

**UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
(TAMPA DIVISION)**

SIEMENS GAMESA RENEWABLE
ENERGY A/S,

Plaintiff,

V.

GENERAL ELECTRIC CO., and
GE RENEWABLES NORTH AMERICA, LLC

Defendants.

Case No. _____

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT AND JURY DEMAND

Plaintiff Siemens Gamesa Renewable Energy A/S (“SGRE”), through its undersigned attorneys, submits this complaint for patent infringement against Defendants General Electric Co. and GE Renewables North America, LLC (collectively, “GE”), and alleges as follows:

NATURE OF THE ACTION

1. SGRE brings this civil action seeking damages and injunctive relief arising out of GE's infringement of U.S. Patent No. 8,575,776 (the "776 patent") (attached as Exhibit A) and U.S. Patent No. 9,279,413 the ("413 patent") (Exhibit B).

PARTIES

2. The Plaintiff, SGRE, is a Danish corporation with a principal place of business at Borupvej 16, 7330 Brande, Denmark. SGRE is a leading innovator and provider of renewable energy throughout the world. In order to protect its innovations, SGRE has applied for and obtained numerous patents throughout the world for inventions relating to wind turbines and their

improvements, including the '776 patent and the '413 patent (collectively, the “SGRE Asserted Patents”).

3. SGRE is part of part of a larger group of companies, which are affiliated under a parent corporation known as Siemens Gamesa Renewable Energy, S.A. The affiliated companies are referred to herein as the “Siemens Gamesa Group.”

4. In accordance with internal agreements within the Siemens Gamesa Group, the SGRE Asserted Patents are held by SGRE on behalf of the Siemens Gamesa Group. Accordingly, SGRE is the owner of the entire right, title and interest in the SGRE Asserted Patents. SGRE (as well as other members of the Siemens Gamesa Group) markets, sells, services and provides operations and support for wind turbine products in the United States through its affiliate Siemens Gamesa Renewable Energy, Inc. Siemens Gamesa Renewable Energy, Inc., is a Delaware corporation with its principal place of business at 4400 N Alafaya Trl Q2, Orlando, FL, 32826-2301.

5. On information and belief, Defendant General Electric Co. is a New York corporation with a principal place of business at 5 Necco Street, Boston, MA 02210. General Electric Co. does business throughout the United States including the Middle District of Florida. That business includes, among other things, designing, manufacturing, offering for sale and selling wind turbines and wind turbine components throughout the United States, including, but not limited to, manufacturing wind turbine products in Florida.

6. On information and belief, Defendant GE Renewables North America, LLC is a Delaware corporation, with a principle place of business at 8301 Scenic Highway, Pensacola, FL 32514. GE Renewables North America, LLC is a wholly owned subsidiary of Defendant General Electric Co. GE Renewables North America, LLC does business throughout the United States

including the Middle District of Florida. That business includes, among other things, designing, manufacturing, offering for sale and selling wind turbines and wind turbine components throughout the United States, including, but not limited to, manufacturing wind turbine products in Florida.

JURISDICTION AND VENUE

7. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.* This Court thereby has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

8. This Court has personal jurisdiction over General Electric Co. because, among other reasons, General Electric Co. does business in Florida and this District, it maintains offices and manufacturing facilities in Florida and this District, and it is registered with the Florida Department of State to do business in Florida.

9. This Court has personal jurisdiction over GE Renewables North America, LLC, because, among other reasons, GE Renewables North America, LLC's principal place of business is in Florida, it maintains offices and manufacturing facilities in Florida, and it is registered with the Florida Department of State to do business in Florida.

10. Venue is proper under 28 U.S.C. §§ 1391(b)(2) and 1400(b) because GE is subject to personal jurisdiction in this District, GE has a regular and established place of business in this District, and on information and belief, GE has committed acts of infringement in this District, and a substantial part of the events or omissions giving rise to the claims occurred in this District and/or a substantial part of property that is the subject of the action is situated in this District.

FACTUAL ALLEGATIONS

SGRE and the Siemens Gamesa Group's Pioneering Role in Wind Energy

11. This is an action for infringement of patents awarded to research and development teams at SGRE for their years of work developing and improving wind turbine technologies.

12. As part of the Siemens Gamesa Group, Plaintiff SGRE's innovations have made it a leading supplier of wind power solutions to customers all over the globe, with more than 35 years in the wind power business. Overall, the Siemens Gamesa Group has installed wind power products and technology in more than 90 countries, with a total capacity base of over 99 GW.

13. SGRE's wind power and technology cover all wind classes and site conditions. SGRE's engineers and technicians pioneered the offshore sector back in 1991, with the world's first wind power plant in Denmark. Since then, SGRE, as part of the Siemens Gamesa Group, has grown to become the global leader in offshore power generation.

