

NOTE: This disposition is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

NCS MULTISTAGE INC., NCS MULTISTAGE LLC,
Plaintiffs-Appellees

v.

TCO GROUP AS, FKA TCO AS,
Defendant-Appellant

2024-2379

Appeal from the United States District Court for the
Western District of Texas in No. 6:20-cv-00622-ADA, Judge
Alan D. Albright.

Decided: September 14, 2026

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Before REYNA, HUGHES, and CUNNINGHAM, *Circuit Judges*.
CUNNINGHAM, *Circuit Judge*.

TCO Group AS (“TCO”) appeals the United States District Court for the Western District of Texas’s amended final judgment ordering that (1) TCO had induced infringement of claims 28 and 29 of U.S. Patent No. 10,465,445 (the “’445 patent”); (2) TCO committed contributory infringement of claims 28 and 29 of the ’445 patent; (3) claims 28 and 29 of the ’445 patent are not invalid; and (4) NCS Multistage Inc. and NCS Multistage LLC (collectively, “NCS”) were entitled to damages. *See* J.A. 39–41. For the reasons discussed below, we *affirm-in-part, vacate-in-part*, and *remand*.

I. BACKGROUND

The ’445 patent relates to a tool used in the oil and gas industry to assist with inserting a long strip of pipe (the “casing” or “casing string”) to the bottom of a wellbore. *See* ’445 patent col. 1 ll. 22–67; *see id.* col. 16 ll. 1–20. The patented technology is described in a separate opinion issued this same date. *See NCS Multistage v. Nine Energy Serv.*, No. 2025-1000 (Fed. Cir. Sep. 14, 2026). Claims 28 and 29 recite:

28. A float tool configured for use in positioning a casing string in a wellbore containing a well fluid, the casing string having an internal diameter that defines a fluid passageway between an upper portion of the casing string and a lower portion of the casing string, the float tool comprising:

a rupture disc assembly comprising (i) a tubular member having an upper end and a lower end, the upper and lower ends

configured for connection in-line with the casing string and (ii) a rupture disc having a rupture burst pressure and in sealing engagement with a region of the tubular member within the upper and lower ends,

wherein the rupture disc is configured to disengage from sealing engagement when exposed to a pressure greater than a hydraulic pressure in the casing string after the casing string has been positioned in the wellbore and the region of the tubular member where the rupture disc is attached has a larger internal diameter than the internal diameter of the casing string and is parallel to the internal diameter of the casing string.

29. The float tool recited in claim 28 wherein the rupture disc is further configured to rupture when exposed to a rupturing force greater than the rupture burst pressure and the pressure greater than the hydraulic pressure is less than the rupture burst pressure.

'445 patent col. 16 ll. 1–25.

NCS alleged that TCO infringed certain claims of the '445 patent “by making, using, offering for sale, selling, and/or importing in the United States” the TDP-PO tool. J.A. 8856 ¶ 24–25.

Consistent with the construction in *NCS Multistage v. Nine Energy Service, Inc.*, No. 6:20-cv-00277 (W.D. Tex. Jan. 14, 2021), the district court construed “a rupturing force” in claims 1, 14–15, 22–25, 27, 29, and 56 to mean “a hydraulic pressure or impact force sufficient to rupture the rupture disc.” J.A. 17; *NCS Multistage v. Nine Energy Serv., Inc.*, No. 6:20-cv-00277 (W.D. Tex. Jan. 14, 2021), Dkt. No. 56. The district court construed “the rupture disc

is . . . configured to rupture when exposed to a rupturing force greater than the rupture burst pressure” in claim 29 as “the rupture disc can rupture when exposed to a rupturing hydraulic pressure greater than the rupture burst pressure.” J.A. 18; *NCS Multistage v. Nine Energy Serv., Inc.*, No. 6:20-cv-00277 (W.D. Tex. Jan. 14, 2021), Dkt. No. 56. NCS moved *in limine* for a ruling precluding TCO from raising that “rupturing force” in claim 29 means an impact force sufficient to rupture the rupture disc, J.A. 5023–24, which the district court denied, J.A. 30.

