(2013) 07 IPAB CK 0002

In the Intellectual Property Appellate Board

Case No : ORA/10/2009/PT/CH, Miscellaneous Petition Nos. 23/2010, 33/2010, 81/2010, 63/2011 In ORA/10/2009/PT/CH

Enercon (India) Limited — APPELLANT

Vs

Alloys Wobben — RESPONDENT

Date of Decision : 27-07-2013

Acts Referred:

Citation : (2013) 07 IPAB CK 0002

Hon'ble Judges : Prabha Sridevan, J;D.P.S. Parmar, Technical Member

Bench : Division Bench

Advocate : R. Parthasarathy, Ayush Sharma, Lakshmikumaran, Sridharan, Praveen Anand, Archana Shankar, M.S. Barath

Final Decision : Dismissed

Judgement

D.P.S. Parmar, Technical Member

1. This is an application for revocation of the patent No. 202935 (Invention in short) granted to Alloys Wobben for the invention ""Wind power

installation with ring generator"". From the records in Intellectual Property Appellate Board (IPAB), it was observed that this matter was heard by the

earlier Board on 20th October, 2010 and orders were reserved. Since the Hon'ble Technical Member Shri Chandrasekaran retired on 2nd December,

2010, decision was not issued. So this case was listed to be heard again. In the meantime, the matter was transferred to the new counsel for the

respondents. On completion of all the formalities, the matter was heard on 28.12.2012, 4.01.2013, 28.01.2013 and 19.02.2013.

2. Learned counsel Mr. R. Parthasarathy appeared for the applicant and learned counsel Mr. Praveen Anand represented the respondent. Both the

counsel, besides arguing the matter at length, has also filed their written

submissions on the preliminary issue as well as on merits.

Preliminary issues

3. This case and several others form a batch of Revocation Petitions filed by the same applicant against the same respondent. In all the matters, the

question whether the applicant has locus standi and is a person aggrieved and whether as the respondents licensee would he not be estopped from the

challenging the patent were raised. In addition, in all the matters amendment were filed to the claims belated and this was challenged by the applicant.

In ORA/6/2009/PT/CH which was the first application of this batch in which orders were pronounced we have dealt in detail regarding these issues

and the same would apply to this case also. Therefore we hold for the reasons stated in ORA/6/2009/PT/CH that the applicant has the locus standi to

file the revocation application and the applicant cannot be estopped based on the Doctrine of a Licensee Estoppel from challenging the patent.

Invention

4. This invention relates to wind power installations having generator with a stator having winding to minimize the large number of connecting locations

as such connecting locations in the former-wound coils of the prior art were quite large. The wind power installations using former wound coils are

always exposed to high levels of loading or stresses during operation. If a joint of former wound coils of one phase is broken, then at least that phase is

out of commission in terms of energy production. In a stator having six phase configuration of a generator with 72 poles, there are 432 former-wound

coils in the stator, which are connected by 864 joints (screws, clamping or solder). To obviate this problem a stator winding of a wind power

installation generator, which is wound without interruption continuously throughout is invented. This arrangement particularly avoids these connecting

means between individual portions of the stator winding.

Claims 1-25 as originally granted are given below.

1. A wind power installation comprising a generator which has a stator in which grooves are provided at the inner or outer periphery in mutually

spaced III relationship to receive a stator winding, wherein the winding is wound without interruption continuously throughout.

2. The wind power installation according to claim 1 wherein a stator having at least two phase windings are wound continuously throughout, preferably

6-phase windings.

3. The wind power installation according to anyone of the preceding claims wherein only respective windings of a phase are arranged within a groove.

4. The wind power installation according to anyone of the preceding claims wherein groove windings of different phases are arranged in adjacent

relationship.

5. The wind power installation according to anyone of the preceding claims wherein the winding of a phase comprises at least one conductor bundle,

preferably at least two conductor bundles, wherein a conductor bundle comprises a plurality of mutually insulated conductors.

6. The wind power installation according to claim 5 wherein at least two conductor bundles are arranged in mutually superposed relationship in a

groove.

7. The wind power installation according to claim 6 wherein, in grooves in which a plurality of conductor bundles are arranged, the positions of the

upper and lower conductor bundles are interchanged in a predetermined order.

8. The wind power installation according to anyone of the preceding claims wherein inserted into each groove are two turns, which preferably

correspond to the same phase.

9. An apparatus for the production of the stator of a generator of a wind power installation according to anyone of the preceding claims wherein a

mounting apparatus for the stator is provided in which the stator is held in a standing position.

10. The apparatus according to claim 9 wherein at least one drive for rotating the stator is provided in the mounting apparatus in its peripheral

direction.

11. The apparatus according to claims 9 and 10 wherein a carrier apparatus for holding at least one drum with winding wire, the carrier apparatus

being separate from the mounting apparatus.

12. The apparatus according to claim 1 wherein a pair-wise arrangement of a plurality of drums, are arranged in uniformly spaced relationship on a

notional circle.

13. The apparatus according to claims 9 to 12 wherein a carrier apparatus is being arranged at each side of the stator.

14. The apparatus according to claims 9 to 13 wherein a number of the pairs of drums, is equal to the number of phases to be wound on the stator.

15. The apparatus according to claim 14 wherein each of the carrier apparatuses carries the respective half of the drum.

16. The apparatus according to claims 9 to 15 wherein a substantially vertically arranged carrier plate and carrier arms extend outwardly from the

center of the carrier plate for receiving the drums.

17. The apparatus according to claim 16 wherein a rotatable mounting is provided for the carrier plate.

18. The apparatus according to claim 17 wherein a drive is being provided for rotating the carrier plate in the peripheral direction.