14. In addition to supplying wind turbines to onshore wind farms throughout the United States, the Siemens Gamesa Group has been awarded conditional supply agreements for approximately 4,300 megawatts of direct drive offshore wind turbines in the United States. It is anticipated that the Siemens Gamesa Group will also provide operations and maintenance for these projects. The Siemens Gamesa Group will continue to expand its role as a provider of offshore and onshore wind technology in the United States.

15. The Siemens Gamesa Group's ability to innovate and improve its wind turbine technology is crucial to its ability to provide best of class wind turbine technology for projects, such as the Coastal Virginia Offshore Wind project. Siemens Gamesa Group's innovation is dependent, in part, on its ability to protect its technology through enforcement of its intellectual property rights, including the SGRE Asserted Patents against entities such as GE, who use SGRE's patented technology without SGRE's authorization.

General Allegations of GE's Infringement

16. GE is one of the largest corporations in the world with a substantial presence in renewable energy, including the manufacture, use, sale, offering for sale, and importation of wind turbines.

17. GE has been SGRE's competitor in the wind-turbine market for almost 20 years. Each company develops and manufactures its own wind-turbine products and owns a patent portfolio that includes patents directed to wind-turbine technology.

18. GE states publicly that, since its entry into the wind turbine market in 2002, it has invested more than \$2.5 billion in developing next-generation wind turbine technology and claims to be a leading supplier of wind turbines in the United States.

19. According to GE, "GE is one of the world's leading wind turbine suppliers, with over 35,000 installed across the globe. In the United States, over 25,000 GE wind turbines are installed onshore with the capacity to power the equivalent of 11 million homes. Since its entry into the wind turbine market in 2002, when it offered one wind turbine model, GE has developed a full suite of turbines created for a variety of wind environments. This product evolution reflects GE's more than \$2.5 billion investment in next-generation wind turbine technology." (*Certain Variable Speed Wind Turbine Generators and Components Thereof*, Inv. No. 337-TA-1218, Compl. ¶ 5 (USITC July 31, 2020).)

20. GE makes, sells, and offers to sell numerous products that infringe the SGRE Asserted Patents including, but not limited to, GE's Haliade-X series offshore wind turbines including, without limitation, GE's Haliade-X 12 MW wind turbine.¹ GE recently announced the launch of an "uprated Haliade-X 13MW wind turbine." (Exhibit G.) According to GE, the Haliade-

¹ <https://www.ge.com/renewableenergy/wind-energy/offshore-wind/haliade-x-offshore-turbine>.

X 12 MW wind turbine (depicted below) offers improved and simplified installation, operation, and maintenance. See <https://www.power-technology.com/features/haliade-x-look-ges-supersized-new-wind-turbine/>. In this Complaint, GE's Haliade-X series wind turbines including, without limitation, GE's Haliade-X 12 MW and Haliade-X 13 MW wind turbines and any future variations of GE's Haliade-X series wind turbines, and any other GE wind turbine covered by one or more claims of the SGRE Asserted Patents, are collectively referred to as the "Accused GE Wind Turbines."



21. GE has made, sold, and offered to sell its Haliade-X 12 MW for installation at the Skipjack wind farm (120MW) off the coast of Maryland (expected commissioning in 2022) and the Ocean Wind wind farm (1,100MW) off the coast of New Jersey (expected commissioning in 2024).²

² <https://skipjackwindfarm.com/news/2019/10/orsted-to-pioneer-deployment-of-ges-next-generation-offshore-wind-turbine>

22. GE's use of the SGRE Asserted Patents is not licensed or authorized by SGRE in any way. SGRE has not licensed any of the SGRE patents to GE.

Specific Allegations of GE's Infringement

The '776 Patent

23. The '776 patent was invented by James Kenneth Booth, Uffe Eriksen, Jacob Blach Nielsen, and Henrik Stiesdal.

24. SGRE is the owner and assignee of 'the '776 patent. The '776 patent is titled "Wind Turbine With A Generator," which was duly and legally issued on November 5, 2013. A true and accurate copy of the '776 patent is attached as Exhibit A.

25. The '776 patent discloses a wind turbine with an improved stator, which improves the operation of the wind turbine and simplifies the maintenance of the wind turbine. Specifically, the stator is configured in a manner that provides a rigid structure capable of withstanding all forces during operation of the wind turbine. The configuration of the stator also provides improved ventilation to the generator when the wind turbine is in operation, which in turn cools the components of the generator, thereby providing improved performance and extending the lifespan of those components. As a result of this improved configuration for the stator, the wind turbine achieves improved performance, stability, and cost of maintenance.

26. The Accused GE Wind Turbines include each element of one or more claims of the '776 patent, including for example (but not limited to) at least claim 1 of the '776 patent.

