

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SOUTH-TEK SYSTEMS, LLC AND POTTER ELECTRIC CO, LLC,
Petitioner,

v.

ENGINEERED CORROSION SOLUTIONS, LLC,
Patent Owner.

Case IPR2016-00136
Patent 9,144,700 B2

Before WILLIAM V. SAINDON, BARRY L. GROSSMAN, and
JEREMY M. PLENZLER, *Administrative Patent Judges*.

GROSSMAN, *Administrative Patent Judge*.

DECISION
Denying Request for Rehearing
37 C.F.R. § 42.71

I. INTRODUCTION

Engineered Corrosion Solutions, LLC (“Patent Owner”) timely filed a Request for Rehearing (Paper 10, (“Req. Reh’g.”)) requesting rehearing of our decision instituting an *inter partes* review of claims 1–9 of U.S. Patent No. 9,144,700 B2 (Ex. 1001, “the ’700 patent”). Paper 8 (“Decision” or “DI”).

Patent Owner asserts the Board abused its discretion because the Decision is based on “erroneous factual conclusions.” Req. Reh’g. 1. Specifically, Patent Owner asserts: (1) the Decision “was an abuse of discretion because the Board erred in concluding Viking suggests the claimed vent” (*id.* at 5–8); and (2) the Decision misapprehended prior art disclosures in the ’700 patent and misapprehended similarities between Viking and the “disclosed invention” (*id.* at 8–10).

For the reasons stated below, we deny Patent Owner’s Request.

II. ANALYSIS

When rehearing a decision on institution, the Board reviews the decision for an abuse of discretion. 37 C.F.R. § 42.71(c). An abuse of discretion may arise if the decision is based on an erroneous interpretation of law, if a factual finding is not supported by substantial evidence, or if an unreasonable judgment is made in weighing relevant factors. *Star Fruits S.N.C. v. U.S.*, 393 F.3d 1277, 1281 (Fed. Cir. 2005); *Arnold P’ship v. Dudas*, 362 F.3d 1338, 1340 (Fed. Cir. 2004); *In re Gartside*, 203 F.3d 1305, 1315–16 (Fed. Cir. 2000).

The burdens and requirements of a request for rehearing are stated in 37 C.F.R. § 42.71(d):

(d) Rehearing. . . . The burden of showing a decision should be modified lies with the party challenging the decision. The request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, an opposition, or a reply.

A. THE DECISION TO INSTITUTE

Our Decision to Institute, instituted an *inter partes* review of all nine claims of the '700 patent. The Decision instituted review based on Petitioner's asserted Ground 1 under 35 U.S.C. § 103 in view of Viking (Ex. 1008), the patent applicant's admitted prior art ("AAPA"), and Wood (Ex. 1009). DI 16. It also instituted review based on Petitioner's asserted Ground 2 of claims 3 and 4 under 35 U.S.C. § 103 in view of Viking, AAPA, Wood, and Wagner (Ex. 1009). *Id.* As stated in the Decision to Institute, Petitioner relied on Viking for the disclosure of "all claimed dry pipe sprinkler system components," and relied on Wood for "a vent operative to vent displaced oxygen while maintaining system pressure." *Id.* at 10 (citing Petition 12); *see also id.* at 11 ("Petitioners rely on Wood for the recited 'vent' in claim 1." (citing Pet. 15)). We determined, for purposes of the Decision to Institute, it was reasonably likely that Petitioner would prevail in establishing that it would have been obvious to use a vent, such as disclosed in Wood, to accomplish the venting that "may be necessary," as stated in Viking. *Id.* at 13.

B. PROCEDURE FOR VENTING

Patent Owner selectively gleans one sentence from the Decision and mischaracterizes its role in our initial determination that the challenged claims would have been obvious based on the cited references. Patent Owner asserts the Board "misapprehended that Viking's procedure for

venting a dry pipe valve accelerator *before placing the system in service* (EX1008) suggests to one of ordinary skill a need for venting a dry pipe system *while in service* as recited by claim 1, even though Petitioners did not argue this.” Req. Reh’g. 1. Patent Owner states three reasons to support its position.