19. The apparatus according to one of claims 16 to 18 wherein the drums are mounted to a substantially horizontally extending portion of the carrier

arms and that the horizontally extending portion is adapted to be rotatable about its longitudinal axis.

20. A synchronous machine characterized in that the stator winding is of an at least 2-phase, preferably 6-phase nature and wherein windings of

different phases are I disposed in adjacent grooves, wherein each winding comprises at least one conductor having a plurality of conductors, and each

winding preferably comprises two conductor bundles which are possibly interchangeable in their arrangement relative to each other within a groove

over the stator periphery.

21. The wind power installation according to anyone of the claims 1 to 8 wherein the stator of said ring generator is secured fixed to the machine

carrier of the wind power installation whereas the rotor of the generator is coupled to the rotor of the wind power installation.

22. A wind power installation substantially as herein described with reference to the accompanying drawings.

23. An apparatus for the production of the stator of a generator of a wind power installation substantially as herein described with reference to the

accompanying drawings.

Miscellaneous Petition No. 63/2011 for amendment of claims

5. The respondent filed a Miscellaneous Petition No. 63/2011 for amendment of the claims. Mr. Praveen Anand submitted that amendments in claims

are made without prejudice to the granted patents on record. Amended claims

are similar in scope to corresponding US 7432610. The amendments

are made by way of explanation and correction. Amended claims are reproduced below.

1. A wind power installation comprising a generator which has a stator in which grooves are provided at the inner or outer periphery in mutually

spaced relationship to receive a stator winding corresponding to a phase of a multi-phase system, wherein each said winding is wound without

interruption continuously throughout, includes at least one conductor bundle, each said conductor bundle comprising a plurality of mutually insulated

conductors, with at least two conductor bundles of the same winding arranged in mutually superposed relationship in a groove, in a manner such that in

grooves in which a plurality of conductor bundles are arranged, positions of upper and lower conductor bundles are interchanged in a predetermined

order, and where the conductor bundles in adjacent grooves are arranged in a rising sequence of the phases of the conductor bundles, said rising

sequence of phases including at least one phase in which said upper and lower conductor bundles are interchanged, and where the stator is a plurality

of meters in diameter and the generator has a rated output of a plurality of 100 kW.

2. The wind power installation according to claim 1 wherein only respective windings of a phase are arranged within a groove.

3. The wind power installation to anyone of the preceding claims wherein groove windings of different phases are arranged in adjacent relationship.

4. The wind power installation according to anyone of the preceding claims wherein inserted into each groove are two turns, which preferably

correspond to the same phase.

5. An apparatus for the production of the stator of a generator of a wind power installation according to anyone of the preceding claims wherein a

mounting apparatus for the stator is provided in which the stator is held in a standing position.

6. The apparatus according to claim 5 wherein at least one drive for rotating the stator is provided in the mounting apparatus in its peripheral direction.

7. The apparatus according to anyone of the claims 5 and 6 wherein a carrier apparatus for holding at least one drum with winding wire, the carrier

apparatus being separate from the mounting apparatus (14).

8. The apparatus according to claim 5 wherein a pair-wise arrangement of a plurality of drums, are arranged in uniformly spaced relationship on a

notional circle.

9. The apparatus according to anyone of the claims 5 to 8 wherein a carrier apparatus is being arranged at each side of the stator.

10. The apparatus according to anyone of the claims 5 to 9 wherein a number of the pairs of drums, is equal to the number of phases to be wound on

the stator.

11. The apparatus according to claim 10 wherein each of the carrier apparatuses carries the respective half of the drum.

12. The apparatus according to anyone claims 5 to 11 wherein a substantially vertically arranged carrier plate and carrier arms extend outwardly from

the center of the carrier plate for receiving the drums.

13. The apparatus according to claim 12 wherein a rotatable mounting is provided for the carrier plate.

14. The apparatus according to claim 13 wherein a drive is being provided for rotating the carrier plate in the peripheral direction.

15. The apparatus according to one of claims 12 to 14 wherein the drums are mounted to a substantially horizontally extending portion of the carrier

arms and that the horizontally extending portion is adapted to be rotatable about its longitudinal axis.

16. A synchronous machine having a stator in which grooves are provided at the inner or outer periphery in mutually spaced relationship to receive a

stator winding corresponding to a phase of a multi-phase system configured in an at least 2-phase, preferably 6-phase arrangement, characterized in

that each stator winding is wound without interruption continuously with windings of different phases being disposed in adjacent grooves, with each

winding comprising a plurality of conductor bundles each said conductor bundle having a plurality of mutually insulated conductors, each winding

preferably comprising two conductor bundles which are possibly interchangeable in their arrangement relative to each other within a groove over the

stator periphery, the conductor bundles in adjacent grooves being arranged in a rising sequence of the phases of the conductor bundles, said rising

sequence of phases including at least one phase in which said two conductor bundles are interchanged, and where the stator is a plurality of meters in

diameter and the generator has a rated output of a plurality of 100 kW.

17. A wind power installation substantially as herein described with reference to the accompanying drawings.

18. An apparatus for the production of the stator of a generator of a wind power installation substantially as herein described with reference to the

accompanying drawings.

6. The learned counsel for the petitioner Shri R. Parthasarathy objected to the amendment in the claims. Mr. Parthasarathy submitted that when the

matter was heard on October 20, 2010 the respondent made an oral request for certain amendments in line with granted EP patent or alternatively in

line with granted US patent. Objecting to the present MP for amendment the learned counsel submitted that pleading in this case was completed in

March 2010. Counterstatement to revocation was filed in 21.12.2009. Hence the proposal to amend the claims at this late stage, in October 2011,

deserves to be rejected.