27. Independent claim 1 of the '776 patent recites:

A wind turbine with a generator, comprising:
a rotor comprising permanent magnets and arranged around an axis
of rotation;
a stator arranged radially inward from the rotor, the stator
comprising:
stator coils;

a circular inner base structure;
 a circular outer base structure on which the stator coils are mounted; and
 a plurality of connection structures, each of the plurality of connection structures separated axially and radially extending between the circular inner base structure and the circular outer base structure forming a hollow chamber between the circular inner base structure, outer base structure and the plurality of connection structures, wherein the hollow chamber is ventilated, and wherein the plurality of connection structures are connected to the circular inner base structure and connected to the circular outer base structure.

28. The Accused GE Wind Turbines are wind turbines having a generator. As shown below in FIG. 1, for example, the Haliade-X 12 MW is a wind turbine that generates electricity by means of a generator.



FIG. 1

29. The Accused GE Wind Turbines include a rotor comprising permanent magnets and arranged around an axis of rotation, as shown below in FIG. 2. Although FIG. 2 does not literally depict permanent magnets, the location for the permanent magnets is shown. The permanent magnets are fixed to an inner surface of the rotor. The permanent magnets are

referenced in the attached Exhibit H.

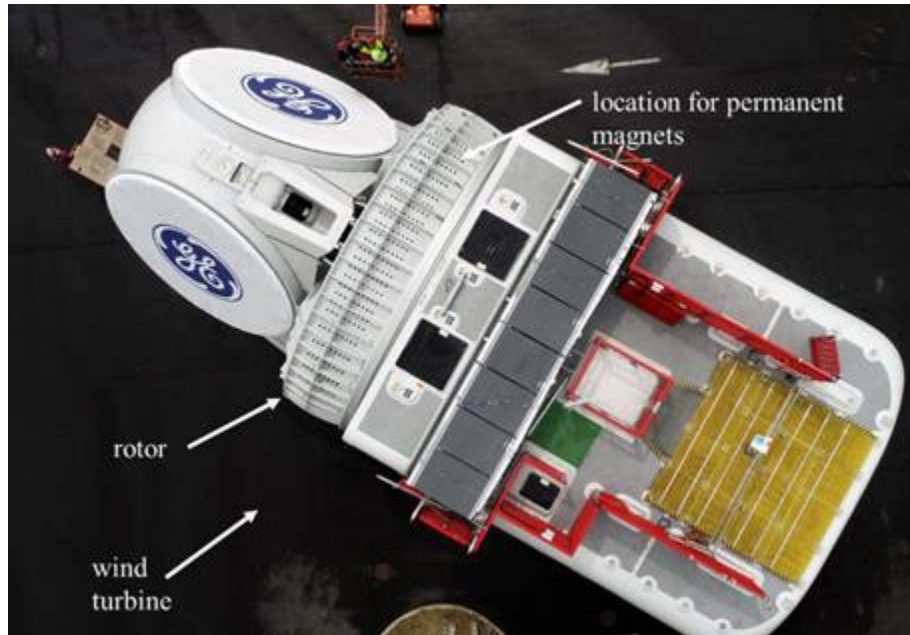


FIG. 2

30. The Accused GE Wind Turbines have a stator arranged radially inward from the rotor, as shown below in FIG. 3.

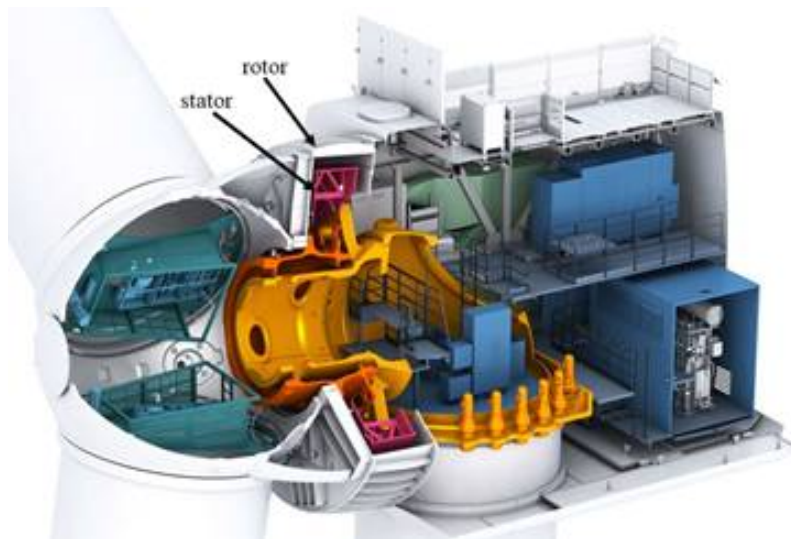


FIG. 3

31. The Accused GE Wind Turbines include a stator comprising: stator coils; a circular inner base structure; a circular outer base structure on which the stator coils are mounted; and a

plurality of connection structures, each of the plurality of connection structures separated axially and radially extending between the circular inner base structure and the circular outer base structure forming a hollow chamber between the circular inner base structure, outer base structure and the plurality of connection structures, wherein the hollow chamber is ventilated, and wherein the plurality of connection structures are connected to the circular inner base structure and connected to the circular outer base structure, as shown below in FIG. 4.

