

CARLSON CASPER

Intellectual Property Law

Nathan D. Louwagie
Direct Dial: 612.436.9656
E-mail: nlouwagie@carlsoncaspers.com

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Via Email

R. Scott Johnson
Fredrikson & Byron, P.A.
111 E. Grand Avenue, Suite 301
Des Moines, IA 50309-1977

Re: *Oxygenator Water Technologies, Inc. v. Tennant Company*
Civil Action No. 20-cv-0358 (ECT/HB)

Dear Scott,

Pursuant to the Pretrial Case Management Order (ECF No. 43), Plaintiff Oxygenator Water Technologies, Inc. (“OWT”) hereby provides the following preliminary proposed constructions for the terms identified by the parties as requiring construction by the Court and provides the following preliminary identification of extrinsic evidence that it contends supports its claim construction.

Term(s)/Phrase(s)	Patent Claim(s)	OWT Preliminary Proposed Construction and Preliminary Identification of Extrinsic Evidence
“flowing water . . . through an electrolysis emitter”	’415 Patent, Claim 13	<u>Preliminary Construction</u> Moving water through an electrolysis emitter by means other than electrolysis.
“an electrical power source” ¹	’415 Patent, Claim 13	<u>Preliminary Construction</u> The electrical and mechanical equipment and their interconnections that supply power. <u>Extrinsic Evidence</u> The New IEEE Standard Dictionary of Electrical and Electronics Terms (OWT0018615) McGraw-Hill Electronics Dictionary (OWT0018623)

¹ Upon further consideration we removed “electrically connected to an anode electrode and a cathode electrode” from the phrase being construed.

“an anode electrode and a cathode electrode contained in a tubular housing”	’415 Patent, Claim 13	<u>Preliminary Construction</u> Plain and ordinary meaning. The term requires a tubular housing that is not formed by either of the two claimed electrodes.
“a suspension”	’415 Patent, Claim 13	<u>Preliminary Construction</u> A mixture including particles that are dispersed within but undissolved in a fluid. In the context of this patent the particles are microbubbles and nanobubbles of oxygen. <u>Extrinsic Evidence</u> Dr. Ralph White will testify that the term suspension requires that there be undissolved particles in the liquid and therefore a fluid that includes dissolved oxygen does not necessarily meet this claim term. Hutchinson Pocket Dictionary of Chemistry (OWT0018625)
“the water temperature is a factor for formation of the suspension”	’415 Patent, Claim 18	<u>Preliminary Construction</u> Plain and ordinary meaning. The term does not require the temperature be measured or evaluated.
“the microbubbles and nanobubbles remain in the water at least in part for a period up to several hours”	’415 Patent, Claim 19	<u>Preliminary Construction</u> The microbubbles and nanobubbles remain in the water at least in part for at least several hours.
“a flow-through oxygenator”	’092 Patent, Claim 13	<u>Preliminary Construction</u> An oxygenator configured to connect to a source of flowing water.
“the first and second electrodes being positioned in the tubular housing”	’092 Patent, Claim 13; ’665 Patent, Claim 13	<u>Preliminary Construction</u> Plain and ordinary meaning. The term requires a tubular housing that is not formed by either of the two recited electrodes.

“a power source” ²	’092 Patent, Claims 13 and 27; ’665 Patent, Claim 13	<u>Preliminary Construction</u> The electrical and mechanical equipment and their interconnections that supply power. <u>Extrinsic Evidence</u> The New IEEE Standard Dictionary of Electrical and Electronics Terms (OWT0018615) McGraw-Hill Electronics Dictionary (OWT0018623)
“passing water through the tubular housing”	’092 Patent, Claim 13	<u>Preliminary Construction</u> Moving water through the electrolysis emitter by means other than electrolysis.
“the outside and inside electrodes being positioned in the oxygenation chamber”	’092 Patent, Claims 27 and 60; ’665 Patent, Claim 55	<u>Preliminary Construction</u> Plain and ordinary meaning. The term requires a tubular housing that is not formed by either of the two recited electrodes.
“oxygenated aqueous composition”	’415 Patent, Claim 13	<u>Preliminary Construction</u> Plain and ordinary meaning.