7. The learned counsel submitted that it may be seen from the above dates and events that there is an inordinate delay in making the present

amendment to the specification/claims. The counter statement to revocation Petition was filed by the respondent on 21.12.2009 i.e. almost 22 months

prior to the present Miscellaneous Petition for amendment. He submitted that the revocation Petition was heard on 20.10.2010 and orders were

reserved by the earlier Bench.

8. The learned counsel submitted that it is also pertinent to note that the notice for rehearing of all the matters was given in February, 2011 and yet the

amendments are being proposed after a delay of 8 months from the date of notice of hearing, especially, when it is admitted that two other sets of

amendments had already been proposed. Thus, this delay disentitles the patentee from the exercise of the discretion by the IPAB. The matters were

listed on 8th August, 2011 on which date, the Hon'ble IPAB was pleased to fix the date of next hearing as 21.11.2011. Even as per the admission of

the Patentee in the present petition, despite the counsel for the patentee receiving the documents in May, 2011, amendments were being proposed in

October, 2011, clearly to delay the proceedings and to have the matters adjourned on 21.11.2011.

9. The learned counsel submitted that Section 58 of the Patents Act empowers

the Appellate Board to allow the Patentee to amend the complete

specification in any proceedings before the Board. Section 58(1) is discretionary and the discretion may not be exercised in case where the patentee

has delayed the moving of application for amending the specification claims.

10. The learned counsel submitted that the reason given in the petition for amendment is that the new counsel got the documents only in February

2011 and hence became aware of the subject matter only then and that he came to the conclusion that the specification needed amendment when

their team visited Germany. Such a contention cannot be a reason to allow amendment. The patentee was always aware of his patent and change of

counsel cannot be a reason for moving the amendment at this late stage. It appears to be a ploy to delay the hearing.

11. The learned counsel submitted that in fact, the amendments brought forth in the present Petition are not such that would have required the alleged

plant visit. It is an old tactic of the Petitioner who has been constantly trying to stall the proceedings and cause delay even when he was represented

by the earlier counsel. In view of the above, it is not open to the Petitioner to move for amendment of specification at this stage.

12. Without prejudice to the above submission, in any case, it was submitted that the amendments do not satisfy the requirements of Section 58 and 59

of the Act and that the amended claims are also invalid under Section 64 of the Act.

AMENDMENT SOUGHT:

13. The Amendment petition states that the amendments in the specification are made by way of explanation and corrections. We also sought the

opinion of the Controller of Patents relating to the amendment proposed by the patentee.

14. On 4th June 2013, the information of the Assistant Controller of Patents and Designs, Chennai was received wherein it was stated that

... the amended claim 1 finds support from the original claims numbered 1-7 as per the wording of the document submitted. During the claims analysis

of the amended and original claims it is found that some portions only find support from the original claims 1-7. The portion ""and where the conductor

bundles in adjacent groves are arranged in a rising sequence of the phases of the conductor bundles, said rising sequence of the phases including at

least one phase in which said upper and lower conductor bundles are interchanged, and where the stator is a plurality of meters in diameter and the

generator has a rated output of a plurality of 100 kW does not appear in any of the original claims. It is also quoted that the support of description is

being produced but the scope of the amended claims is being widened by introducing the above quoted portion.

Hence it is concluded that the scope of the claims changes by the new terminologies introduced which cannot be allowed.

The amended claim 20 finds it support from the original claims 20, 1, 2, 5-7 as per the wording in the table submitted. When analyzed it is found that

new technologies and expressions are introduced which tend to widen the scope of the claims. Then one of the original claims specified support the

technology ""windings of different phases being disposed in adjacent grooves"". The portion ""the conductor bundles in adjacent grooves being arranged

in a rising sequence of the phases of the conductor bundles, said rising sequence of phases including at least one phase in which said two conductor

bundles are interchanged, and where the stator is a plurality of meters in diameter and the generator has a rated output of a plurality of 100 kW

appears nowhere in the specified claims explicitly or implicitly.

Hence it is stated that the scope of the claims widen by the changes by the new technologies and the additional portions of the claims. Therefore it is

concluded that the proposed amendments in the claims are not allowable u/s. 59 and 10(4) of the Patents Act, 1970.

15. In order to provide fairness and in the interest of justice, both the parties were provided with copy of the Controller's opinion on the amendments

vide order dated 28.01.2013 for filling their written notes on the amendment within ten days of the communication of order.

16. In the written note, filed by the counsel for applicant, he agreed with Controllers opinion and rejection of amendments as not allowable under

section 59. The counsel for applicant submitted that he agrees with the opinion of the controller as the portions ""where the conductor bundles in the

adjacent grooves are arranged in a rising sequence of the phases of the conductor bundles and the stator is a plurality of meters in diameter were not

there in any of the as-granted claims (including claims 2, 5 to 7).

17. The counsel for applicant submitted that in respect of proposed claim 20, the

Applicant supports the findings of the Controller and state that the

particular portions now added were claimed in any of the as-granted claims. In view of this, the learned Controller's opinion may be taken on record

and the proposed amendments be rejected both on delay/conduct and on merit and consequently all the claims of the impugned patent 202935 be

revoked.