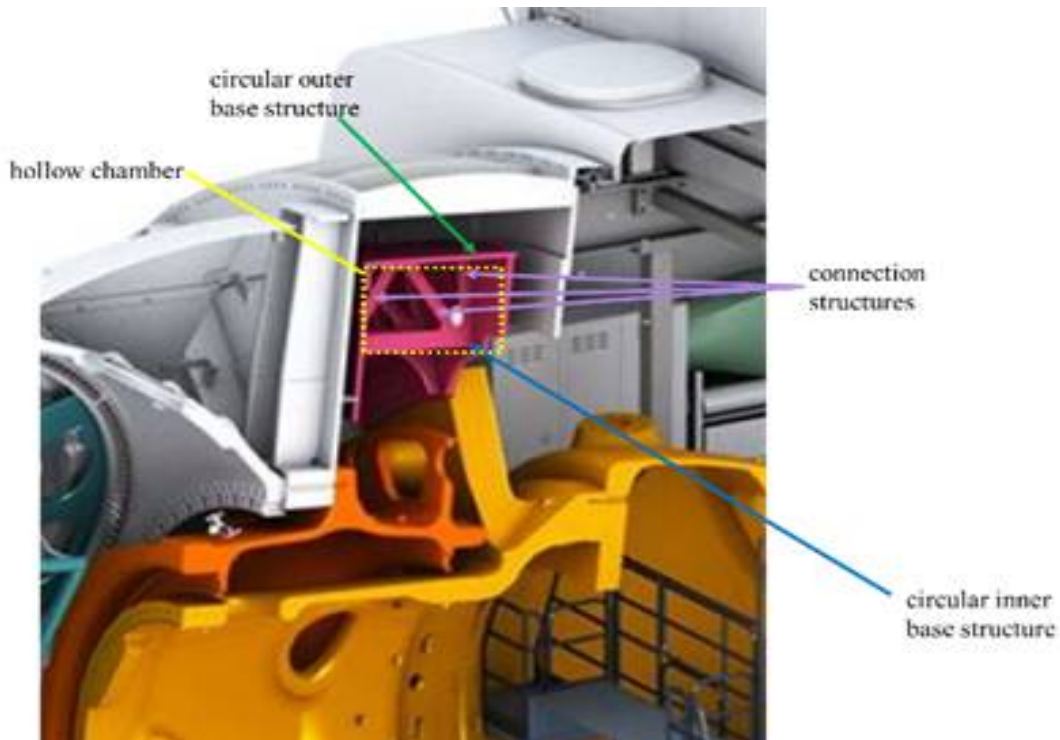


FIG. 4

The '413 Patent

32. The '413 patent was invented by Henning Ebbesen, Bo Pedersen, and Kim Thomsen.

33. SGRE is the owner and assignee of ‘the ’413 patent. The ’413 patent is titled “Wind Turbine,” and was duly and legally issued on March 8, 2016. A true and accurate copy of the ’413 patent is attached as Exhibit B.

34. The ’413 patent is directed generally to a wind turbine, and specifically to a novel structural support arrangement for the turbine that enables wind turbines to be larger and/or handle increased loads, which in turn allows the wind turbine to generate more energy.

35. The amount of energy a wind turbine can generate is based on several factors, including the size of a turbine’s rotor blades and wind speed. Accordingly, the larger the rotor blades of the wind turbine and/or the greater the speed of the wind, the more energy the wind turbine can generate. However, prior to the ’413 patent, some wind turbines had structural support systems for the turbines that limited the size and/or shape of rotor hubs and blades that could be used, which in turn limited the amount of energy that the turbine could generate. In addition, some of these structural support systems did not provide enough support for the turbine itself, which could result in instability issues. This in turn limited the lifespan of the wind turbine components, and resulted in more maintenance for the wind turbine.

36. The improved structural support arrangement set forth in the ’413 patent solves this problem by reducing the stress experienced by components of the turbine. This enables the construction of larger wind turbines and/or turbines that can handle increased loads. Not only does implementing this novel structural support arrangement improve the operation of the turbine through its ability to generate more energy, but it also extends the turbine’s lifespan and reduces the need for maintenance.

