UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BLASTERS INC.,

Petitioner,

v.

WATERBLASTING, LLC,

Patent Owner.

Case IPR2018-00504

Patent 7,255,116

PATENT OWNER'S PRELIMINARY RESPONSE

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I. INTRODUCTION

Pursuant to 37 C.F.R. § 42.107(a) Patent Owner, Waterblasting, LLC, submits the following preliminary response to the Petition, setting forth reasons why no *Inter Partes* review should be instituted under 35 U.S.C.§ 314. The Petition fails to demonstrate that there is a reasonable likelihood that any of claims 1-6 and 10 ("the challenged claims") of U.S. Patent No. 7,255,116 ("the '116 patent"; Ex. 1001) are unpatentable based on any of Grounds 1-5 raised by petitioner. Accordingly, for the reasons set forth below, the Petition should be denied in its entirety.

II. SUMMARY OF THE INVENTION

Waterblasting, LLC, d/b/a Waterblasting Technologies is the Owner of the '116 patent and actively practices the patent in the water blasting industry.

Disclosed in the '116 patent is a cleaning system for removing coatings and pavement markings from roadways and airport runways using ultra high pressure and a high-power vacuum. The specification of the '116 patent teaches that all the components of the cleaning system can be mounted on the truck or pulled behind the truck on a trailer. *Blasters-1001* at 2:23-33.

Prior to the filing of the '116 patent on July 2, 2004, all of the necessary components of a cleaning system for roadways and runways were transported using multiple trucks and trailers, in this field of water blasting technology. This cumbersome and inefficient method of operation was extremely costly to customers. One objective of this invention was to provide a vacuum recovery, truck mounted, stripe removal system having a compact unit for safe, fast over-the-road travel to job sites. *Id* at 2:35-37. Claim 1 of the '116 patent is directed to that objective, in which all of the components of the cleaning system are mounted on one truck.

III. KNOWLEDGE OF A PERSON OF ORDINARY SKILL IN THE ART

The Petitioner relies on the knowledge of a POSA as established by the declaration submitted by Scott F. Boos, who has been working in the water blasting industry since 1982 (*See* Blasters-1009)[1]. Mr. Boos declaration outlines his experience, training, awards and several patents issued to him, all related to the water blasting industry. (Blasters-1009 p. 4-7).

Mr. Boos opines that a POSA would typically have 4-5 years of experience working with surface cleaning devices and systems and/or a degree in mechanical engineering or an equivalent education. He further opines that a POSA would have had knowledge of known systems, services, and techniques used in the field, such as those described in the '116 Patent and the prior art references. (*See* Blasters-1109 p.8-9). Limited to the express purpose of preliminarily responding to this Petition, Patent Owner accepts the assessment of Mr. Boos as a POSA. Additionally, Patent Owner acknowledges that Mr. Boos has advanced a position that attempts to establish himself as a POSA, based on the representations and references in his declaration regarding his background and experience. Curiously, however, the Petitioner has proposed claim constructions that are fundamentally inconsistent with an interpretation that those skilled in the art would have understood in this field of technology, when applying the same platform of

[1] Since 1999, Scott F. Boos has served as President of Blasters Inc., which is both the Petitioner in this matter and Defendant/Counterclaimant in the patent infringement suit under the '116 patent in United States District Court Case No.: 17-cv-02660- CEH-MAP. (Middle District of Florida)

background and knowledge that Mr. Boos himself relies upon in his declaration to establish himself as a POSA.

The broadest reasonable interpretation does not mean the broadest possible interpretation. Rather, the meaning given to a claim term must be consistent with the ordinary and customary meaning of the term (unless the term has been given a special definition in the specification), and must be consistent with the use of the claim term in the specification and drawings. Further, the broadest reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach. *In re Cortright,* 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999); *See Also, MPEP § 2111.*

It is the Patent Owner's position that the claim interpretations advanced by the Petitioner are unreasonable and therefore should be rejected. As argued *infra,* Mr. Boos opinions regarding the knowledge of a POSA in the water blasting industry and related technologies should be regarded with some skepticism by the Board.

IV. CLAIM TERMS PROPOSED FOR CONSTRUCTION BY PETITIONER

Petitioner's proposed claim constructions should be rejected because they are not the broadest reasonable constructions. See 37 C.F.R. § 42.100(b). When considering whether to institute a patent trial the Board has indicated that it will interpret the claims of a challenged patent using a "broadest reasonable construction" approach. *Patent Trial Practice Guide*, 77 Fed. Reg. 48756, 48766 (Aug. 14, 2012).

> "Regarding the need for a claim construction, where appropriate, it may be sufficient for a party to provide a simple statement that the claim terms are to be given their broadest reasonable interpretation,

> as understood by one of ordinary skill in the art and consistent with the disclosure. Alternatively, where a party believes that a specific term has meaning other than its plain meaning, the party should provide a statement identifying a proposed construction of the particular term and where the disclosure supports that meaning." 77 Fed. Reg. at 48764 (Aug. 12, 2012).