18. The counsel for Respondent submitted that the proposed amendment comprises of two independent claims namely claim 1 and claim 16 and

therefore, the references by the Learned Controller to claim 20 may be read as claim 16

19. The counsel for Respondent submitted that the findings of the Learned Controller that the scope of the claims has been widened by the addition of

new terminology in the claims and therefore not allowable under Section 59 and Section 10(4) of the Indian Patents Act are incorrect for the following

reasons:

(a) The breadth of a claim is what is considered as being the ""scope of the claim"";

(b) The scope of a claim is not determined by doing a feature by feature analysis;

(c) It is submitted that if a feature of a claim is removed, it might amount to broadening of the scope of the claim;

(d) However, addition of new features either from the claims or description is in the nature of a disclaimer and results in the narrowing of the scope of

claim;

(e) Section 59 mandates that the scope of the claims should not be widened by an amendment and the said amendment can be by way of a disclaimer,

explanation or correction;

(f) The purpose of the proposed amendment in the aforesaid patent is to (i) narrow the scope for the patent protection and (ii) to make the claims

more clear and succinct;

(g) The mere fact that the expression ""and where the conductor bundles in adjacent groves are arranged in a rising sequence of the phases of the

conductor bundles, said rising sequences of the phases including at least one phase in which said upper and lower conductor bundles are interchanged,

and where the stator is a plurality of meters in diameter and the generator has a

rated output of a plurality of 100 kW does not appear explicitly in the

claims and its addition to the main claim and claim 16 renders the amended claims as beyond the scope of the amended claims is an incorrect

interpretation of the well established jurisprudence on amendment;

(h) The addition of the said feature to claim 1 narrows the scope of the claims and any such addition clearly amounts to a disclaimer within Section 59

of the Indian Patents Act;

20. The counsel for Respondent submitted that in following Para excerpt from 4th edition of P. Narayanan enclosed it is stated that

the additions of an integer into a combination which ready consists of a number of integers would amount to a disclaimer of part of the ambit of the

unamended claim;

21. The counsel for Respondent submitted that in AGC Flat Glass Europe SA vs. Anand Mahajan and Ors., the Hon'ble High Court held that the

addition of words does not lie outside the scope of the invention, thereby making the amendment a clarificatory one (Para 20). The Hon'ble Court

further held that it is imperative to read the entire specification and to see as to whether the words to be amended alter the scope of the invention.

Therefore the premise on which the Learned Controller has disallowed the amendment as being beyond the scope of the claims is clearly erroneous.

22. Mr. Anand, learned counsel for the Respondent, in the written note submitted that the said amendment of the claims is by way of disclaimer,

clarification and has resulted in narrowing down of the scope of original claim.

23. If the proposed amendment is narrower than the original claim and it brings clarity and explains the inventive step and novelty, we are wound to

consider it. However we cannot allow an amendment that does not stand the test of Section 59. If the amendment falls within the scope of the original

claim and does not claim anything beyond it, we may consider whether our discretion should be exercised for granting the amendment in lieu of

revoking the patent.

24. The respondent has invoked section 58 to seek amendments. We have the negative opinion of the Controller in view of the limitations under

section 59. Section 58 allows us to use our discretion to amend if we decide that the patent is invalid. However the limitation under section 59

particularly relating to amendment of claims ""No amendment of... a complete specification...shall be made...and no amendment of a complete

specification shall be allowed, the effect of which would be that the specification as amended would claim...or that any claim of the specification as

amended would not fall within the scope of any claim of the specification before the amendment must be observed in allowing the amendments.

25. In the granted claims, we find claim 1-8 are for wind power installation, claims 9-19 are for apparatus and claim 20 is for synchronous machine.

Claims 21, 22 and 23 being omnibus claims. In the original claims 1-8 there was no limitation in respect of diameter and rated output [i.e. is above 100

kW] of the stator. The inventive feature of claim 1 was winding is wound without interruption continuously. In view of this the wind power installation

as claimed in proposed claims 1-4 now cannot add a limitation to size and rated output. The respondent also cannot now limit the original claims to

large size stator and rated output above 100 kw wind power installation when in the original claims he claimed a stator in general. Therefore the

amendments sought in claims are not allowable under section 59 of the Patents Act, 1970.

26. In the corresponding US patent application 10/485, 429 the respondent had amended the claims extensively in reply to office action in June 2006

but no steps were taken by the respondent to amend the Indian patent' 935 accordingly. The US patent 7432610 with amended claims 1-10 for 'wind

power installation having a 'ring generator' and claims 11 to 18 for ring generator was granted on Oct. 7, 2008.

A divisional US patent 7436097 for corresponding synchronous machine claims 20-21 was granted with substantially amended claims 1-8 in OCT 14,

2008. Another divisional US patent 7478777 for corresponding apparatus claims 9-19 of '935 was granted with substantially amended claims 1-15 in

JAN 20, 2009. But no steps were taken by the respondent to amend the Indian patent' 935 accordingly. So it is not a case of clarification or

explanation but an intended keeping of the coveted claims. The respondent could have explained the correct reason for the amendment we may have

considered it. But he cannot present what is clearly contrary to truth, and hope to receive a favourable order. We are not convinced by the plea of

clarification or explanation.

27. In May and Baker Ltd.'s patent (1948) 65 R.P.C. 255, the Court had to consider whether the amendment of a chemo-therapeutic patent must be

allowed. The Court held that if the claims made by the unamended specification are covetous that ""should in itself be a ground for refusing the

amendment as a matter of discretion."" In ORA/14/2009/PT/MUM VRC Continental Ltd. Vs. Uniroyal And Others dated 24.8.2012, this Board had

relied on Matbro Ltd. v. Machingan (GB) Ltd. [(1973) RPC 823] in relation to belated amendments and held that, a clear distinction between

instances where a patentee knows of prior art which he genuinely, and quite properly in the circumstances, thinks is irrelevant, and other instances

where, though he learns of or has been warned of objections which are available against his patent as a result of prior art, yet he takes no steps to put

his specification right by way of amendment, or still worse, knowingly persists in retaining it in the unamended and suspect form. In the latter cases

delay is culpable because potential defendants and the general public are entitled to plan their activities on the assumption that the patentee, though

warned, has decided not to amend. If the patentee, by his conduct, lulls the public into a false sense of security he cannot thereafter be allowed to

change his mind and ask for amendment, or at any rate without adequate protection being granted to the public.

and refused to allow the amendments. We find this applicable to this case also and refuse to allow the belated amendments.