37. The Accused GE Wind Turbines are, according to GE, the largest and most powerful offshore wind turbine in the world. Using SGRE’s patented technology set forth in the

'413 patent, the Accused GE Wind Turbines rely on increased strength and stability of its structural components to support its massive size and handle stronger wind conditions. See <https://www.power-technology.com/features/haliade-x-look-ges-supersized-new-wind-turbine/>.

38. The Accused GE Wind Turbines include each element of one or more claims of the '413 patent, including for example (but not limited to) at least claims 1 and 8 of the '413 patent.

39. Independent claim 1 of the '413 patent recites:

A rotor hub for a wind turbine, comprising:
a hollow shell defining an interior; and
an annular member integral part of or connectable to a bearing,
wherein the rotor hub is adapted to be connected to a plurality of rotor blades,
wherein the bearing is adapted to rotatably mount the rotor hub to a stationary main shaft of the wind turbine,
wherein the annular member protrudes inwards into the interior of the rotor hub; and wherein the annular member extends axially inwards into the interior from a side of the hollow shell configured to face, when the wind turbine is assembled, the stationary main shaft of the wind turbine.

40. The Accused GE Wind Turbines include a rotor hub comprising a hollow shell defining an interior; an annular member integral part of or connectable to a bearing, wherein the rotor hub is adapted to be connected to a plurality of rotor blades, wherein the bearing is adapted to rotatably mount the rotor hub to a stationary main shaft of the wind turbine, wherein the annular member protrudes inwards into the interior of the rotor hub; and wherein the annular member extends axially inwards into the interior from a side of the hollow shell configured to face, when the wind turbine is assembled, the stationary main shaft of the wind turbine, as shown below in FIG. 5 & 6.