Unless there are indications to the contrary, a claim term is accorded its ordinary and customary meaning. *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005). The "ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Id. at 1313, citing *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.* , 381 F.3d 1111, 1116 (Fed. Cir. 2004) ("A court construing a patent claim seeks to accord a claim the meaning it would have to a person of ordinary skill in the art at the time of the invention."); *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1477 (Fed. Cir. 1998) (the court must interpret the claims "as they would be understood and interpreted by a person in that field of technology"). Claims are first construed according to intrinsic evidence, which consists of the language of the claims themselves, the language of the other claims, the patent specification and the prosecution history. *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005); see also *Teleflex, Inc. v. Ficosa North America Corp* , 299 F. 3d 1313, 1325 (Fed. Cir. 2001).

Accordingly, the Patent Owner provides the following argument in addressing the constructions proposed by the Petitioner for the following claim terms.

A. "coatings" (Claim 1), "hard surface" (Claims 1 and 4) and "high pressure" (Claim 1).

Claim 1 of the '116 patent, titled "**Stripe Removal System**" (emphasis added), discloses "A cleaning system for removing coatings from a hard surface by high pressure liquid comprising……". *See* Blasters-1001. Petitioner has elected to propose three of these terms individually and out of the order they are disclosed in the patent, rather than in the clear context that they appear. The '116 patent specification begins by disclosing that, "This invention relates to the field of high pressure water cleaning devices for highways, runways, parking decks and other hard surfaces. *See* Blasters-1001 at 1:5-7. Further, the prior art background of the '116 patent discusses various pavement markings and known techniques for applying those markings upon roadways. Common pavement surfaces are asphalt and concrete. Additionally, known removal techniques in the prior art are discussed. *See generally* Blasters-1001 at 1:10-60.

Mr. Boos opines that a POSA would have understood the term "coatings" to mean: "a layer of any substance spread over a surface". *See* Blasters-1009 p. 12. This proposed definition is inconsistent with Mr. Boos own disclosures in this area of technology. To support his assertion that he is a technical expert in this field of technology, Mr. Boos details his background and qualifications including identifying patents he received related to the water blasting industry. *See* Blasters-1009 p.5-7. One of those listed patents issued to Mr. Boos is U.S. Patent No. 8,510,905 (herein '905 patent). *See* Waterblasting-2001. In the description of the prior art, the '905 patent states "Vacuum boxes are used to collect water, pulverized asphalt, paint, rubber, thermoplastic, tape, and curing compounds and other debris created when high pressure water is discharged by a nozzle bar mounted on a tractor to remove **pavement markings or coatings** (emphasis added)

from roads, airport runways, taxiways, parking lots and the like." *See* Waterblasting-2001 at 1:10-16.

The summary of the invention in the '905 patent continues to interchangeably use pavement markings and coatings. "The inventive structure is used with a tractor of the type used to remove **pavement markings or coatings** (emphasis added) from asphalt or concrete roads, parking lots and the like by blasting the asphalt or concrete with water under high pressure. The technology is also used in removing **pavement markings or coatings** (emphasis added) and built up runway rubber from airport runways and taxiways as indicated at airport-technology.com." *See* Waterblasting-2001 at 1:40-46.

Next, Mr. Boos opines that a POSA would have understood the term "hard surface" to mean any surface having rigidity sufficient to support the weight of a vehicle. *See* Blasters-1009 p.10. Again, this proposed definition is inconsistent with Mr. Boos' own disclosures in this area of technology. As recited *supra,* the '905 patent cites various examples of surfaces that pavement markings or coatings are applied to, such as roads, airport runways, taxiways and parking lots. *See Waterblasting*-2001 at 1: 10-16 and 40-46. As noted *supra,* the '905 patent specification refences a website, airport-technologies.com for examples of applications in this field of technology. Cyclone-Technology, LLC[2], advertises that the company provides hard surface cleaning solutions. The Cyclone 4006™ is designed specifically to clean surfaces in airport and runway applications.

Mr. Boos further opines that a POSA would understand the term "high pressure" in the claimed system would refer to any cleaning system employing a pressure higher than atmospheric pressure. An initial review of its intrinsic evidence reveals that the '116 patent

[2] https://www.airport-technology.com/contractors/apron_clean/cyclone/

specification describes that the cleaning system has a high pressure fluid pump greater that 25,000-40,000 psi. *See* Blasters-1001 at 3:57-60. Further, a review of the '116 prosecution history would reveal that the Inventor explained that the present invention included a high pressure pump capable of delivering 2-15 gallons per minute of fluid at 25,000- 40,000 psi. The Inventor distinguished a cited reference, U.S. Patent No. 5,704,989 to Page, directed to a cleaning device with a pump capable of generating a pump pressure up to 5000 psi, stating it was too low of an operating pressure for removal of pavement markings. *See* Waterblasting-2002 p.110-114; *See, Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005).