First, according to Patent Owner, Viking teaches *venting the accelerator* only before the system is placed in service, whereas Wood’s drain opens only after the sprinkler system is placed in service and pressurized with air. *Id.* Patent Owner also asserts “Viking provides no suggestion of venting gas from the piping network after the dry pipe system is placed in service and pressurized with nitrogen.” *Id.* at 6. Patent Owner’s position is based on the alternative and optional system disclosed in Viking of using an “accelerator.” *Id.* (“This is how the dry pipe val[v]e accelerator operates after the system is put in service.”); *see also id.* at 5 (“Viking discloses a dry pipe system which may use an *optional* dry pipe valve *accelerator* to speed up actuation of the system.”) (emphases added). Viking clearly states that the accelerator is “Optional.” Ex. 1008, 2 (description of element 16 in the figure). Patent Owner’s reliance on the accelerator in Viking is misplaced as the basis for its assertion of an abuse of discretion.

Viking discloses the basic operation of a dry pipe sprinkler system. As stated in Viking, “[w]hen a fire occurs, the heat produced will operate a sprinkler causing the air pressure in the piping system to escape. When the pressure trip-point is reached (*directly or through the accelerator*), the dry-pipe valve opens allowing water to flow through the system.” Ex. 1008, 3 (emphasis added). As explained in Viking, “[a] dry pipe valve equipped

with an accelerator will trip more rapidly and at a higher air-pressure differential.” *Id.* Neither the Decision nor Petitioner’s challenge to the claims, however, refer to the accelerator option disclosed in Viking. Petitioner’s claim chart for claim 1 quotes Viking §4A (“Dry Valve Operation”); it does not refer to §4B concerning “Accelerator Operation.” *See* Pet. 15.

The challenged claims are directed to “[a] water-based fire protection system.” Ex. 1001, 18:14.¹ The claims are not directed to the method or “procedure for venting.” *See* Req. Reh’g. 1 (the Board misapprehended “Viking’s procedure for venting”).

In discussing the “vent” element in claim 1, the Decision stated the issue before the Board regarding the claimed “vent”: “Petitioners conclude that *Wood* discloses the pressure-based, adjustable, ‘vent positioned within the piping network,’ as recited in claim 1 of the ’700 patent.” DI 9 (citing Pet. 10) (emphasis added). We also stated Petitioner’s argument regarding obviousness of the proposed combination of Viking and Wood: “[i]t would also have been obvious to add a vent operative to vent displaced oxygen while maintaining system pressure, *as taught by Wood*” to the Viking system. DI 9 (citing Pet. 12) (emphasis added). The Decision was explicit in pointing out that “Petitioners rely on Wood for the recited ‘vent’ in claim 1.” *Id.* at 11 (citing Pet. 15). Thus, Patent Owner’s assertion of an abuse of discretion based on Viking’s disclosure of an optional accelerator is not persuasive.

In the Decision, we determined that the record before us supports Petitioner’s position that it would have been obvious to use a vent, *such as*

¹ Citations are to column:line of the cited patent.

disclosed in Wood, to accomplish the venting that “may be necessary,” as stated in Viking. DI 13 (emphasis added). The Decision explained that the rationale for the proposed combination of references was based on background knowledge, inferences, and creative steps that a person of ordinary skill in the relevant technology would employ. *Id.* at 12.

As a second basis for rehearing based on the procedure for venting, Patent Owner asserts Viking teaches venting the accelerator down to zero psi, whereas Wood’s drain opens only when pressure in the piping network is above the minimum system pressure, such as 30 psi. Req. Reh’g. 1. The challenged claims do not refer to specific values of pressure. Thus, we are not persuaded that Patent Owner’s characterization of the references, even if correct, establishes an abuse of discretion. Moreover, this asserted basis also is premised on venting the accelerator, which, as discussed above, was not the basis on which the trial was instituted.

As a third basis for rehearing based on the procedure for venting, Patent Owner asserts that adding Wood’s condensate drain to Viking’s accelerator would delay rather than accelerate opening of the dry pipe valve. Req. Reh’g. 1. Thus, Patent Owner concludes it would not have been obvious to use Wood’s condensate drain to “vent” Viking’s accelerator. *Id.* Again, Patent Owner’s focus is on the optional accelerator, which was not relied on in either the Petition or the Decision. It also focuses on an asserted “delay” or timing, which is not recited in the claims. Accordingly, we are not persuaded of an abuse of discretion.