At trial, NCS contended that the TDP-PO devices infringed claims 28 and 29. *See* J.A. 6804, at 1267:23–24. Additionally, NCS objected at trial to TCO’s expert using a slide showing the “rupturing force” could be either “hydraulic pressure or impact force,” which the district court sustained. J.A. 6553–57, at 1016:12–1020:2. Meanwhile, TCO contended that past versions of the TDP-PO device rendered claims 28 and 29 of the ’445 patent invalid. *See, e.g.*, J.A. 6526–29, at 989:20–992:3.

The jury returned a verdict in favor of NCS on both infringement and no invalidity. J.A. 6914–21. TCO renewed its motion for judgment as a matter of law and moved for a new trial. *See generally* J.A. 7122–94. The district court granted TCO’s motion to amend the final judgment to reflect noninfringement by a specific TDP-PO model, J.A. 38, and entered final judgment, including entering judgment that TCO induced infringement of claims 28 and 29 of the ’445 patent, that TCO contributorily infringed claims 28 and 29 of the ’445 patent, and that claims 28 and 29 of the ’445 patent are not invalid, J.A. 39–41.

TCO timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

II. STANDARD OF REVIEW

“In reviewing district court judgments, we apply the law of the circuit in which the district court sits with

respect to nonpatent issues, but we apply our own law to issues of substantive patent law.” *In re Spalding Sports Worldwide, Inc.*, 203 F.3d 800, 803 (Fed. Cir. 2000). We review a district court’s denial of a motion for judgment as a matter of law under the law of the regional circuit. *Verizon Servs. Corp. v. Cox Fibernet Va., Inc.*, 602 F.3d 1325, 1331 (Fed. Cir. 2010). The Fifth Circuit reviews the denial of a motion for judgment as a matter of law de novo, applying the same legal standard as the district court: “consider[ing] all of the evidence, drawing all reasonable inferences and resolving all credibility determinations in the light most favorable to the non-moving party,” then affirming “unless the jury’s factual findings are not supported by substantial evidence, or if the legal conclusions implied from the jury’s verdict cannot in law be supported by those findings.” *Baisden v. I’m Ready Prods., Inc.*, 693 F.3d 491, 498–99 (5th Cir. 2012) (internal quotation omitted).

Federal Circuit law applies to claim construction. *Magnolia Med. Techs., Inc. v. Kurin, Inc.*, 169 F.4th 1094, 1100 (Fed. Cir. 2026). We review claim construction de novo with any underlying findings of fact based on extrinsic evidence reviewed for clear error. *Id.* at 1101. “Clear error exists when ‘we are left with a definite and firm conviction that a mistake has been committed.’” *Id.* (quoting *Advanced Ground Info. Sys., Inc. v. Life360, Inc.*, 830 F.3d 1341, 1347 (Fed. Cir. 2016)).

III. DISCUSSION

TCO argues that the district court erred by implicitly construing “a rupturing force” to exclude “impact force.” Appellant’s Br. 34–37. TCO also argues that the district court erred by denying judgment as a matter of law on non-infringement for induced infringement, *id.* at 65–71; and contributory infringement, *id.* at 73–75. Additionally, TCO argues that the district court incorrectly construed “casing string,” *id.* at 25–34, and that the district court incorrectly instructed the jury on 35 U.S.C. § 102(b) such that a new

trial is necessary, *id.* at 37–42. TCO also argues that it is entitled to judgment as a matter of law on invalidity. *Id.* at 43–64. We address each argument in turn.

A.

TCO argues that the district court erred by implicitly construing “a rupturing force,” as recited in claim 29, to exclude an “impact force.” *Id.* at 34–37. We disagree.