In the context of the patent disclosures, the Patent Owner respectfully submits that the broadest reasonable interpretation of the term "high pressure" as understood by POSA, would be at least 25,000 psi for effective removal of pavement markings. Further review of the website, airport-technology.com, evidences what a POSA in this specific field of technology would understand the term "high pressure" to mean.

Roehsler[3] has specialized in ultra high-pressure water blasting treatment for over 27 years and provides high pressure water blasting treatment up to 36,000 psi. Roehsler services include apron and runway cleanings; paint marking removal on runways, taxiways, roads and motorways; and rubber removal on runways. SMETS-technology[4] has more than 25 years experience in the field of high and ultra-high pressure water jetting technology for cleaning airport runways worldwide. SMETS utilizes the ARC 1000, a high pressure water jet system that is operated at a pressure up to 35,000 psi and can be configured for line and marking removal.

[3] https://www.airport-technology.com/contractors/apron_clean/roehsler/
[4] https://www.airport-technology.com/contractors/apron_clean/smets/

Traffic-lines[5] develops marking and rubber removal technologies for aviation environments with hydro blasting, offering pressures up to 43,500 psi. Additionally, Petitioner attached an exhibit from NLB Corp entitled, "Water Jet Solutions for Removing Pavement Markings and Runway Rubber", which describes ultra-high pressure water (up to 40,000 psi). *See* Blasters-1006.

The claim constructions proposed by the Petitioner are designed to be unreasonable, and therefore are not the broadest reasonable interpretations as they would be understood and interpreted by a POSA in this field of technology. Mr. Boos' proposed constructions are inconsistent with the general canons of claim construction, as well as his own disclosures and cited references, for establishing himself as a POSA in this field of technology, as evidenced *supra.* Accordingly, Petitioner's proposed claim constructions for "coatings" and "hard surface" should be rejected. It is the Patent Owner's position that these claim terms do not require construction at this time.

B. "blast head" (Claims 1, and 3-5)

Petitioner has proposed the term "blast head" for construction. Mr. Boos opines that a POSA, when considering the patent specification as a whole, and in particular the statement "[t]he blast head has at least one and up to sixteen high pressure nozzles 69 delivering high pressure fluid to the surface to be cleaned," would have understood the term "blast head" to mean a mechanical component having one or more nozzles for ejecting a substance onto a surface.

Patent Owner respectfully disagrees. Independent Claim 1, defines "said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface." The

[5] https://www.airport-technology.com/contractors/apron_clean/traffic-lines/

specification of the '116 patent clearly defines that "[t]he blast head 23 has at least one and up to sixteen high pressure nozzles 69 delivering high pressure fluid to the surface to be cleaned." *See* Blasters-1001 at 3:65-67. The terms liquid, fluid and water are used interchangeably throughout the specification in describing the water cleaning system. "This invention relates to the field of high pressure water cleaning devices for highways, runways, parking decks, and other hard surfaces." *See* Blasters-1001 at 1:5-7.

Petitioner has advanced a proposed claim construction that is designed to be unreasonable. Mr. Boos opines that the plain language of the specification, "the high pressure nozzles 69 delivering high pressure fluid" would be interpreted by a POSA to mean nozzles for ejecting a substance. Consequently, Petitioner's proposed claim construction should be rejected since the term "blast head" is clearly defined in the specification as at least one and up to sixteen high pressure nozzles delivering high pressure fluid to the surface to be cleaned.

C. "sump" (Claims 1-2) and "high power vacuum pump" (Claims 1 and 2)

Petitioner has proposed to construe these claim terms separately rather than in the context in which they appear in the '116 patent. For the term "sump", the Petitioner has proposed for the construction of sump: "a reservoir serving as a receptacle for liquid and substances removed from a surface." *See* Blasters-2009 p.12. Mr. Boos opines that a vacuum pump disclosed as capable of approximately 1100 CFM lacks a lower quantitative boundary for determining what intake values are required to qualify as high power. Consequently, for "high power vacuum pump", the Petitioner argues that the term should be construed as "a vacuum pump capable of removing liquid and substances from a surface and conveying them to a vacuum tank." Patent Owner respectfully disagrees, as discussed further below.

In the '116 patent, the terms "sump" and "high power vacuum pump" first appear together in the claims as "..., said liquid and said coatings conveyed through said waste removal hose to said sump via a high power vacuum pump,..." *See* Blasters-1001 at 6:46-48. The specification of the '116 patent provides interpretive guidance as to the scope of these claims, which conveniently appears to have been ignored by Mr. Boos in his evaluation, as a POSA in this field of technology. "[T]he PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification." *In re Morris,* 127 F.3d 1048, 1054 (Fed. Cir. 1997).

