

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CIZION, LLC,
d/b/a VULCAN INDUSTRIAL MANUFACTURING,
Petitioner,

v.

KERR MACHINE CO.,
Patent Owner.

PGR2020-00065
Patent 10,591,070 B2

Before HYUN J. JUNG, JAMES J. MAYBERRY, and RYAN H. FLAX,
Administrative Patent Judges.

MAYBERRY, *Administrative Patent Judge.*

DECISION
Granting Institution of Post-Grant Review
35 U.S.C. § 324

I. INTRODUCTION

Cizion, LLC, d/b/a Vulcan Industrial Manufacturing (“Petitioner”) filed a Petition requesting a post-grant review of claims 1–24 of U.S. Patent No. 10,591,070 B2 (the “’070 patent”). Paper 1, 1 (“Pet.” or “Petition”). Kerr Machine Co. (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

We may not authorize a post-grant review to be instituted “unless . . . the information presented in the petition filed under section 321, if such information is not rebutted, would demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” 35 U.S.C. § 324(a). Upon consideration of the arguments and evidence, we determine Petitioner has demonstrated that it is more likely than not that at least one of the Challenged Claims is unpatentable. Accordingly, we institute a post-grant review of the Challenged Claims of the ’070 patent.

A. Real Parties in Interest

Petitioner states that it and its parent company, Vulcan Industrial Holdings, LLC, are real parties-in-interest. Pet. 2. Petitioner adds that Vulcan Energy Services is a sister company of Cizion, LLC. *Id.* Patent Owner identifies itself as the sole real party-in-interest. Paper 5, 1.

B. Related Matters

Petitioner states that “Patent Owner . . . improperly has asserted the ’070 [p]atent against Vulcan Industrial Holdings, LLC in a lawsuit filed on March 19, 2020, captioned *Kerr Machine Co. v. Vulcan Industrial Holdings, LLC*, No. 6:20-cv-00200 (W.D. Tex.)” Pet. 2 (referencing Exs. 1043, 1044)

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(the “Western District Action”); *see also* Paper 5, 1 (identifying the Western District Action as a related matter).

Patent Owner also identifies a case styled *Vulcan Industrial Holding LLC v. Kerr Machine Co.*, No. 4:20-cv-01852 (S.D. Tex.), as a related matter. Paper 5, 1 (the “Southern District Action”). Among other issues, the Southern District Action includes the validity and enforceability of the ’070 patent. *See* Ex. 1048, 7.

Additionally, Patent Owner identifies two pending applications pending at the Patent Office: U.S. Patent Application No. 15/719,124, filed September 28, 2017, and U.S. Patent Application No. 16/814,267, filed March 10, 2020. Paper 5, 1.

C. The ’070 Patent

The ’070 patent, titled “Sealing High Pressure Flow Devices,” issued March 17, 2020, from U.S. Application 16/574,918, filed September 18, 2019. Ex. 1001, codes (54), (45), (22). The face of the patent indicates that this application was a divisional of U.S. Application 15/719,124, filed September 28, 2017, which itself was a continuation-in-part of U.S. Application 15/280,642, filed September 29, 2016. *Id.* at code (60). The application that issued as the ’070 patent is also related to four provisional applications, Provisional 62/346,915 filed June 7, 2016, Provisional 62/318,542 filed April 5, 2016, Provisional 62/315,343 filed March 30, 2016, and Provisional 62/234,483 filed September 29, 2015. *Id.*

The ’070 patent is directed “to sealing fluid flow passages inside flow control devices, such as those particularly suited for use in high pressure oil and gas production and processing systems.” Ex. 1001, 1:5–8. The patent states that “[i]mprovements are needed . . . to increase operating life [of

these control devices] while reducing downtime and operating cost . . . [by] transfer[ing] the erosion (corrosion and abrasion) from the high pressure fluid device body to the component sealed with the body.” *Id.* 1:66–2:4.

One such control device is a fluid end. Ex. 1001, 1:52–56. We reproduce the ’070 patent’s Figure 11, below.