The convoluted procedural history masks a simple truth: TCO argued at claim construction that “a rupturing force” recited in “the rupture disc is . . . configured to rupture when exposed to a rupturing force greater than the rupture burst pressure” in claim 29 was not an “impact force,” and the district court agreed. The procedural history is as follows: (1) TCO argued at the *Markman* stage that “the rupture disc is . . . configured to rupture when exposed to a rupturing force greater than the rupture burst pressure” in claim 29 means “the rupture disc can rupture when exposed to a hydraulic pressure equal to or greater than the rupture burst pressure,” Defendant TCO AS’s Response to Plaintiffs’ Opening Claim Construction Brief at 19, *NCS Multistage Inc. v. TCO Prods. Inc.*, No. 6:20-cv-00622 (W.D. Tex. Apr. 23, 2021), Dkt. No. 69; *see* J.A. 18; (2) the district court construed “the rupture disc is . . . configured to rupture when exposed to a rupturing force greater than the rupture burst pressure” to mean “the rupture disc can rupture when exposed to a rupturing hydraulic pressure greater than the rupture burst pressure,” J.A. 18; (3) at trial, TCO sought to introduce a slide purporting to apply the district court’s claim construction of rupturing force as including either a hydraulic pressure or an impact force, J.A. 6554–57, at 1017:11–1020:2; and (4) the district court prevented TCO from introducing a slide contradicting the court’s claim construction for claim 29, *id.*, and instructed the jury according to that claim construction, J.A. 6881. TCO cannot now challenge the claim construction TCO itself proposed. *See, e.g., TVIIM, LLC*

v. McAfee, Inc., 851 F.3d 1356, 1363 (Fed. Cir. 2017) (“A party may not introduce new claim construction arguments on appeal or alter the scope of the claim construction positions it took below.” (cleaned up) (quoting *Conoco, Inc. v. Energy & Env’t. Int’l, L.C.*, 460 F.3d 1349, 1358–59 (Fed. Cir. 2006))). *See also Wash World Inc. v. Belanger Inc.*, 131 F.4th 1360, 1370 (Fed. Cir. 2025) (holding that a party forfeited an alternative claim construction when it “chose what construction to propose to the district court, was fully heard on its reasoning for its proposal” and did not timely raise the alternative construction to the district court). Accordingly, we find that the district court did not err by holding TCO to the claim construction it sought and that the district court adopted.

B.

TCO argues that the district court erred by denying judgment as a matter of law that TCO did not infringe the ’445 patent. Appellant’s Br. 65–73. Because we hold that TCO has forfeited its challenge to the judgment of contributory infringement, we affirm the district court’s judgment of contributory infringement.

NCS contends, and we agree, that TCO forfeited¹ its challenge on contributory infringement. Appellees’ Br. 24. “To establish contributory infringement, the patent owner

¹ NCS argues that TCO waived its indirect infringement arguments on appeal by failing to raise the arguments in its post-trial motions. Appellees’ Br 24. In this context, we use forfeiture rather than waiver. *See, e.g., In re Google Tech. Holdings LLC*, 980 F.3d 858, 862 (Fed. Cir. 2020) (“[W]aiver is different from forfeiture. Whereas forfeiture is the failure to make the timely assertion of a right, waiver is the intentional relinquishment or abandonment of a known right.” (cleaned up) (citing *United States v. Olano*, 507 U.S. 725, 733 (1993))).

must show the following elements relevant to this appeal: 1) that there is direct infringement, 2) that the accused infringer had knowledge of the patent, 3) that the component has no substantial noninfringing uses, and 4) that the component is a material part of the invention.” *Fujitsu Ltd. v. Netgear Inc.*, 620 F.3d 1321, 1326 (Fed. Cir. 2010); *see* 35 U.S.C. § 271(c). NCS’s contributory infringement theory at trial was that National Oilwell Varco (“NOV”) was licensed to manufacture and sell accused TDP-PO devices but would purchase glass disc assemblies from TCO Products, *see* J.A. 5811–12, at 274:3–275:2; J.A. 5816–5818, at 279:22–281:10; J.A. 6803–04, at 1266:12–1267:11; J.A. 8314, and those disc assemblies had no substantial noninfringing uses, J.A. 6006–08, at 469:21–471:14; *see, e.g.*, J.A. 5810–24. On appeal, TCO makes two arguments in support of judgment as a matter of law of no contributory infringement: “(1) TCO did not sell the glass packs to NOV and (2) TCO’s subjective belief of noninfringement negates the *scienter* requirements of § 271(c).” Appellant’s Br. 71.