The "sump" and "high power vacuum pump" are connected by a hose and operated to create a vacuum chamber or vacuum tank. The sump is first described in the '116 specification as "the sump 14 or vacuum chamber." *See* Blasters-1001 at 1:15. The sump 14 is connected to the vacuum pump 15 by hose 16. Operation of the sump or vacuum chamber for high power vacuum applications, is further described by the addition of a specific piece of equipment having minimal operational requirements. The intake of a high power vacuum pump, capable of approximately 1100 CFM (cubic feet per minute), is connected to the vacuum tank. *See* Blasters-1001 at 3:46-49. The operation of the vacuum tank is further described in the specification. The vacuum tank is placed under vacuum by starting the diesel powered vacuum pump which is connected by an air outlet hose to the vacuum tank. *See* Blasters-1001 at 5:31-33.

Clearly, the structural and operational parameters of the sump and high power vacuum pump are articulated in the written description contained in the specification. Patent Owner respectfully suggests that the Broadest Reasonable Interpretations of the terms "sump" and "high

power vacuum pump" would be consistent with the definitions articulated in the specification. Accordingly, the claim constructions advanced by the Petitioner are facially unreasonable.

D. "connected to" (Claims 1-3 and 6)

It is the Patent Owner's position that the meaning of the claim term "connected to" is unambiguous, as utilized in the '116 patent. Consequently, it is unclear why the Petitioner has proposed the need for construction of a term that Petitioner concedes has a plain and ordinary meaning.

E. "mobile frame" (Claim 1)

The term "mobile" is defined in Webster's Third New International Dictionary as capable of moving or being moved from one place to another. Waterblasting-2007. Webster's Third International Dictionary defines the term "frame" as something composed of parts fitted together and united. Waterblasting-2008 Accordingly, the claim element "mobile frame" would be properly construed by a POSA as, something composed of parts fitted together and united that are capable of moving or being moved from one place to another.

"[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application." *Phillips v. AWH Corp.*,415 F.3d 1303, 1313, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005) *(en banc)*; *Sunrace Roots Enter. Co. v. SRAM Corp.,* 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003); *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.,* 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir. 2003) ("In the absence of an express intent to impart a novel meaning to the claim terms, the words are

presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art.").

The Broadest Reasonable Interpretation of the claim term "mobile frame" therefore, is consistent with the plain and ordinary meaning. The claim term is used consistently in the '116 patent. Claim 1 states, "said liquid reservoir, said sump and said high power vacuum pump being mounted on **a mobile frame**,(emphasis added), said mobile frame forming an integral part of a truck having a bed portion and a cab portion. *See* Blasters-1001 at 6:49-52. Clearly, in this context, a mobile frame refers to a structure that has a liquid reservoir, a sump and a high power vacuum pump mounted on it. The specification discloses another "mobile frame" that describes a structure consistent with the plain and ordinary meaning. "The system employs a liquid reservoir connected to a high pressure pump for directing high pressure water through a blast head mounted on **a self-propelled mobile frame.** (emphasis added). The mobile frame is a self-propelled tractor wherein the blast head and tractor are of a size for removably docking transversely on a bed of said truck." *Id.* at 2:24-30. Each time **a mobile frame** is disclosed in the '116 patent, specific components are mounted upon the mobile frame to unambiguously distinguish which mobile frame is being referenced.

Mr. Boos has elected to present limited excerpts from the context in which the term "mobile frame" appears in the '116 patent in his Declaration. Taken out of context, he then concludes that these are conflicting definitions, which appear to be a drafting error. Next, he proposes that mobile frame should be construed as a chassis and ultimately concludes that a POSA would have understood the term "mobile frame" to mean the base frame of a motor vehicle or other wheeled conveyance.

Despite the context in which the claim term "mobile frame" appears throughout the patent, Mr. Boos nevertheless advances a proposed claim construction that is clearly unreasonable by design. Accordingly, the claim construction advanced by the Petitioner should be rejected.

F. "articulating link" (Claims 1 and 10)

It is the Patent Owner's position that the meaning of the claim term "articulating link" is unambiguous, as utilized in the '116 patent. Consequently, it is unclear why the Petitioner has proposed the need for construction of a term that Petitioner concedes has a plain and ordinary meaning.

G. "controlled movement" (Claim 10)

It is the Patent Owner's position that the meaning of the claim term "controlled movement" is unambiguous, as utilized in the '116 patent. Consequently, it is unclear why the Petitioner has proposed the need for construction of a term that Petitioner concedes has a plain and ordinary meaning.

