 4,380,893 and 4,428,194 (the '893 and '194 patents, respectively). The '893 and '194 patents relate to controlling airflow through auxiliary power units (APUs) which generate electricity for aircraft in flight. Such APUs include a load compressor which is susceptible to surges which occur when airflow through the compressor is too low resulting in air surging back into the compressor. To prevent damage to the compressor, surge control systems are used to maintain a minimum level of airflow through the compressor. The '893 and '194 patents teach the use of a set point to represent the minimum airflow needed to prevent a surge. The set point is determined by a function of the position of inlet guide vanes (IGVs) that regulate the flow of air into the compressor.

During prosecution, the claims which issued as claims 8 and 19 of the '893 patent and claim 4 of the '194 patent were rewritten in independent form to secure allowance. In this manner, these claims were amended to include limitations related to the use of IGV position by the surge control system of an APU. These limitations were missing from the original independent claims.

Honeywell brought suit against Hamilton Sundstrand Corporation (Sundstrand) based on issued claims 8 and 19 of the '893 patent and claim 4 of the '194 patent. Sundstrand manufactured an APU surge control system that compared a pressure-based measurement to a set point and, in certain circumstances, used the position of the IGV as part of its control scheme. At trial, the jury found that Sundstrand infringed claims of the '893 and the '194 patent under the doctrine of equivalents. On appeal, the Federal Circuit, sitting *en banc*, held that there was a presumption of prosecution history estoppel with respect to the relevant claims of the '893 and the '194 patents. The Federal Circuit remanded the case to the district court to determine whether Honeywell could rebut the presumption.

On remand, a two-day bench trial was held during which Honeywell contested the tangentiality and the foreseeability of the alleged equivalent. Honeywell was unsuccessful in rebutting the presumption of prosecution history estoppel at the district court and filed a timely appeal asserting that they had properly rebutted the presumption under both the tangentiality and the foreseeability standards.

II. Issues

- A. Did Honeywell rebut the presumption of prosecution history estoppel based on the foreseeability of the alleged equivalent at the time of the narrowing amendment?
- B. Did Honeywell rebut the presumption of prosecution history estoppel based on the tangentiality of the alleged equivalent in view of the rationale underlying the narrowing amendment?

III. Discussion

- A. No. Foreseeability is an objective inquiry that ensures that the doctrine of equivalents does not capture subject matter that the patent drafter could have foreseen and included in the claims. Thus, the principle acts to ensure that the claim language defines the claim scope in those circumstances that are foreseeable while protecting patent owners from insubstantial variations of a claim element that were not foreseeable. Later-developed technologies or technologies that were not known in the relevant art during prosecution would not be foreseeable. Conversely, old technology is more likely to be foreseeable and technology actually known in the art within the field of the invention certainly should be foreseeable.

In the present case, the district court accepted Honeywell's articulation of the alleged equivalent as being "the use of (1) a static pressure differential (i.e., DELPQP), which can be indicative of surge only if the APU is experiencing low flow, in combination with (2) IGV position, which is indicative of whether the APU is experiencing low flow or high flow, to detect surge." Thus the panel examined whether the use of IGV position to assess high flow or low flow was a later-developed technology and thus unforeseeable at the time of the amendments.

Honeywell contended that at the relevant time period (1982-1983) surge control systems did not use IGV position to distinguish between high and low flow situations. However, the art demonstrated that it was known at the time that the control of surge was important, that surge control systems had been developed which distinguished between high and low flow situations, and that IGVs were routinely used in surge control systems and affected the air flow rate. Further, no technical barrier to the use of IGV position to determine flow rate was shown to exist. Based on these determinations and on testimonial evidence, the district court concluded that measuring IGV position was a reasonably obvious way at the time of the amendments to determine whether the APU is experiencing high or low air flow. The panel found no clear error in this conclusion.

In particular, the district court's commentary that the issue was not a close call and the teachings of several prior art references in the record support the district court's decision. Honeywell could have foreseen and included the alleged equivalent in the claims when they were amended but failed to do so. Thus Honeywell did not rebut the presumption of surrender with evidence of unforeseeability.

- B. No. To rebut the estoppel presumption with tangentiality, the patentee must demonstrate that the narrowing amendment was not directly relevant (i.e., peripheral or tangential) to the alleged equivalent. Silence (i.e., the absence of a reason for the amendment) in the prosecution history record cannot be used to rebut the presumption of prosecution history estoppel.

In the present case, the patentee was deemed to have effectively added the IGV limitation and its use in a surge control system to claims that otherwise did not include this limitation. Further, the alleged equivalent focused on the IGV limitation. Thus, the amendment was directly, not merely tangentially, related to the alleged equivalent. Therefore, Honeywell failed to rebut the presumption of prosecution history estoppel based on the tangentiality of the amendment relative to the alleged equivalent.

IV. Dissent

Judge Newman dissented in part due to her opinion that no narrowing amendment ever occurred, and the presumption of surrender was inappropriate.