Patent Owner also makes a procedural observation regarding this issue. Patent Owner asserts that the Decision relied on portions of Viking (“vents”) not relied on by Petitioner, thereby precluding Patent Owner from

addressing the argument. Req. Reh’g. 5. The Board is entitled rely on its own reading of the evidence to explain or support its analysis, and also to determine the merits of the parties positions. At the institution stage, the Board is not changing the theories of the trial, because there is no trial until after the institution decision. Moreover, the Board’s Decision is based on the same combinations of references that were set forth in the Petition for the reasons stated in the Petition. Patent Owner has an opportunity to respond to the Petition and Decision in the Patent Owner’s response. The parties are on notice that, regarding the instituted grounds of unpatentability, the issues asserted in the Petition and Preliminary Response, and the issues discussed in the Decision, are issues the parties should address during the trial.

C. THE VIKING DISCLOSURE

Patent Owner also asserts an abuse of discretion based on the Board’s statement that there are “substantial similarities between Viking and *the disclosed invention*.” Req. Reh’g. 8 (citing DI 13). In the context of addressing whether Viking was duplicative of references considered by the PTO during examination of the application that led to issuance of the ’700 patent, the Decision stated, “[a]s *pointed out by Petitioners*, there is a substantial similarity between Figure 1 of the ’700 patent and portions of its Specification and the disclosure of Viking.” DI 13 (citing Pet. 8–9) (emphasis added). Indeed, there are substantial similarities. For example, Figure 1 of the ’700 patent is shown below, with the figure from Viking immediately below it. Comparing the two figures, there can be no reasonable dispute that these two figures are, in fact, substantially similar, as stated in the Decision. We are not persuaded that the statement in our Decision was an abuse of our discretion.

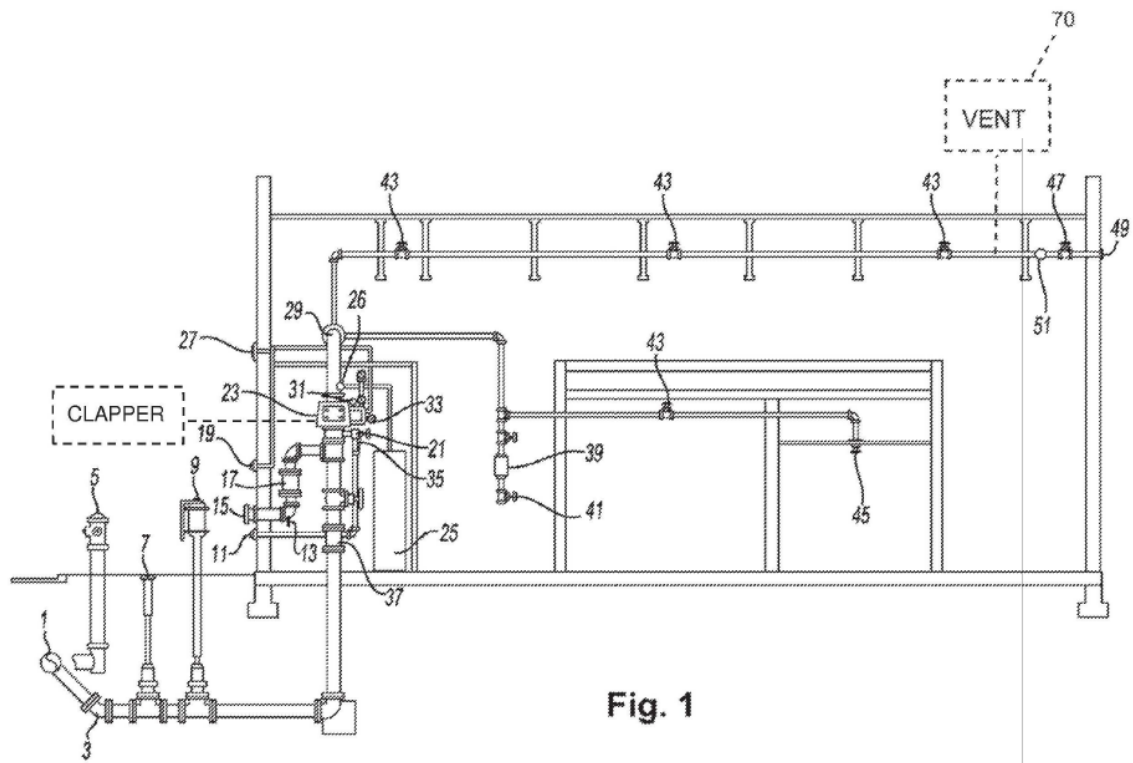


Figure 1 from the '700 patent (Ex. 1001)