28. We are also convinced that the amendment of claims as sought by the patentee is beyond the scope of claims as originally granted. We decided to

proceed with the matter based on the patent specification on record.

GROUNDS

29. The learned counsel for applicant submitted that '935 is liable to be revoked on the grounds of:- anticipation (Section 64(1)(e)); obvious and does

not (involve any inventive step (Section 64(1)(1)) The ground of sufficiency (Section 64(1)(i)) and Section 64(1)(h) were not pressed.

30. Mr. Parthasarathy submitted that the impugned patent specification addresses at pages 2 and 3 the following objectives

a. To provide a stator having a winding to minimize the stress on the wind power installation; and

b. To provide a stator having a winding to minimize the large number of

connecting locations those arise in the prior arts between the individual

portions of a stator winding.

31. The learned counsel for applicant submitted that the number of connecting locations between the former-wound coils of the prior art is quite large.

Even if the connections between the former-wound coils are carefully made, this involves a serious source of trouble. Accordingly, the impugned

invention provides a stator having a winding which is of a continuous nature throughout. This arrangement avoids, in particular, the large number of

locations connecting means between individual portions of a stator winding. Therefore, the alleged inventive step lies in providing a stator having

winding which is of a continuous nature throughout.

32. Mr. Parthasarathy contented that the subject matter of the patent is anticipated, obvious and does not involve any inventive step. According to the

counsel, claim 1 is for wind power installation wherein winding is wound without interruption continuously throughout. He contended that the

fundamental principle of claim construction is that in a claim, which uses the word ""wherein"", the features preceding the said words are admitted to be

known. Accordingly, the invention lies in the feature that is, the winding is wound without interruption continuously.

Claim construction

33. According to the counsel Impugned invention is directed towards a Wind Power Installation wherein the winding is wound without interruption

continuously throughout. Claim is one of the two independent claims and reads as:

A wind power installation comprising a generator which has a stator in which grooves are provided at the inner or outer periphery in mutually spaced

relationship to receive a stator windings. wherein the winding is wound without interruption continuously throughout,

34. The learned counsel for applicant submitted that It is a fundamental principle of claim construction that in a claim, which uses the word 'wherein'

or 'characterized by' etc the features preceding the said word(s) are admitted to be known in the prior art and that the invention lies in the features

succeeding the said word(s). Thus, wind power installation having generator which has stator with grooves mutually spaced to receive winding, is

known in the art and the claim is not directed towards these features. Hence, the

element of the claim i.e. the winding is wound without interruption

continuously throughout is the feature of the claimed invention in claim

Anticipation

35. The learned counsel for applicant submitted that Patent '935 is anticipated by US 6, 223, 784 and US 4, 402, 129

US 6, 223, 784(D1)

US Patent 6, 223, 784 titled Motor and Device for Producing Wave J Windings for a Stator of a Three-Phase Generator granted on 01.0.5.2001

having PCT Publication Date 08.07.1999 ('784 patent,.) discloses the subject matter of the invention. This patent generally relates to an improved

method and device for producing wave windings electrical machines, especially for a stator of a three-phase generator.

784 patent claims in claim 1 a method (of making a wave winding for a stator of a three-phase generator wherein said wave winding (12) is divided

into two winding halves (12a, 12b), each said two winding halves consists of at least one continuous winding wire (15) ...said method comprising the

steps of-

a. winding said at least one continuous winding wire in a first winding direction to form a first winding half (12a) in said circular or polygonal shape;

b. switching over said at least one continuous winding wire into an opposite winding direction in a winding loop (21),.

c. after the switching over of said at least one continuous winding wire, winding said at least one continuous winding wire in the opposite winding

direction to form a second winding half (12b) in said circular or polygonal shape.

d...

e...

The above method is also disclosed in the specification. (Column 1, line 59 to 62). 784 Patent also discloses that the method provides a wave winding

for a stator of a three-phase generator, which is divided into two winding halves, each consisting of at least one continuous winding wire. (Summary of

the invention, Col. 1, line 49 to 53).

The learned counsel contended that it is very evident from claim 1 that the' 784 Patent discloses the stator winding which is wound without interruption

continuously. Therefore, the alleged invention as claimed in claim 1 is anticipated

by the 784 Patent alone and thus, claim 1 is liable to be revoked.

US 4, 402, 129(D2)

US Patent 4, 402, 129 titled Method for winding the stator or a three phase generator granted on 06.09.1983 ('129 patent, Exhibit 3), '129 Patent

relates to a winding method for the stator of a three phase AC generator and, more particularly, to automatic winding of such a stator (Column 1, line

11 to 13).

22. '129 Patent discloses the subject matter of the present invention i.e., winding is wound without interruption continuously throughout, The relevant

portion is extracted below:-

In accordance with a feature of the invention, the first partial winding of the second and third phase are wound in clockwise direction in slots 2 and 5

and 3 and 6, respectively, before the second partial winding of the first phase is wound. After the winding of the second partial winding of the first

phase in counter clockwise direction, the second partial winding of the second and third phases are wound in like manner in counterclockwise direction

in slots 8 and 5, and 9 and 6, respectively. This winding method continued until the second partial winding of each phase has been wound. The winding

starts and the winding ends of each of the main windings constituted by all the associated partial windings are then connected together so that the

desired electrical configuration such as, for example, a star connection is formed, as is well known (Column 1, line 41 to 56).

The learned counsel contended that this clearly explains that the winding is wound continuously in stator and thus, the subject matter of the invention is

anticipated by '129 Patent alone. The continuous winding is also clearly shown in Fig. 1 of the '129 Patent.