V. Reasons Why *Inter Partes* Review Should Not be Instituted

The Petition fails to demonstrate a reasonable likelihood that any of the challenged claims are rendered obvious. The Petition, therefore, fails to meet the criteria that would warrant the institution of a trial.

A. Ground 1: Claims 1, 2 and 10 are Not Obvious Over Jones in view of Breither and in further view of NLB

1. Claim 1:

a. "A cleaning system for removing coatings from a hard surface by a high pressure liquid…"

As argued *supra,* Mr. Boos has advanced the broadest possible interpretation of particular claim terms of the '116 patent. This unreasonable interpretation for the claims of the '116 patent has resulted in a fundamentally flawed obviousness analysis advanced by the Petitioner. The broadest reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach. *In re Cortright,* 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999);*See Also, MPEP* § 2111.

Based on the unreasonable claim constructions advanced by Mr. Boos, the first reference advanced by the Petitioner is Jones, which discloses a portable device for cleaning artificial turf that can operate at a pressure of approximately 200 pounds per square inch. In his declaration, Mr. Boos interprets the term other "coatings" as disclosed in the '116 patent to include substances disclosed by Jones, such as "oily fallout, soot, broken glass and other hazardous fallout." *See* Blasters-1009 p.36.

Next, Mr. Boos advances the broadest possible interpretation of hard surface and opines that the hard surface disclosed in the '116 patent refers to any surface, including artificial turf, so long as it could support a vehicle. *Id. p.*37 Mr. Boos then opines that a POSA would have understood the term high pressure liquid, as disclosed in the '116 patent, to be a liquid at a pressure above ambient. Consequently, Mr. Boos concludes that the 200 psi pump disclosed by

Jones would be considered a high pressure pump by a POSA. *Id.* At 37. This evaluation is the basis Mr. Boos relies upon to conclude that Jones teaches all the limitations recited in the preamble of claim 1 of the '116 patent. In reality, he does not provide sufficient reasoning or facts upon which a POSA would base that conclusion.

Mr. Boos represents in his declaration that he is a POSA in the area of technology disclosed in the '116 patent. However, as argued *supra,* Mr. Boos' proposed claim constructions are inconsistent with his own disclosures and references in this field of technology. This inconsistency results in an obviousness analysis devoid of sufficient reason or facts as to what a POSA would have considered obvious. "[R]ejections based on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn,* 441 F.3d 977, 988(Fed. Cir. 2006).

b. "a liquid reservoir connected to a high pressure pump"

The next reference cited by the Petitioner is Breither, which discloses a street cleaning vehicle that wets the dirt or rubbish on a road for more efficient cleaning. Mr. Boos opines that it would have been obvious for a POSA to modify the system in Jones by mounting the water tank disclosed in Breither and connecting it to the "high pressure pump" disclosed by Jones. Alternatively, Mr. Boos concludes that even if the term "high pressure" is construed to mean a pressure between 25,000 and 40,000 psi a POSA would have been motivated to substitute the 200 psi pump disclosed in Jones for the 40,000 psi pump disclosed in the NLB reference. Again, his declaration lacks sufficient reasoning or facts upon which to base this conclusion. *Id.* at 988.

c. "said pump connected to a mobile blast head by a high pressure hose"

The cleaning head disclosed by Jones is the equivalent of the mobile blast head disclosed in the '116 patent, according to Mr. Boos. Since Mr. Boos has taken the position that the pump disclosed in Jones is high pressure, he also concludes that the hose connecting the pump to the cleaning head is also high pressure. Consequently, Mr. Boos concludes that Jones teaches or suggests these claim limitations. Alternatively, Mr. Boos concludes that it would have been obvious to a POSA to modify the disclosures in Jones to adapt the blast head and hose to handle pressures of 40,000 psi. Again, his declaration lacks sufficient reasoning or facts upon which to base this conclusion. *Id.* at 988.

d. "said blast head having at least one high pressure nozzle for delivering high pressure onto a hard surface"

As argued *supra,* Mr. Boos concludes that the cleaning head disclosed by Jones is equivalent to the mobile blast head disclosed in the '116 patent. Consequently, Mr. Boos proposes that the "high pressure system" taught by Jones obviously teaches a high pressure nozzle. Without further explanation or facts of how a POSA would modify the Jones device to pump liquids pressurized at 40,000 psi, Mr. Boos ultimately concludes that "a POSA would have undoubtedly updated the hoses and nozzles with what could only be considered high pressure hose and nozzles." *See* Blasters-1009 p.46. Again, his declaration lacks sufficient reasoning or facts upon which to base this conclusion. *In re Kahn,* at 988.

e. "a waste removal hose connected at one end to said blast head and at the other end to a sump for collection of liquid and coatings therefrom"

"said sump connected to said liquid reservoir"

"whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure nozzle onto the hard surface for removing coatings therefrom"

