

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WEATHERFORD INTERNATIONAL, LLC,
Petitioner,

v.

BAKER HUGHES OILFIELD OPERATIONS, LLC,
Patent Owner.

Case IPR2019-00708
Patent RE46,137 E

Before MITCHELL G. WEATHERLY, JON B. TORNQUIST, and
RYAN H. FLAX, *Administrative Patent Judges*.

WEATHERLY, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. BACKGROUND

Weatherford International, LLC (“Petitioner”) filed a petition (Paper 2, “Pet.”) to institute an *inter partes* review of claims 1–44 (the “challenged claims”) of U.S. Patent No. RE46,137 E (Ex. 1001, “the ’137 patent”). 35 U.S.C. § 311. Baker Hughes Oilfield Operations, LLC

(“Patent Owner”) did not file a Preliminary Response. Institution of an *inter partes* review is authorized by statute when “the information presented in the petition filed under section 311 and any response filed under section 313 shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Based on our review of the record, we conclude that Petitioner is reasonably likely to prevail with respect to at least one of the challenged claims.

Petitioner contends that the challenged claims are unpatentable under 35 U.S.C. §§ 102 and/or 103 based on the following grounds (Pet. 25–75):

Reference(s)	Basis	Claims challenged
Giroux ¹	§ 102(b)	1, 2, 4–7, 12–25, 31–35, and 41–44
Giroux and AAPA ²	§ 103	1–44
Giroux, Patel ’853, ³ and AAPA	§ 103	1–44

On April 24, 2018, the Supreme Court held that, under 35 U.S.C. § 314, the Office may not institute review of fewer than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018). For the reasons expressed below, we determine that Petitioner has demonstrated a reasonable likelihood of establishing that at least independent claims 1, 19, and 21 are unpatentable. In accordance with the

¹ U.S. Patent No. 6,834,726 B2 (Ex. 1003, “Giroux”).

² Applicant admitted prior art (“AAPA”).

³ U.S. Patent No. 5,819,853 (Ex. 1004, “Patel ’853”).

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SAS decision and Office guidance,⁴ we institute an *inter partes* review of all challenged claims of the '137 patent on all grounds alleged by Petitioner.

B. RELATED PROCEEDINGS

Petitioner has identified as a related proceeding the co-pending district court proceeding of *Baker Hughes Oilfield Operations, LLC v. Weatherford International, LLC*, Civil Action No. 4:18-cv-4797 (S.D. Tex. 2018). Pet. 4. Petitioner has also identified as a related matter its petition for *inter partes* review of the '137 patent in IPR2019-00768. *See id.*

C. THE '137 PATENT

The '137 patent is a reissued version of U.S. Patent No. 8,555,960 B2, and claims priority to an application filed July 29, 2011. Ex. 1001, cover page. The '137 patent is directed to “a pressure actuated sleeve used in a cementing assembly that is responsive to tubing pressure to open a port.” *Id.* at 1:14–16. Petitioner’s annotated and colorized versions of Figures 1 and 2, reproduced below, illustrate the manner in which the sleeve operates.

⁴ “Guidance on the impact of SAS on AIA trial proceedings” (Apr. 26, 2018), accessible at <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial> (last accessed Oct. 2, 2018) (“At this time, if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition,” and “for pending trials . . . the panel may issue an order supplementing the institution decision to institute on all challenges raised in the petition.”).

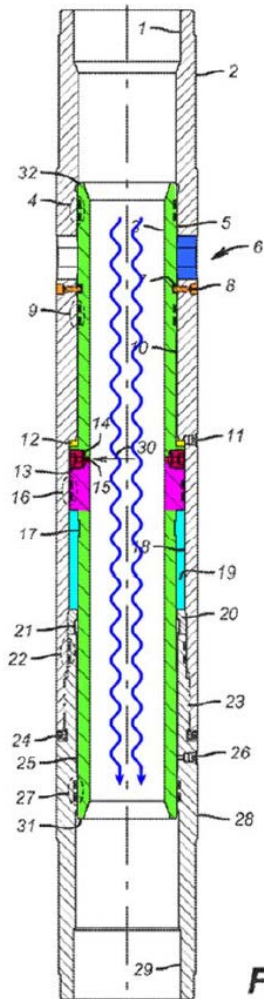


FIG. 1

Closed (annotated)

Annotated Figure 1 is a cross-sectional view of the sleeve illustrating closed ports 6. *Id.* at 2:33–34.

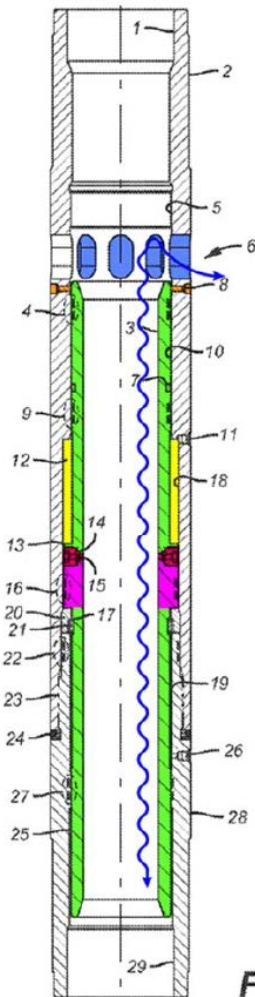


FIG. 2

Open (annotated)

Annotated Figure 2 is a cross-sectional view of the sleeve illustrating open ports 6. *Id.* at 2:35–36.

The embodiment illustrated above includes movable sleeve 3 (green) with integrated piston 16 (purple) that is exposed to two atmospheric chambers (upper chamber 12 (yellow) and lower chamber 19 (light blue)). Burst disk 15 (red), while intact, isolates upper chamber 12 (yellow) from pressure in the central bore of sleeve 3 (green). *Id.* at 3:51–53, Figure 1.

When pressure within that bore rises above a predetermined threshold, burst

disk 15 (red) ruptures and high pressure enters chamber 12 (yellow) such that the pressure in upper chamber 12 (yellow) becomes greater than the pressure within lower chamber 19 (light blue). *Id.* at 3:59–4:2. This difference in pressure results in net force being applied to the upper surface of piston 16, which drives sleeve 3 downward until the lower surface of piston 16 contacts lock ring retainer 20. *Id.* at 4:2–7. When sleeve 3 is in this position, ports 6 in sleeve 3 and housing 2 align so that fluid from within the bore can impinge upon the casing to perforate the casing without requiring a perforating gun. *Id.* at 2:6–10.

Claims 1, 19, 21, 23, and 34 are the independent claims of the '137 patent. *Id.* at 4:42–7:4. Claim 1, which is illustrative, recites:

1. A valve for subterranean use, comprising:

- [a] a housing having a passage therethrough and a port in a wall thereof;
- [b] a sleeve having a flow path therethrough movably mounted in said passage of said housing between a first position where said port is closed and a second position where said port is at least in part open;
- [c] a piston associated with said sleeve for moving said sleeve, said piston selectively isolated from passage pressure until a predetermined pressure is reached.

Id. at 4:42–51 (with letters [a]–[c] added to aid discussion).

II. ANALYSIS

A. CLAIM INTERPRETATION

For petitions filed after November 13, 2018, such as the one in this case, we interpret claims in the same manner used in a civil action under 35 U.S.C. § 282(b) “including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of

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