TCO’s argument that TCO did not sell the glass packs to NOV is that TCO Products, not TCO, manufactured the glass discs, and that the license between TCO and NOV had provisions making TCO Products the contracting party whose terms and conditions must be followed. *See id.* TCO’s arguments about the glass packs in its post-trial briefing before the district court regarding contributory infringement only discuss whether the glass packs are a material part of the invention or have substantial noninfringing uses. J.A. 7139–42. TCO failed to argue that the NOV license terms preclude TCO from infringing the asserted claims of the ’445 patent in its post-trial briefing on contributory infringement before the district court and thus forfeited this argument. J.A. 7139–43; J.A. 7175; *see Garcia v. Orta*, 47 F.4th 343, 349 (5th Cir. 2022). Accordingly, TCO has forfeited its argument that it cannot be held responsible for the acts of its subsidiary.

Similarly, TCO has forfeited its argument that it had a “subjective belief that the accused TDP-PO devices did not infringe.” Appellant’s Br. 72. TCO does not make this argument about subjective belief in the section of its post-trial briefing directed to contributory infringement, and the argument is thus forfeited. *See* J.A. 7136–43; J.A. 7174–75; *Garcia*, 47 F.4th at 349. At most, TCO made a cursory argument that it lacked “knowledge [] that the accused components were especially made or especially adapted to infringe.” J.A. 7139; *see* J.A. 7142 (stating this point in a header of a brief, without fleshing out the argument in the body of the brief). Even if not forfeited, the district court did not err in rejecting this cursory argument for judgment as a matter of law: The jury heard competing evidence that TCO knew it was infringing, J.A. 5670–75; and this testimony provides substantial evidence support for the jury’s verdict.

Because we hold that TCO forfeited its challenge on contributory infringement, we do not reach TCO’s induced infringement arguments, as contributory infringement is an independent basis for affirming the judgment of infringement. *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 851 (Fed. Cir. 2010) (“[W]e need not reach [the induced infringement] theory because substantial evidence supports [plaintiffs] theory of contributory infringement[.]”), *aff’d* 564 U.S. 91 (2011); *see id.* at 849–50 (explaining that, when “the jury was instructed that it could rely on any of” multiple legal theories of infringement, there only needs to be sufficient support for any of the “independently sufficient legal theories”); J.A. 6883 (jury instructions explaining that infringement is proved if NCS proves “the requirements for one or more of [the two] types of infringement . . . by a preponderance of the evidence”); J.A. 6885–88. Accordingly, we affirm the district court’s judgment of contributory infringement.

C.

TCO also argues that the district court incorrectly construed “casing string,” Appellant’s Br. 25–34, and that the district court incorrectly instructed the jury on 35 U.S.C. § 102(b) such that a new trial is necessary, *id.* at 37–42. Similar arguments have been addressed in the related opinion. *See NCS Multistage v. Nine Energy Serv.*, No. 2025-1000 (Fed. Cir. Sep. 14, 2026). Accordingly, as in that case, we vacate the judgment of no invalidity and remand for a new trial on invalidity.

Our new construction of “casing string” does not require a new trial on infringement. *Contra* Appellant’s Br. 64–65. While TCO contends that NCS was required to show “actual use of the accused TDP-PO devices for casing flotation,” *id.* at 64, the asserted claims are apparatus claims. The undisputed trial evidence showed that the allegedly infringing devices were “configured for connection in-line with the casing string.” ’445 patent col. 16 ll. 6–9; J.A. 5980–84, at 443:23–447:15; *see* Appellant’s Br. 65 (conceding that the accused devices were configured “to be run as part of a . . . casing tool[]” as one of two configurations).

We do not reach TCO’s argument that it is entitled to judgment as a matter of law on invalidity. *Id.* at 43–64. On the briefing before us, it is unclear whether TCO is entitled to judgment as a matter of law of invalidity, and we take no position on that issue. The district court is in a better position to assess the record in the first instance, and we remand for further proceedings consistent with this opinion.

III. CONCLUSION

We have considered the parties’ remaining arguments and find them unpersuasive. We affirm the district court’s judgment of contributory infringement, vacate the

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judgment of no invalidity, and remand for further proceedings consistent with this opinion.

**AFFIRMED-IN-PART, VACATED-IN-PART, AND
REMANDED**

COSTS

No costs.