EP 1,245,072(D3)

European Patent, EP '072 titled Numerically controlled Automatic Machine for Winding an Electric Wire on Closed Slot Stators published on

12.07.2001 as WO 01/050580 ('072 Patent, Exhibit 4). The description of the said European Patent discloses an arrangement of winding which is

continuous and un-interrupted. It states as 'an object of the present invention is to provide users with a machine allowing to automatically perform the

complete winding on closed slot stators, without being forced to interrupt the continuity of the conducting wire.

The learned counsel contended that it is clear that '072 Patent anticipated the invention as claimed in claim 1 of Patent. Hence, claim 1 is liable to be

revoked.

36. The learned counsel for the respondent submitted that during the course of arguments, the counsel for the Applicant did not rely upon the affidavits

of its expert witnesses, i.e. Mr. Devendra Kumar Bhatnagar and Mr. Ravindra Sitaram Barve.

37. The learned counsel for the respondent argued that a person of ordinary skilled in the art will only look into the analogous prior arts which are in

the field of the present invention and are faced by problem associated with the present invention. In the present case, the problem addressed by the

claimed invention having regard to scale and magnitude of wind turbine generators cannot be lost sight of in considering the relevancy of the cited

prior art references. In doing so, it is evident that none of the cited prior art are reasonably pertinent to the inventor's endeavour in solving the problem

pertaining to wind turbine generators.

38. Mr. Anand contended that the problems identified in the subject patent are peculiar to wind power installations having large generators and hence

a person skilled in the art will not look for solutions into small generators e.g. generator of a car.

39. Mr. Anand submitted that if a skilled person in the art is given the problems in the large generator of a wind power installation, where would

he/she look for the solution? If the solution is obvious and comes straight to his/ her mind, then and only then may the invention be deemed to be

obvious. The Delhi High Court in F. Hoffmann-La Roche Ltd. & Anr. v. Cipla Ltd. relied upon and affirmed this test of obviousness laid down by the

Supreme Court in Bishwanath Prasad Radhey Shyam v. Hindustan Metal Industries, (1979) 2 SCC 511], namely:

The 'obviousness' has to be strictly and objectively judged. For this determination several forms of the question have been suggested. The one

suggested by Salmond L.J. in Rado v. John Tye & Son Ltd. is apposite. It is whether the alleged discovery lies so much out of the Track of what was

known before as not naturally to suggest itself to a person thinking on the subject, it must not be the obvious or natural suggestion of what was

previously known.

40. Mr. Anand submitted that another test of whether a document is a publication which would negative existence of novelty or an ""inventive step"" is

suggested, as under:

Had the document been placed in the hands of a competent craftsman (or engineer as distinguished from a mere artisan), endowed with the common

general knowledge at the 'priority date', who was faced with the problem solved by the patentee but without knowledge of the patented invention,

would he have said, ""this gives me what I want?"" (Encyclopedia Britannica; ibid).

To put it in another form:

Was it for practical purposes obvious to a skilled worker, in the field concerned, in the state of knowledge existing at the date of the patent to be found

in the literature then available to him, that he would or should make the invention the subject of the claim concerned?

41. The learned counsel for the respondent argued that a wind power installation houses a large generator stator and none of the prior art references

cited by the Applicant address continuous winding of the stator in such machines.

42. The learned counsel for the respondent submitted that the applicant has failed to produce any evidence to show why or what would motivate a

person of ordinary skills to look at the small generators in order to overcome the peculiar problems of large generator stator of a wind power

installation. It has been held that the evidence to show lack of inventive step must be ""clear and convincing"". Furthermore, the prior art must contain a

motivation/teaching leading the person skilled in the art to consider the prior art relevant, and that the prior art must provide a motivation to

change/modify the prior art to reach the invention. In the event that there is teaching away, then person of ordinary skill in the art will not be led to the

invention. [Eli Lilly Co. & Anr. v. Zenith Goldline Pharmaceutical Ltd. & Ors., 471 F. 3d 1369]

43. The learned counsel for the respondent submitted that the applicant admitted that none of the prior arts relate to large generators in particular for

wind power installations. Furthermore, the Applicant's reliance on Edward H. Phillips v. AWH Corporation, 415 F. 3d 1303, is mis-founded as the said

case clearly lays down that ""we nonetheless believe that attempting to resolve that problem in the context of the particular patent is likely to capture

the scope of the actual invention more accurately than either strictly limiting the scope of the claims to the embodiments disclosed in the specification

or divorcing the claim language from the specification"". The learned counsel submitted that in the instant case, the Applicant has sought to use the

cited prior arts to demonstrate that elements of the claim are known, rather than analysing the inventive concept of the subject invention in relation to

the problem addressed by the respondent in respect of wind turbines.

44. The learned counsel for the respondent submitted that the counsel for the Applicant argued the case based only on the common general

knowledge purported to have been gleaned from three of the cited prior art documents-US 6223784, US 4402129, and EP 1245072.

US 6223784

According to the counsel US 784 relates to ""Method and device for producing wave windings for a stator of a three phase generator. In particular it

relates to an AC generator for a car. Object of the invention here is to provide a simple and improved automatic large-scale mass production of two-

part wave windings with waves of that are offset from one another.

Accordingly in 784, the wave winding or wire, denoted by ""12"", is produced on a winding device ""13"". The wave winding ""12"" is divided into winding

halves ""12a"" and ""12b"" (refer column 3, lines 32 to 36 and Figure 4 and 6). The winding halves ""12a"" and ""12b"" can be seen spaced apart in Figure 6.