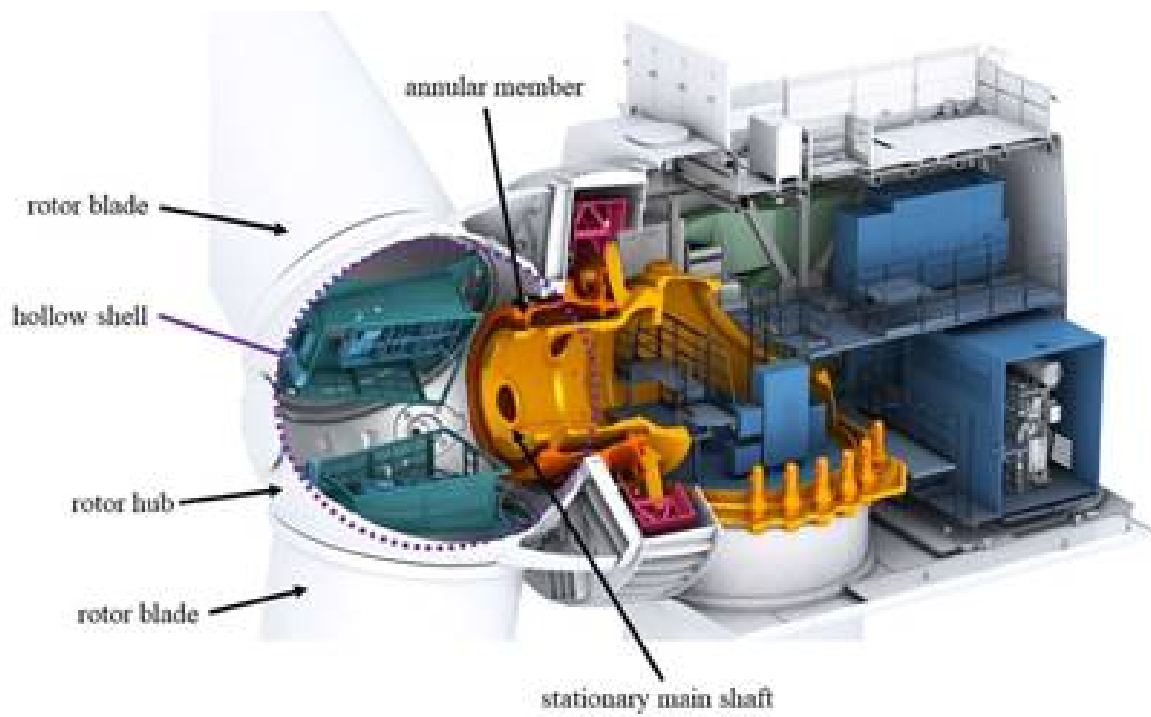


FIG. 5

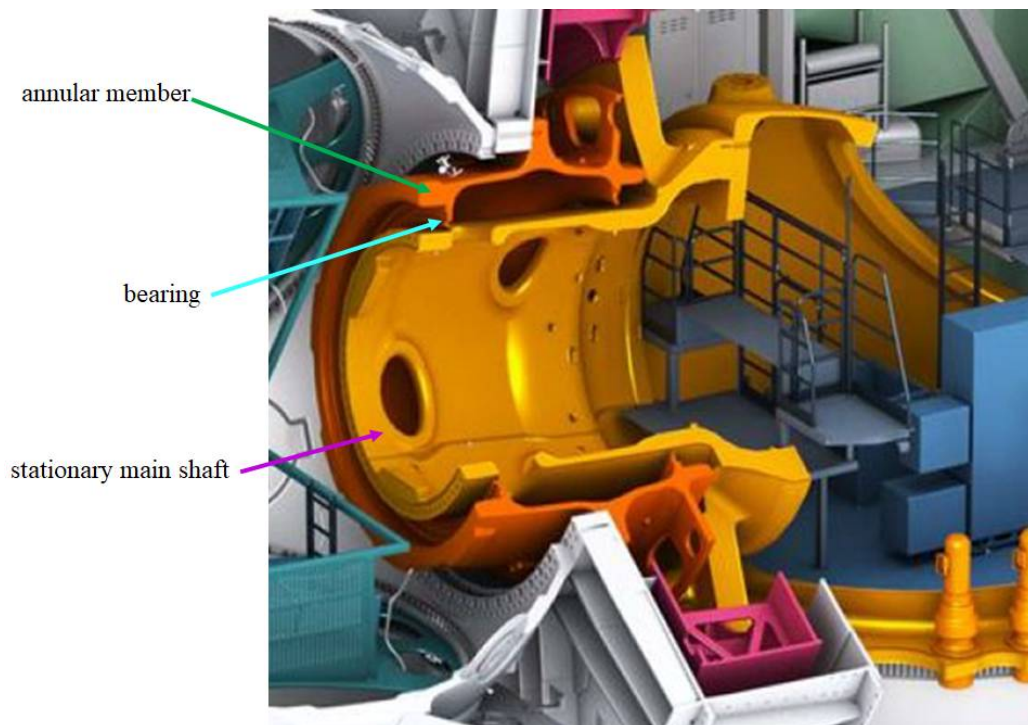


FIG. 6

41. Independent claim 8 of the '413 patent recites:

A wind turbine, comprising:

a stationary main shaft arranged within a nacelle of the wind turbine;
 a rotor hub comprising a hollow shell defining an interior; and
 a plurality of rotor blades extending radially outwards from the rotor hub,
 wherein the rotor hub is rotatably mounted to the stationary main shaft via
 a bearing, and
 wherein the bearing is arranged within the interior of the rotor hub and
 connected to a section of the stationary main shaft protruding into the
 interior of the rotor hub;
 wherein the rotor hub is rotatably mounted to the stationary main shaft via
 at least two bearings;
 wherein at least one of the two bearings is located in the interior of the
 rotor hub;
 wherein one of the at least two bearings is configured to support at least an
 axial load; and the other of the at least two bearings is configured to
 support at least a radial load.

42. An example of one of the Accused GE Wind Turbines, GE's Haliade-X 12MW, is shown below in FIG. 7.



FIG. 7

43. The Accused GE Wind Turbines include a stationary main shaft arranged within a nacelle of the wind turbine; a rotor hub comprising a hollow shell defining an interior; and a

plurality of rotor blades extending radially outwards from the rotor hub, wherein the rotor hub is rotatably mounted to the stationary main shaft via a bearing, as shown below in FIG. 8.

