

RAYTHEON TECH. CORP. v. GENERAL ELECTRIC CO., Appeal No. 2020-1755 (Fed. Cir. April 16, 2021). Before Lourie, Chen, and Hughes. Appealed from the Patent Trial and Appeal Board.

Background:

General Electric (GE) petitioned for *inter partes* review of Raytheon's patent ('751 patent) directed to a gas turbine engine with an improved power density. GE argued that two of the claims of the '751 patent were obvious over a NASA technical memorandum (Knip). Knip discusses an imaginary advanced turbofan engine that incorporates revolutionary composite materials that reduced the weight of the turbofan engine and allow for the turbofan engine to achieve aggressive performance parameters. Knip acknowledges that the aggressive performance parameters were not yet achievable because no composite material existed that could allow the turbofan engine to operate under the aggressive performance parameters. GE argued in the Petition that one of the aggressive performance parameters is the power density recited in the claims of the '751 patent.

In response, Raytheon argued that Knip's disclosure failed to enable a skilled artisan to make the claimed invention because the alleged power density was only achievable using materials that were unavailable at the time of the priority date of the '751 patent. GE did not directly challenge this argument by Raytheon. Instead, GE argued that Knip's enablement is irrelevant, and the determination of obviousness is only based on whether a skilled artisan reviewing Knip could make the invention recited in the claims of the '751 patent without undue experimentation.

The Board found that Knip was enabling based on GE's expert testimony explaining how a skilled artisan would have combined explicitly stated parameters in Knip with routine assumptions and estimates of engine operating conditions to achieve the claimed power density. Upon finding Knip enabling, the Board held obvious the claims of the '751 patent over Knip. Raytheon appealed.

Issue/Holding:

Did the Board err in finding that Knip's disclosure was sufficiently enabling to a skilled artisan to render obvious the claims of the '751 patent? - Yes, reversed.

Discussion:

The Federal Circuit found that the Board erred by focusing its analysis solely on whether Knip described sufficient parameters for a skilled artisan to determine a power density of Knip's engine. The Federal Circuit found that the proper analysis is whether Knip enabled a skilled artisan to make and use the invention recited in the claims of the '751 patent. GE failed to provide any evidence that the engine described in the claims of the '751 patent could have been made based on the knowledge of a skilled artisan and the teachings of Knip. Instead, GE only provided evidence that the claimed power density was achievable based on the parameters taught by Knip. On the other hand, Raytheon provided extensive un rebutted evidence that the engine described in Knip could not be made because the composite materials necessary did not exist.

The Federal Circuit held that Knip alone lacked sufficient disclosure for a skilled artisan to actually make and use a turbofan engine using the non-existent composite materials described in Knip, which is necessary to achieve the power density values recited in the claims of the '751 patent. The Federal Circuit held that the claims of the '751 patent are not obvious over Knip without a showing in Knip that a skilled artisan could make and use the invention of the claims.