The winding halves ""12a"" and ""12b"" are deformed into a star shape (refer column 4, lines 31 to 36). The star-shaped winding halves ""12a"" and ""12b

can be seen in Figures 5 and 6. The star-shaped winding halves ""12a"" and ""12b"" are then rotated so that these are offset from each other. Once the

wave winding ""12"" is made in this manner, the same is then inserted into the grooves of the stator lamination packet ""32"". The winding of three phases

of the generator stator is shown in Figure 11.

The learned counsel for the respondent submitted that the field of US 6223784 is different from the present invention as it relates to an automatic

wave winding on a stator of a small generator i.e. an AC generator of a car. The learned counsel further added that in small size generators, current

flows through a single wire therefore, multiplicity of bundles can never be employed in small generators. In the absence of such multiple bundles, there

cannot be any possibility of swapping these bundles.

US 4402129

The learned counsel for the respondent submitted that this patent is based on US 4351102 relates to a method for winding the stator of a three phase

small generators. The object of this invention is to provide an automatic winding method achieving a higher space utilization factor than any of the well

known automatic methods. The learned counsel further added that the solution provided here is to have joints, which is contrary to the present

invention. As shown in column 1, lines 51 to 56, each main winding is constituted by partial windings, and the winding starts and winding ends of each

main winding are connected together so that the desired electrical configuration such as a star connection is formed. The partial windings for each

winding are further described in column 2, lines 24 to 30. According to claim 1 of US 4402129, the winding starts and winding ends of first, second and

third windings are connected.

The learned counsel for the respondent submitted that US 4402129 does not disclose a joint-less windings or continuous winding as claimed in '935

hence it is different from the present invention. The learned counsel for the respondent reiterated that in small size generators, current flows through a

single wire. Therefore, multiplicity of bundles can never be employed in small generators. In the absence of such multiple bundles, there cannot be any

possibility of swapping these bundles.

EP 1245072

The learned counsel for the respondent submitted that this patent relates to a numerically controlled automatic winding machine for winding an electric

wire on closed slot stators. Further, the working of the machine to automatically wind the stators is described in paragraph [0016] on page 4 in relation

with Figure 6. A carriage ""2"" supports multiple stators and can slide in horizontal directions whereas a carriage ""4"" can move vertically and supports a

needle support head, needles ""5"" for dispensing wires, and forks ""6"" for guiding wires. As shown in column 6, lines 28 to 31, an automatic mechanical

hand ""37"" or a robot is provided to replace the service plate carrying the stators.

The learned counsel for the respondent submitted that the field of EP 1245072 is also different from the present invention. The learned counsel

reiterated that in small size generators, current flows through a single wire.

Therefore, multiplicity of bundles can never be employed in small

generators. In the absence of such multiple bundles, there cannot be any possibility of swapping these bundles.

45. If we see US '784 we find it disclose a generator wherein the winding is wound without interruption. We find claim 1 of the invention has

characterizing feature claimed to be inventive by the respondent as wherein the winding is wound without interruption continuously throughout' This is

the essential feature of the invention. In claim 1 there is no reference to diameter or rating of the wind power stator. This is also apparent from claim

20 and 21 which is drawn to synchronous generation. These claims in fact cover an alternator for use in automobiles. These claims are stand alone

claims for synchronous generation with no limitation as to where it will be used. In US '784 the use of continuous winding is disclosed. [Col. 1, line 50-

55], the device comprises means for winding at least one continuous winding, [Col. 2., line 10-25], method of continuous winding is disclosed [Col 2,

line 40-62.] and three phase wiring is shown in fig 11. Therefore originally granted claim 1 and claim 20 of '935 as worded are anticipated by US '784.

46. If we see para [007] of EP 072 we find the 'object of the invention ...to perform winding ...on stators ...without being forced to interrupt the

continuity of the conductive wire'. Fig. 12 shows 'three turns of coil synchronous generation which is angularly shifted by 120Â§ degrees from each

other.' [COL 4, line 1-4]. Essential feature of the claim 1 of impugned patent is continuity of winding and same is disclosed in US '784. The respondent

argued that generator in US '784 is different from the generator of claim 1 as it is not for wind power installations. We agree with the respondent to

point that it is not clear whether generator is wind power generator or not. However, it is common knowledge that a generator is used for wind power

installations. Limitation of equal space of slots is of the kind that is already known for making generators. Therefore US 784 clearly anticipates the

impugned invention.

47. Fig 1 of US '129 shows the continuity of the windings. Fig. 1 of US '129 is same as Fig 3d of the impugned patent. Therefore the claim 1 as

worded is anticipated by US '129. We may point out here that claims as originally granted had no limitation in relation to size (diameter) of stator as

well as the rating of the output. In view of this the argument of the respondent

that the present invention as claimed is restricted to these limitations

will not succeed. In view of teaching and disclosure of US 6223784, US 4402129, and EP 1245072 we are inclined to agree with the applicant that the

claimed invention is not new in view of the said prior art.

Obviousness

48. The learned counsel for the applicant submitted that the question as to whether the invention as claimed is obvious has to be judged from the view

point of the person skilled in the art. The subject matter of Patent is a generator wherein the stator winding are so arranged that the connecting means

between individual portions is avoided. Thus, an electrical engineer or an academic in the field of electrical engineering would be considered as a

person skilled' in the art for this subject matter.

49. According to counsel the US 784 discloses the subject matter of the invention. This patent generally relates to an improved method and device for

producing wave windings for electrical machines, especially for a stator of: a three-phase generator. (Column 1, line 5 to 10).