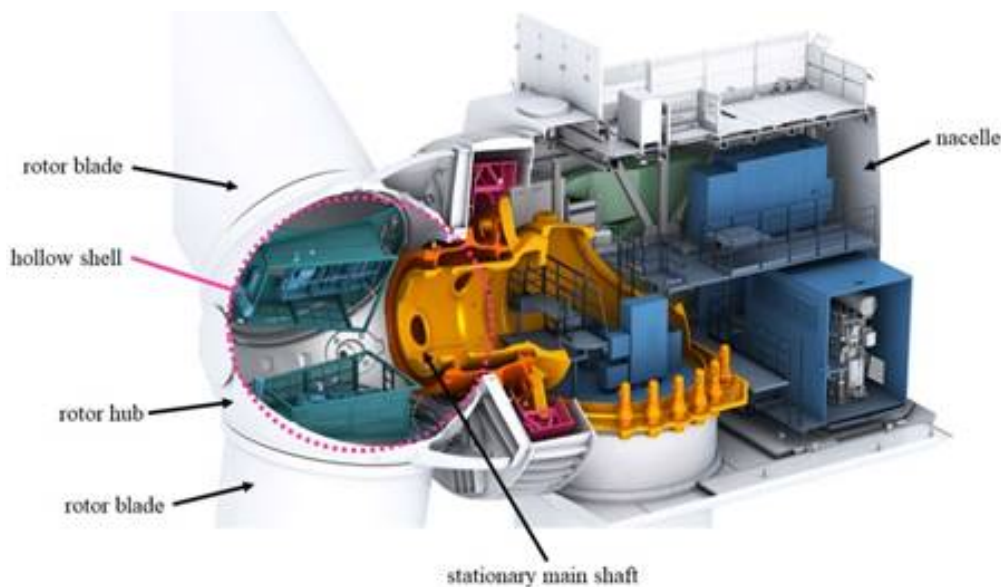


FIG. 8

44. The Accused GE Wind Turbines include one bearing arranged within the interior of the rotor hub and connected to a section of the stationary main shaft protruding into the interior of the rotor hub; wherein the rotor hub is rotatably mounted to the stationary main shaft via at least two bearings; wherein at least one of the two bearings is located in the interior of the rotor hub; wherein one of the at least two bearings is configured to support at least an axial load; and the other of the at least two bearings is configured to support at least a radial load, as shown below in FIG. 9.

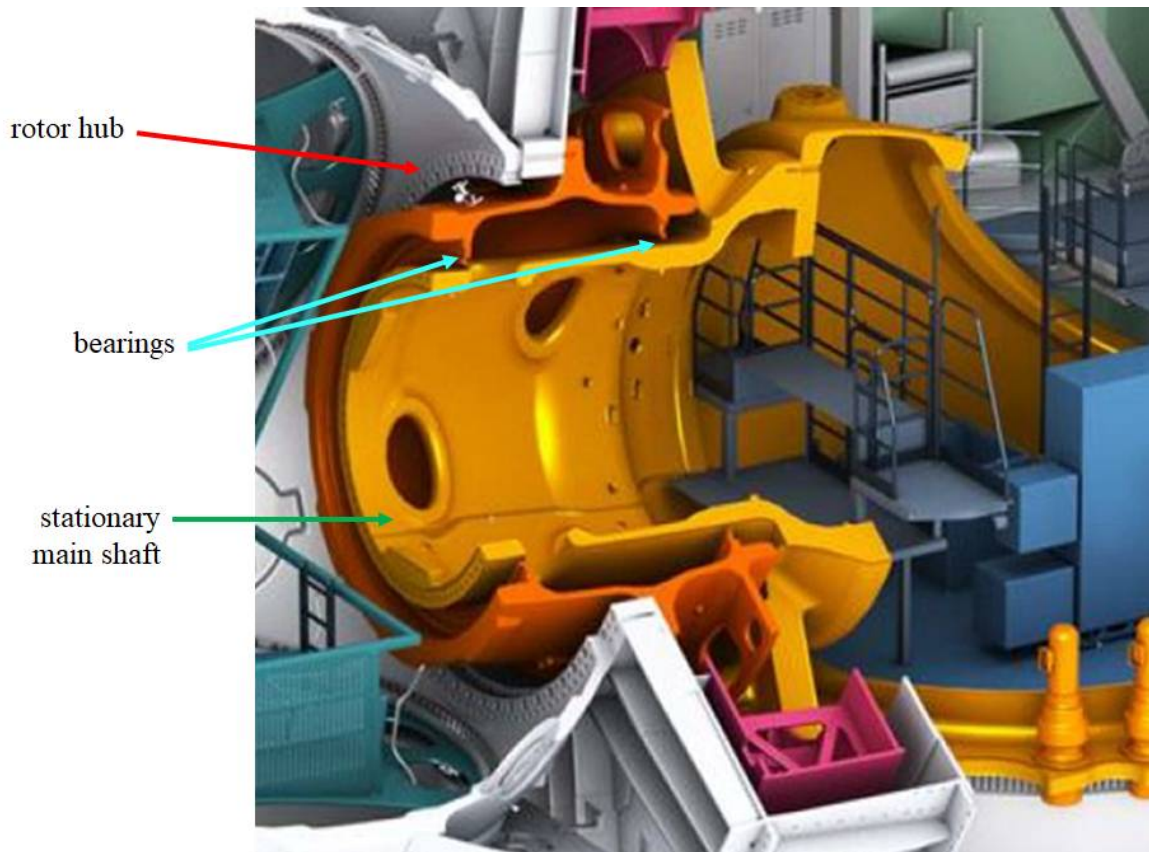


FIG. 9

COUNT I:
INFRINGEMENT OF U.S. PATENT NO. 8,757,776

45. Plaintiff SGRE incorporates all paragraphs herein by reference.

46. GE has directly infringed and continues to directly infringe one or more claims of the '776 patent, including for example (but not limited to) at least claim 1 of the '776 patent, by making, using, selling, offering for sale, and/or importing into the United States the Accused GE Wind Turbines without SGRE's authorization in violation of 35 U.S.C. § 271(a).

