The US Court of Appeals for the Federal Circuit affirmed a ruling that certain claims reciting a “housing . . . being cast in one piece” should be construed as a product-by-process claim element and affirmed the subsequent finding of invalidity of all challenged claims. *Kamstrup A/S v. Axioma Metering UAB*, Case No. 21-1923 (Aug. 12, 2022) (Reyna, Mayer, Cunningham, JJ.)

Kamstrup owns a patent directed to an ultrasonic flow meter housing in the form of a monolithic polymer structure that is cast in one piece. The patent specification explains that the invention can be fabricated with fewer steps compared to existing meters, since only a single step is used to form the monolithic polymer structure. Axioma petitioned for *inter partes* review of all claims of the patent, and the Patent Trial & Appeal Board (Board) found each claim unpatentable as either obvious or
The Board construed the claim term “being cast in one piece” to be a product-by-process claim element. Kamstrup did not present any evidence showing that this claim element provided structural or functional differences distinguishing the housing itself from the prior art, and therefore the Board determined that the housing element was not entitled to patentable weight. The Board subsequently invalidated the independent claim and various dependent claims based on a prior art meter having a housing. The Board also found the remaining dependent claims to be invalid based on two additional references, which the Board determined were sufficiently analogous to flow meter technology to merit consideration in its obviousness analysis.

On appeal, Kamstrup challenged the Board’s product-by-process construction. The Federal Circuit explained that product-by-process claiming is designed to enable an applicant to claim an otherwise patentable product that resists definition other than by the process by which it is made. Where a product-by-process claim element is implicated, structural and functional differences distinguishing the claimed product from the prior art must be shown in order for that claim element to be relevant (limiting) to the anticipation or obviousness inquiry. If no structural or functional differences are shown, the element is given no patentable weight. Turning to the claim element at issue, the Court found that the plain meaning of the term “housing . . . being cast in one piece” implicated a product-by-process interpretation since it described the structure “being” cast in a particular way. The Court also affirmed the Board’s finding of invalidity because Kamstrup failed to identify any disclosure in the specification, prosecution history or extrinsic evidence of any structural or functional differences between the housing element as claimed and the prior art.

Kamstrup also argued that the two secondary prior art references were not analogous prior art because they fell within the field of “medical devices for thermodilution,” and therefore they should not be included in an obviousness analysis. The Federal Circuit disagreed, finding that the references were directed to “sensing or measuring fluid flow and fluid flow characteristics such as temperature,” which is related to “flow meters that include different types of sensors.”

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