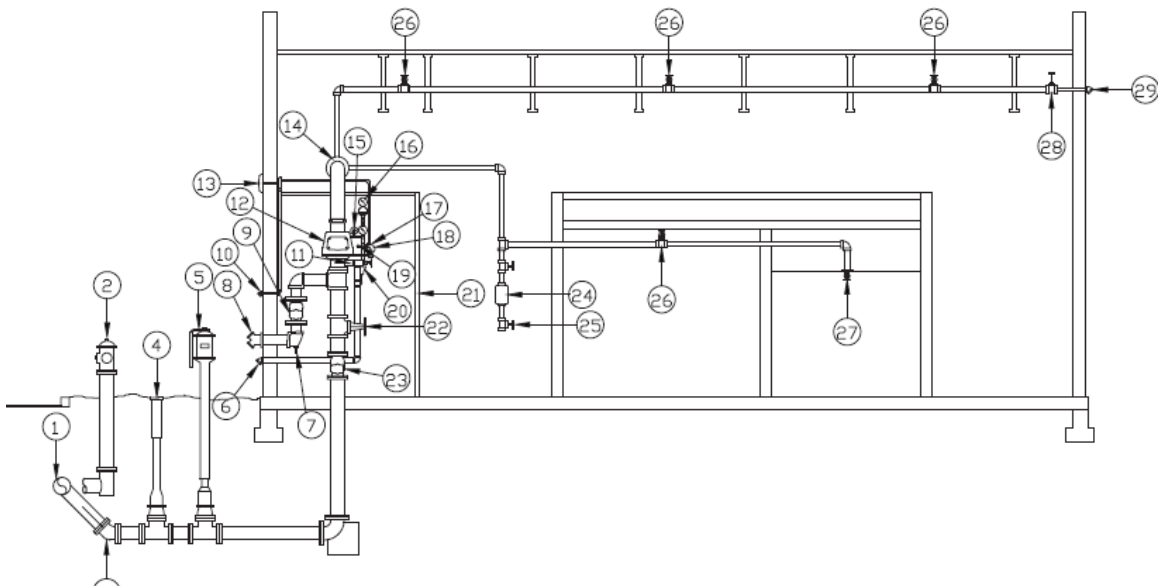


Figure from Viking, Ex. 1008, 2.

The '700 patent states that Figure 1 “illustrates a fire protection system constructed in accordance with the present teachings that includes a dry pipe sprinkler system.” Ex. 1001, 3:17–19. Viking appears to show substantially the same fire protection system. If Patent Owner maintains that these two figures are not substantially similar, Patent Owner has an opportunity to address this issue in its response.

Additionally, as stated in the Decision, portions of the '700 patent written description also are substantially similar to the Viking disclosure. *E.g.*, compare Ex. 1001, 13:54–67 and 14:36–39, 58–60 with Ex. 1008, 1, §§ 1, 2, 3. These few examples are shown in the chart below.

'700 Patent Disclosure (Ex. 1001)	Viking Disclosure (Ex. 1008)
The dry pipe sprinkler system utilizes water as an extinguishing agent. The system piping from the dry pipe valve to the fusible sprinklers is filled with pressurized nitrogen. (13:54–57).	A Dry Pipe Sprinkler System is a fire-protection system which utilizes water as an extinguishing agent. The system piping from the Dry Pipe Valve to the fusible sprinklers is filled with pressurized air or nitrogen. (§ 1).
An air check system is a small dry system which is directly connected to a wet pipe system. The air check system uses a dry valve and a nitrogen generator but does not have a separate alarm. The alarm is provided by the main alarm valve. (13:58–62).	An air check system is a small dry system that is directly connected to a wet pipe system. The air check system uses a dry valve and an air supply, but does not have a separate alarm. The alarm is provided by the main alarm valve. (§ 1).