47. GE has induced and continues to actively induce the infringement of the '776 patent, in violation of 35 U.S.C. § 271(b), by actively and knowingly aiding and abetting others, including GE customers, to directly make, use, sell, offer for sale, and/or import into the United States the Accused GE Wind Turbines without SGRE's authorization.

48. GE has contributorily infringed and continues to contributorily infringe the '776 patent, in violation of 35 U.S.C. § 271(c), by making, using, selling, offering for sale, and/or importing into the United States, without SGRE's authorization, the Accused GE Wind Turbines and components thereof (e.g., blades, rotors, generators, etc.) which constitute a material part of an apparatus claimed by the SGRE Asserted Patents, knowing that such products and/or components are not staple articles or commodities of commerce suitable for substantial non-infringing use.

49. GE has and continues to promote, advertise, and instruct customers and potential customers about GE's products, such as the Accused GE Wind Turbines, and uses of such products, including infringing uses. An example of GE's promotion and advertising is attached as Exhibit C. GE engaged in these acts with the actual intent to cause the acts which it knew or should have known would induce actual infringement.

50. Exhibit D includes a chart comparing exemplary claim 1 of the '776 patent to the Accused GE Wind Turbines, which demonstrates that the Accused GE Wind Turbines satisfy each and every element recited in that claim.

51. GE's infringement of the '776 patent has caused irreparable harm to Plaintiff SGRE and will continue to do so unless enjoined.

COUNT II:
INFRINGEMENT OF U.S. PATENT NO. 9,279,413

52. Plaintiff SGRE incorporates all paragraphs herein by reference.

53. GE has directly infringed and continues to directly infringe one or more claims of the '413 patent, including for example (but not limited to) at least claims 1 and 8 of the '413 patent, by making, using, selling, offering for sale, and/or importing into the United States the Accused GE Wind Turbines without SGRE's authorization in violation of 35 U.S.C. § 271(a).

54. GE has induced and continues to actively induce the infringement of the '413 patent, in violation of 35 U.S.C. § 271(b), by actively and knowingly aiding and abetting others, including GE customers, to directly make, use, sell, offer for sale, and/or import into the United States the Accused GE Wind Turbines without SGRE's authorization.

55. GE has contributorily infringed and continues to contributorily infringe the '413 patent, in violation of 35 U.S.C. § 271(c), by making, using, selling, offering for sale, and/or importing into the United States, without SGRE's authorization, the Accused GE Wind Turbines and components thereof (e.g., blades, rotors, generators, etc.) which constitute a material part of an apparatus claimed by the SGRE Asserted Patents, knowing that such products and/or components are not staple articles or commodities of commerce suitable for substantial non-infringing use.

56. GE had constructive, if not actual, notice of the existence of the '413 patent since no later than July 14, 2017, when the '413 patent was included on IDS submitted to the U.S. Patent Office as part of the prosecution of U.S. Patent No. 10,385,830, assigned to GE (attached hereto as Exhibit E).

57. GE has and continues to promote, advertise, and instruct customers and potential customers about GE's products, such as the Accused GE Wind Turbines, and uses of such products, including infringing uses. An example of GE's promotion and advertising is attached as Exhibit C. GE engaged in these acts with the actual intent to cause the acts which it knew or should have known would induce actual infringement.

58. Exhibit F includes a chart comparing exemplary claims 1 and 8 of the '413 patent to the Accused GE Wind Turbines, which demonstrates that the Accused GE Wind Turbines satisfy each and every element recited in those claims.

59. GE's infringement of the '413 patent has caused irreparable harm to Plaintiff SGRE and will continue to do so unless enjoined.

RELIEF REQUESTED

WHEREFORE, Plaintiff SGRE prays for judgment and relief including:

(A) Judgment that GE has been and is infringing one or more of the claims of the '776 and '413 patents pursuant to 35 U.S.C. §§ 271(a), (b) and (c);

(B) A permanent injunction enjoining GE and its officers, agents, servants, employees, attorneys, related business entities and those in active concert or participation with them from further infringement of the '776 and '413 patents;

(C) An award of all damages adequate to compensate SGRE for GE's infringement of the '776 and '413 patents, and in no event less than a reasonable royalty for GE's acts of infringement, including all pre-judgment and post-judgment interest at the maximum rate permitted by law;

(D) An assessment of costs, including reasonable attorney fees pursuant to 35 U.S.C. § 285; and

(E) Such other and further relief as this Court may deem just and proper.

JURY DEMAND

Plaintiff SGRE demands trial by jury on all issues so triable.

Date: September 29 2020

Respectfully submitted,

/s/ Robert W. Thielhelm, Jr.

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* (*pro hac vice admission to be sought*)