As articulated *supra,* Mr. Boos has not provided sufficient reasoning with some rational underpinning upon which to base a conclusion that the '116 patent is obvious based upon the disclosures in Jones in view of Breither. *Id* at 988. Consequently, the above grouped claim limitations suffer the same deficiency in Mr. Boos analysis.

f. "said liquid and coatings conveyed through said waste removal hose to said sump via a high power vacuum pump, said coatings collected in said sump"

As articulated *supra,* Mr. Boos has not provided sufficient reasoning with some rational underpinning upon which to base a conclusion that the '116 patent is obvious based upon the disclosures in Jones in view of Breither. *Id* at 988. With regard to the high power vacuum pump limitation, Mr. Boos merely states that the disclosure in the '116 patent, of the high power vacuum pump being capable of approximately 1,100 CFM, lacks a lower quantitative boundary. From this, he concludes that the term "high power vacuum pump" means "having a greater than normal strength." *See* Blaster-1009 p.55.

Therefore, Mr. Boos concludes that both Jones and Breither teach high power vacuum pumps without articulating why a POSA would make that determination. But NLB discloses a vacuum pump having an intake of 1,000 cfm. Without providing any factual support to substantiate his conclusion, Mr. Boos nevertheless advances the conclusory statement that, should the term high power vacuum pump be construed to mean an intake of approximately 1,100 cfm, a POSA would have been motivated to use a stronger vacuum pump in conjunction with Jones and Breither. *See, In re Kahn at 988.*

g. "said liquid reservoir, said sump and said high power vacuum pump being mounted on a mobile frame"

In the analysis of these claim limitations within his declaration, Mr. Boos elects to define the term "mounted", however, this claim term has not been proposed for claim construction by the Petitioner. He opines that "[A] consistent interpretation of the term "mounted" as used in the specification and the claims of the '116 Patent, results in a POSA concluding that the term "mounted" means directly or indirectly attached. Mr. Boos does not identify any special definitions associated with the word mounted[6], anywhere in the '116 patent which would differ from its plain and ordinary meaning.Waterblasting-2009. This baseless conclusion is an attempt to create an illusion for lending support to his already baseless conclusion about what constitutes a mobile frame.

Patent Owner respectfully reiterates its position that the claim element "mobile frame" would be reasonably construed by a POSA as: something composed of parts fitted together and united that are capable of moving or being moved from one place to another. Each time **a mobile**

[6] As defined in Webster's Third New International Dictionary, mounted means: "assembled or equipped for use esp. by being attached to a support."

frame is disclosed in the '116 patent, specific components are mounted upon the mobile frame to unambiguously distinguish which mobile frame is being referenced.

Mr. Boos' conclusion that the above mentioned claim limitations would be obvious in view of the combination of Jones, Breither and NLB can only be arrived at by the unreasonable proposition that the term "mounted", as used in the '116 patent, somehow has a special meaning which renders a mobile frame, the bed of a truck and a chassis as synonymous with one another.

h. "said mobile frame forming an integral part of a truck having a bed portion and a cab portion, said truck being self propelled"

As articulated *supra,* Mr. Boos relies upon the unreasonable interpretation of the claim term mobile frame. The Patent Owner maintains the position that Mr. Boos has not provided sufficient reasoning with some rational underpinning upon which to base a conclusion that the '116 patent is obvious based upon the disclosures in Jones in view of Breither. *Id* at 988. Consequently, the above referenced claim limitation suffers the same deficiency in Mr. Boos analysis.

i. "said mobile blast head being mounted at a distal end of an articulating link, a proximal end of said articulating link secured to a tractor"

"said tractor including an engine for propulsion therof"

"wherein said high pressure hose and waste removal hose extend between said truck and said tractor"

"whereby the tractor is utilized to maneuver said blast head"

The above listed claim elements is merely a recitation of remaining components in Claim 1 of the '116 patent. Mr. Boos concludes these elements would have been obvious to a POSA,

but his declaration is devoid of any explanation why it would be obvious to combine all these elements.

"[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR International CO. v. Teleflex Inc.,* 555 U.S. 398, 418.

2. Claims 2 and 10

With regards to the dependent claims, claims 2 and 10 each depend directly from claim 1 and if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

For at least the above reasons, the Board should reject Ground 1 because Petitioner has failed to meet its burden of demonstrating a reasonable likelihood that it will prevail on any of the challenges to the claims raised in Ground 1.

B. Ground 2: Claims 3 and 4 are not obvious over Jones in view of Breither and in further view of Herhold.

1. Claim 3

With regards to dependent claim 3, claim 3 depends from claim 2. Claim 2 depends directly from claim 1 and if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

2. Claim 4

With regards to dependent claim 4, claim 4 depends from claim 3, which depends from claim 2. Claim 2 depends directly from claim 1 and if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

For at least the above reasons, the Board should reject Ground 2 because Petitioner has failed to meet its burden of demonstrating a reasonable likelihood that it will prevail on any of the challenges to the claims raised in Ground 2.