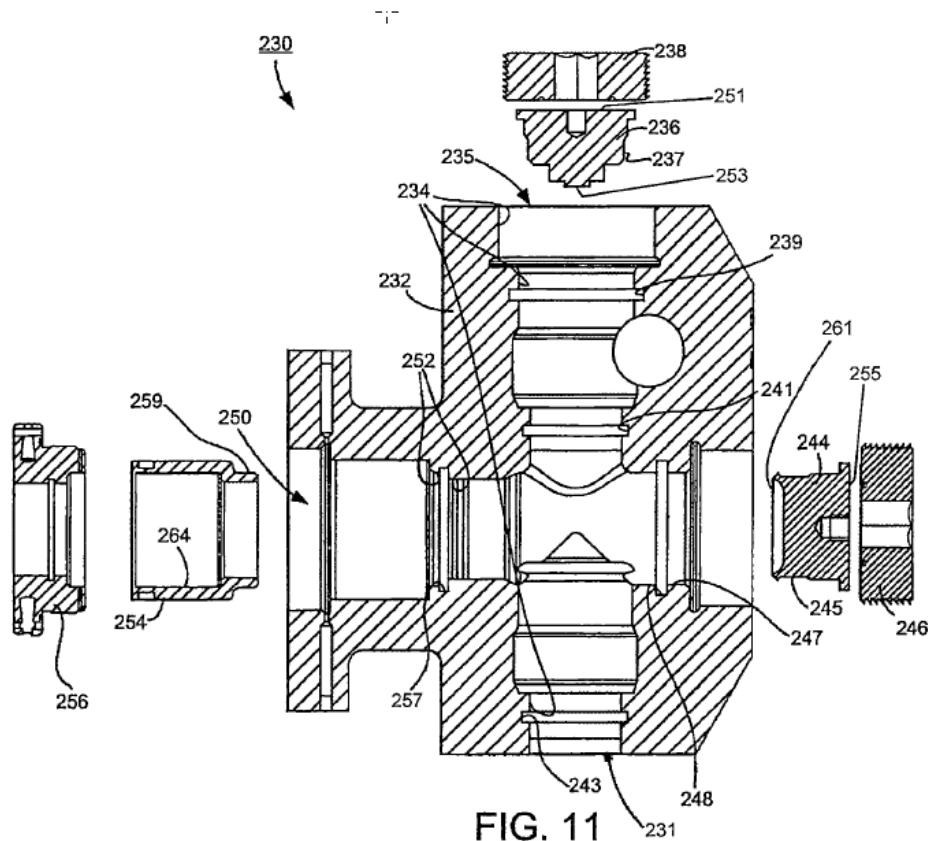


Figure 11 depicts “an exploded cross-sectional depiction of a fluid end” of the ’070 patent. *Id.* at 3:16–17. This embodiment “is constructed . . . to, in numerous places, transfer the erosion wear from the body to the less complex and less expensive component that is sealed to the body.” *Id.* at 8:24–27.

Body 232 includes first conduit (discharge bore) 234, which defines discharge opening 235 and intake opening 231, formed opposite discharge opening 235. Ex. 1001, 8:27–33. That is, first conduit 234 spans from

opening 231 to opening 235. Discharge plug 236 seals discharge opening 235. *Id.* at 8:49–52. Plug 236 does not include seals mounted to the plug to seal the plug against opening 235. *Id.* at 8:52–54. “Instead, the plug 236 defines a sealing surface 237 for a seal (not depicted in FIG. 11) that is mounted in an endless groove or recess formed by a surface 239 of the body 232.” *Id.* at 8:54–57. Body 232 also includes surface 241 and surface 243, both defining an endless groove, or recess, intersecting bore 234 and configured to receive a seal. *Id.* at 9:31–40.

Suction bore 247 is sealed by plug 244. Ex. 1001, 9:50–53. Body 232 includes surface 248 forming an endless groove, or recess, intersecting bore 247 and configured to receive a seal. *Id.* at 9:56–60. The ’070 patent indicates that this seal configuration “transfers the wear from the body 232 to the suction plug 244.” *Id.* at 9:60–61. Body 232 also includes plunger opening 250, which receives stuffing box sleeve 254. *Id.* at 9:64–66. “[S]tuffing box sleeve 254 is characterized by a tubular sleeve.” *Id.* at 9:67–10:1. Opening 250 is formed by plunger bore 252, which includes surface 257 defining an endless groove or recess intersecting bore 252, which receives a seal. *Id.* at 10:4–7. Suction bore 247 and plunger bore 252 together form a second conduit in body 232, which, as seen in Figure 11, intersects the first conduit. *Id.* at 10:7–9.

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