² Upon further consideration we removed “in electrical communication with the electrodes” from the phrase being construed.

“water”	’415 Patent, Claims 13, 18, 19, 20, 21, 25, 29; ’092 Patent, Claims 13, 27, 60; ’665 Patent, Claims 13, 55	<p><u>Preliminary Construction</u> An aqueous medium that can support the electrolysis of water.</p> <p><u>Extrinsic Evidence</u> Dr. Ralph White will testify as to the general knowledge in the art of the relationship between total dissolved solids, resistance, and conductivity in an aqueous medium and how these properties effect electrolysis. Dr. White will explain that it was well known that pure water has a very high resistance such that it would not conduct electricity well and therefore would not support electrolysis. Dr. White will testify as to how one skilled in the art would interpret the language of col. 4, ll. 22-26 of the specification within the context of the claims, specification, and prosecution history. Dr. White will testify that a POSA would understand col. 4, ll. 22-26 of the specification to generally indicate that the aqueous medium that is used should support electrolysis of water. Dr. White will testify that a POSA would recognize that the value with units identified at col. 4, ll. 22-23 4 (“resistance less than one ohm per square centimeter”) contains an error. He will testify that the POSA would not understand that value to provide any sort of strict numerical boundary. Dr. White will discuss references that corroborate his understanding of the art. <i>See e.g.</i> Fundamentals of Electrochemistry (OWT0017895); An Experimental Study on the Effect of Electrolytic Concentration (OWT0017879); Investigation of electrical conductivity of different water liquids and electrolyte solutions (OWT0018617).</p>
“tubular housing”	’415 Patent, Claims 13, 26	<p><u>Preliminary Construction</u> Plain and ordinary meaning. The term does not require a circular cross section.</p>
“microbubbles”	’415 Patent, Claims 13, 19, 20, 21, 22, 25; ’092 Patent, Claim 23	<p><u>Preliminary Construction</u> A bubble with a diameter less than 50 microns.</p>

“nanobubbles”	'415 Patent, Claims 13, 19, 20, 21, 22, 25; '092 Patent, Claim 26	<u>Preliminary Construction</u> A bubble with a diameter less than that necessary to break the surface tension of water.
“critical distance”	'415 Patent, Claim 13	<u>Preliminary Construction</u> The distance separating the anode and cathode at which evolved oxygen forms microbubbles and nanobubbles.
“a voltage no greater than about 28.3 volts”	'415 Patent, Claim 13	<u>Preliminary Construction</u> Plain and ordinary meaning.
“inlet”	'415 Patent, Claim 13; '092 Patent, Claims 13, 27; '665 Patent, Claims 13, 55	<u>Preliminary Construction</u> Plain and ordinary meaning.
“outlet”	'415 Patent, Claim 13; '092 Patent, Claims 13, 27; '665 Patent, Claims 13, 55	<u>Preliminary Construction</u> Plain and ordinary meaning.
“tubular flow axis from the inlet to the outlet”	'415 Patent, Claim 13	<u>Preliminary Construction</u> Plain and ordinary meaning.
“conductivity produced by the presence of dissolved solids such that the water supports plant or animal life”	'415 Patent, Claim 13	<u>Preliminary Construction</u> Plain and ordinary meaning.
“containing the water with microbubbles and nanobubbles in a two and one half gallon aquarium reservoir container”	'415 Patent, Claim 20	<u>Preliminary Construction</u> Plain and ordinary meaning.
“supersaturate”	'415 Patent, Claim 21	<u>Preliminary Construction</u> Cause the water to have oxygen at a higher concentration than normal calculated oxygen solubility at the temperature and pressure of the water.
“bubble diameter is less than 0.0006 inches”	'415 Patent, Claim 22	<u>Preliminary Construction</u> Plain and ordinary meaning.

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