C. Ground 3: Claims 5 and 6 are not obvious over the combination of Jones, Breither, Herhold, and Schrunk

1. Claim 5

Regarding dependent claim 5, this claim depends from claim 4. Claim 4 depends from claim 3, which depends from claim 2. Claim 2 directly depends from claim 1 and if an

independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

2. Claim 6

Regarding dependent claim 6, this claim depends from claim 5, which depends from Claim 4. Claim 4 depends from claim 3, which depends from claim 2. Claim 2 depends directly from claim 1 and if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

For at least the above reasons, the Board should reject Ground 3 because Petitioner has failed to meet its burden of demonstrating a reasonable likelihood that it will prevail on any of the challenges to the claims raised in Ground 3.

D. Ground 4: Claims 1-4 are not obvious based on Clemons in view of NLB

1. Claim 1

a. "A cleaning system for removing coatings from a hard surface by high pressure liquid comprising"

As argued *supra,* Mr. Boos has advanced the broadest possible interpretation of the claims of the '116 patent. This unreasonable interpretation of the claims of the '116 patent has resulted in a fundamentally flawed obviousness analysis advanced by the petitioner. The broadest reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach. *In re Cortright,* 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999); *See Also,* MPEP § 2111.

Based on the unreasonable claim constructions advanced by Mr. Boos, the first reference advanced by the Petitioner is Clemons, which discloses a self-propelled brushless surface cleaner with reclamation, capable of pump operations at a pressure of approximately 4000 pounds per square inch. Mr. Boos has concluded that 4000 psi is above atmospheric pressure and, therefore, Clemons teaches high pressure. However, as noted *supra*, Mr. Boos' proposed definition of "high pressure" overlooks the prosecution history in which the Inventor clearly articulated, in order to distinguish from a cited reference, that a pump capable of 5000 psi would be unsuitable in this area of technology.

In his declaration, Mr. Boos interpretation of the terms "coatings" and "hard surface" as disclosed in the '116 patent, are so unreasonably broad, that he cites, with no insight or explanation, a rather ambiguous embodiment of the Clemons reference. Mr. Boos actually states: "Clemons tested an embodiment of the cleaning system on an **undisclosed surface** (emphasis added) to remove **undisclosed coatings** (emphasis added), and that the best results were achieved when the discharged water had a temperature of 150° Fahrenheit and a pressure of approximately 4000 psi." *See* Blasters-1009 p.85 ¶149.

Next, Mr. Boos states that a POSA would have understood that the water temperature and water pressure can be varied based on the surface to be cleaned and the type of coatings to be removed. *Id. p.*86. Consequently, Mr. Boos concludes that the 4000psi pump disclosed by Clemons would be considered high pressure by a POSA. Mr. Boos adds that the 40,000 psi pump disclosed by NLB would be a simple design choice, in concluding that there is nothing unique or difficult in exchanging the pump disclosed by Clemons with the one disclosed by NLB. *See Id. p.*86.

Notably, there appears to be no articulated reasoning to support that conclusion of obviousness. *See, In re Kahn, at* 988. Mr. Boos continues hedging his opinions by concluding that even if the term "high pressure" is construed according to the values in the '116 patent of between 25,000-40,000 psi, the combination of Clemons and NLB discloses that limitation. Blaster- 1009 at *p.86.*

Mr. Boos continually fails to provide sufficient reasoning or facts upon which a POSA would base a conclusion. Mr. Boos represents in his declaration that he is a POSA in the area of technology addressed by the '116 patent. However, as argued *supra,* Mr. Boos proposed claim constructions are inconsistent with his own disclosures and references in this field of technology. This inconsistency results in an obviousness analysis devoid of sufficient reason or facts as to what a POSA would have considered obvious. "[R]ejections based on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn,* 441 F.3d 977, 988(Fed. Cir. 2006).

b. "in combination a liquid reservoir connected to a high pressure pump"

Based upon his contention that a POSA in this field of technology would understand "high pressure" to be a pressure higher than atmospheric pressure, Mr. Boos concludes that Clemons discloses the limitation "in combination a liquid reservoir connected to a high pressure pump." *Blasters-1009 p.87.* Alternatively, Mr. Boos continues to rely on his previous conclusion, without explanation, that a POSA would have been motivated to modify Clemons to include the NLB pump. Again, this analysis lacks sufficient reasoning or facts upon which to base this conclusion. *In re Kahn,* at 988.