A dry pipe system is primarily used to protect unheated structures or areas where the system is subject to freezing. Under such circumstances, it may be installed in any structure to automatically protect the structure contents and/or personnel from loss due to fire. (13:63–67)	A Dry Pipe System is primarily used to protect unheated structures or areas where the system is subject to freezing. Under such circumstances, it may be installed in any structure to automatically protect the structure contents and/or personnel from loss due to fire. (§ 2).
a nitrogen generator (automatic or manual) capable of restoring nitrogen pressure to the system in 30 minutes or less. (14:36–38).	Compressed air supply (automatic or manual) capable of restoring normal air pressure to a system in 30 minutes or less. (§ 3C(3)(b)).
an accelerator is required when system capacity exceeds 500 (1892.5 liters) gallons. (14:38–39).	An accelerator is required when system capacity exceeds 500 (1892.5 liters) gallons. (§ 3C(3)(c)).
All piping is pitched toward a drain. A drain is provided at all low points. A two-valve drum drip may be required. (14:58–60).	All piping must be pitched toward a drain. A drain must be provided at all low points. A two-valve drum drip may be required. (§ 3C(7)(b)). ²

As cited in the Decision (DI 13), page 8 of the Petition cites to additional examples of substantial similarities between the ’700 patent written description and the Viking disclosure. There can be no reasonable dispute that the exemplary passages are, in fact, substantially similar.

² In an amendment submitted during prosecution, Patent Owner stated that, pursuant to an agreement reached with the Examiner during an interview, “Applicant has further amended independent claim 7 to overcome the existing rejections. Specifically, claim 7 is amended herein to further recite (a) one or more drains, (b) the piping network pitched toward the one or more drains, and (c) the one or more drains including a drum drip. . . . In view of the above, Applicant respectfully submits the instant application is now in condition for allowance.” Ex. 1004, 5. The asserted bases for allowance appear to be disclosed in the cited passage from Viking, which was not before the Examiner.

Again, if Patent Owner maintains that the exemplary passages listed above, and other passages cited in the Petition, are not substantially similar, Patent Owner has an opportunity to address this issue in its response.

On the record before us, however, the evidence establishes that Patent Owner's argument that "there is *no substantial similarity* between Viking and the disclosed invention" (Req. Reh'g 9) (emphasis added) is not supported by the facts. Thus, Patent Owner has not established an abuse of discretion in the statement in the Decision that there are "substantial similarities between Viking and the disclosed invention" in the '700 patent.

D. ADMITTED PRIOR ART

Patent Owner also asserts that the Decision misapprehended the characterization of known prior art in the '700 patent. Req. Reh'g 10 (citing Paper 8, 3). The Decision asserted that "[a]ccording to the Specification, known dry pipe systems use nitrogen to fill the piping void space to pressurize the piping and to mitigate the corrosion of the ferrous and cuprous metal components."

The "Detailed Description" section of the Specification of the '700 patent discusses "conventional" dry pipe sprinkler systems. *E.g.*, Ex. 1001, 5:11–20 ("In conventional dry pipe sprinkler systems . . ."). The next paragraph of the Specification begins "[i]n the case of the dry pipe system, the present systems and methods use nitrogen . . ." (*id.* at 5:21–24), which is the sentence Patent Owner states we misapprehended. It was, and is, unclear whether the phrase "the present systems and methods" refers to the "conventional system" described in the preceding paragraph of the Specification or to the new system, which the patent sought to disclose and protect. In either situation, our statement was harmless because the Decision

relied on Viking, not admitted prior art, for the disclosure of pressurized nitrogen in a dry pipe system. The only admitted prior art relied on in the Petition and the Decision was the reference to manufacturers of suitable nitrogen generators at column 10, lines 55–62 of the '700 patent. As stated in the Decision:

Viking discloses using pressurized air or nitrogen. Viking does not explicitly state the source of the pressurized medium. Nitrogen generators admittedly were well-known. Using such a generator in the Viking system appears to be well within the skill and creativity of a person of ordinary skill.

DI 12–13.

Thus, we are not persuaded of an abuse of discretion in instituting trial because of any error in the statement cited by Patent Owner.

III. CONCLUSION

Based on the analysis above, Patent Owner has not persuaded us that our determination that it is reasonably likely Petitioner will prevail on the grounds instituted for trial in our Decision was an abuse of our discretion, or that we misapprehended or overlooked any substantive matter. Accordingly, we deny the request for rehearing.

IV. ORDER

For the reasons given, it is

ORDERED that the request for rehearing is *denied*.

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