c. **"said pump connected to a mobile blast head by a high pressure hose,"**

d. **"said blast head having at least one high pressure nozzle for delivering high pressure liquid onto a hard surface,"**

e. **"a waste removal hose connected at one end to said blast head and the other end to a sump for collection of liquid and coating,"**

f. **"said sump connected to said liquid reservoir"**

g. **"whereby liquid is pumped through said high pressure hose from said reservoir and exits said high pressure onto the hard surface for removing coatings therefrom,"**

h. **"said liquid and coatings conveyed through said waste removal hose to said sump via a high power vacuum pump"**

i. **"said Coatings collected in said sump"**

j. **"said liquid reservoir, said sump and high power vacuum pump being mounted on a mobile frame,"**

k. **"said mobile frame forming an integral part of a truck having a bed portion and a cab portion,"**

l. **"said truck being self-propelled,"**

m. **"said mobile blast head being mounted at a distal end of an articulated link, a proximal end of said articulating link secured to a tractor,"**

n. **"said tractor including an engine for propulsion thereof,"**

o. **"wherein said high pressure hose and said waste removal hose extend between said truck and said tractor,"**

p. "whereby said tractor is utilized to maneuver said blast head."

The above listed claim elements are the remaining limitations from claim 1 of the '116 Patent, identified by Mr. Boos in his declaration. Mr. Boos ultimately concludes that Clemons and NLB, in combination, disclose every limitation in claim 1 of the '116 patent. However, Mr. Boos does not articulate a rationale detailing why it would have been obvious to a POSA to combine all these elements in the manner disclosed in the '116 patent.

"[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR International CO. v. Teleflex Inc.,* 555 U.S. 398, 418.

2. Claim 2

With regard to dependent claim 2, it depends directly from claim 1 and if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

3. Claim 3

With regard to dependent claim 3, it depends from claim 2. Claim 2 depends directly from claim 1 and if an independent claim is nonobvious under 35 U.S.C. 103, then any claim

depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

4. Claim 4

With regards to dependent claim 4, it depends from claim 3, which depends from claim 2. Claim 2 depends directly from claim 1 and if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

5. Claim 10

With regard to dependent claim 10, it depends directly from claim 1 and if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

For at least the above reasons, the Board should reject Ground 4 because Petitioner has failed to meet its burden of demonstrating a reasonable likelihood that it will prevail on any of the challenges to the claims raised in Ground 4.

E. Ground 5: Claims 5-6 are not obvious based on Clemons in view of NLB and in further view of Schrunk.

1. Claim 5

Regarding dependent claim 5, this claim depends from claim 4. Claim 4 depends from claim 3, which depends from claim 2. Claim 2 directly depends from claim 1 and if an

independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

2. Claim 6

Regarding dependent claim 6, this claim depends from claim 5, which depends from Claim 4. Claim 4 depends from claim 3, which depends from claim 2. Claim 2 depends directly from claim 1 and if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is also nonobvious. M.P.E.P. § 2143.03; see also, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

For at least the above reasons, the Board should reject Ground 5 because Petitioner has failed to meet its burden of demonstrating a reasonable likelihood that it will prevail on any of the challenges to the claims raised in Ground 5.

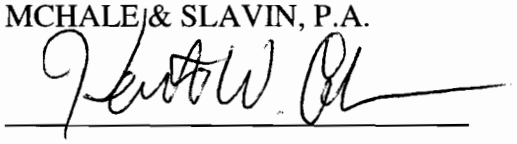
VI. CONCLUSION

Thus, for at least the foregoing reasons, the Petitioner has failed to meet its burden of demonstrating a reasonable likelihood that it will prevail on any of the claims challenged with respect to each and every Ground 1-5 raised. Patent Owner therefore respectfully submits that the petition for *Inter Partes* review of the '116 patent should be denied.

Dated: April 24, 2018

Respectfully submitted,

MCHALE & SLAVIN, P.A.



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CERTIFICATE OF SERVICE

I certify that the foregoing **PATENT OWNERS PRELIMINARY RESPONSE** was served April 24, 2018 by electronic mail upon:

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APPENDIX A

EXHIBIT LIST

Exhibit No.	Description
Waterblasting- 2001	U.S. Patent No. 8,510,905 to Scott F. Boos et al. (the '905 patent)
Waterblasting- 2002	'116 Patent Prosecution File History
Waterblasting- 2003	Cyclone Technology LLC web screen shot from airport-technology.com (example of technology background disclosed in '905 patent)
Waterblasting- 2004	Roehsler web screen shot from airport-technology.com (example of technology background disclosed in '905 patent)
Waterblasting- 2005	SMETS-Technology web screen shot from airport-technology.com (example of technology background disclosed in '905 patent)
Waterblasting- 2006	Traffic-lines web screen shot from airport-technology.com (example of technology background disclosed in '905 patent)
Waterblasting- 2007	Webster's Third New International Dictionary definition for: Mobile
Waterblasting- 2008	Webster's Third New International Dictionary definition for: Frame
Waterblasting- 2009	Webster's Third New International Dictionary definition for: Mounted