50. According to counsel 784 Patent claims in claim 1 a method of making a wave winding for a stator of a three-phase generator wherein said wave

winding (72) is divided into two winding halves (12a, 12b), each of said two winding halves consists of at least one continuous winding wire (15)...,

said method comprising the steps of-

a. winding said at least one continuous winding wire in a first winding direction to form a first winding half (12a) in said circular or polygonal shape;

b. switching over said at least one continuous winding wire into an or opposite winding direction in a winding loop;

c. after the switching over of said at least one continuous winding wire, winding said at least one continuous winding wire in the opposite winding

direction to form a second winding half in said circular or polygonal shape.

e... (Col. 6, line 9 to 43)

51. The learned counsel submitted that 784 Patent also discloses that the method provides a wave winding for a stator of a three-phase generator,

which is divided into two winding halves, each consisting of at least one continuous winding wire. (Summary of the invention, Col. 1, line 49 to 53).

52. The learned counsel submitted that similarly EP '072 Patent also discloses an

arrangement of winding which is continuous and uninterrupted. It

states as 'an object of the present invention is to provide users with a machine allowing to automatically perform the complete winding on closed slot

stators, without being forced to interrupt the continuity of the conducting wire. He submitted that it is clear from this that the cited prior arts teach the

subject matter of the claimed invention either alone or in combination with the teachings of other prior arts. Therefore claim 1 is obvious to a person

skilled in the art over the teachings of cited prior arts and hence claim 1 is liable to be revoked.

53. The learned counsel submitted that that Claim 9 of the Patent states as under: ""An apparatus for production of the stator of a generator of a wind

power installation according to anyone of the preceding claims wherein a mounting apparatus for the stator is provided in which the stator is held in a

standing position."" Claim 9 claims that the stator is held in standing position. Figures 4, 10 and 11 of '784 Patent shows that the orientation of the stator

is in similar position. Thus, the subject matter of claim 9 is obvious to a person skilled in the art and is liable to be revoked.

54. The learned counsel submitted that Respondent has impliedly admitted that continuous winding in stators is well known but those were all small

generators and not large generators. In other words, the Claim as granted becomes a mere new use of a known process (continuous winding process),

thereby being hit by section 3(d) which bars patenting of the mere use of a known process, machine or apparatus which does not result in a new

product-it is the same stator albeit big. Further, the specification did not address anywhere what were the problems in having continuous winding in

large diameter stators and how these are overcome in the claimed invention. The claim is simply about continuous winding of the stator so that joints

are removed and the probability of the joints becoming loose due to vibration or loading is significantly reduced.

55. Mr. Praveen Anand submitted that the problems identified in the subject patent are peculiar to wind power installations having large generators

and hence a person skilled in the art will not look for solutions into small generators e.g. generator of a car. He argued that the wind power installation

claimed is a huge machine and the present invention can be applied not only to ring generators for wind power installations but basically synchronous

machines but machines which involve a considerable spatial extent and which usually have connected loads of under some circumstances several 100

kW and more. He submitted that the principles applied in smaller generators cannot be applied in the present invention because the problems arising in

large stators are totally different from that of small stators.

56. The learned counsel submitted that If a skilled person in the art is given the problems in the large generator of a wind power installation, where

would he/she look for the solution? If the solution is obvious and comes straight to his/her mind, then and only then may the invention be deemed to be

obvious. The Delhi High Court in F. Hoffmann-La Roche Ltd. & Anr. v. Cipla Ltd. relied upon and affirmed this test of obviousness laid down by the

Supreme Court in Bishwanath Prasad Radhey Shyam v. Hindustan Metal Industries, (1979) 2 SCC 511], namely:

The 'obviousness' has to be strictly and objectively judged. For this determination several forms of the question have been suggested. The one

suggested by Salmond L.J. in Rado v. John Tye & Son Ltd. is apposite. It is whether the alleged discovery lies so much out of the Track of what was

known before as not naturally to suggest itself to a person thinking on the subject, it must not be the obvious or natural suggestion of what was

previously known.

57. The learned counsel submitted that another test of whether a document is a publication which would negative existence of novelty or an ""inventive

step"" is suggested, as under:

Had the document been placed in the hands of a competent craftsman (or engineer as distinguished from a mere artisan), endowed with the common

general knowledge at the 'priority date', who was faced with the problem solved by the patentee but without knowledge of the patented invention,

would he have said, ""this gives me what I want?"" (Encyclopedia Britannica; ibid). To put it in another form: ""Was it for practical purposes obvious to a

skilled worker, in the field concerned, in the state of knowledge existing at the date of the patent to be found in the literature then available to him, that

he would or should make the invention the subject of the claim concerned?

58. The learned counsel submitted that a wind power installation houses a large generator stator and none of the prior art references cited by the

Applicant address continuous winding of the stator in such machines. He argued

that the teachings of various prior arts are completely silent with

respect to a wind power installation having a generator which comprises a stator with a continuous winding. He argued that comparison for

obviousness shall be done with analogous art that is stator of wind mills.

59. Respondent admitted that continuous winding is small size generator is known. The applicant argued that there was no limitation in the granted

claim to diameter stator and output above 10 kW. Plain reading of claim 1 suggest that wind power having a stator with mutually spaced slots and

continuous winding. The stator in which grooves are provided at the inner or outer periphery in mutually spaced relationship to receive a stator

winding' is a admitted known.[Page 2 of CS para 1]. According to the respondent the inventive step in fact lies in how the winding in stator are applied

for generating power to replace the 'former wound coils' and avoid connecting means between individual portion of stator winding.

60. If we see common general knowledge in generators, we find all generators use coils of wire wound on rotor and stator. In US 784, and EP '072

stator winding is wound without interruption. The claimed generator in the impugned patent has same functional features of the stator winding for the

purpose of generation of electric power by movement of prime mover. When feature of continuous winding is known for generation of electricity its

use in large wind turbine does not involve an inventive step. Step forward which the inventor claimed to have taken is already known for same

functional result. Size of the generator for wind power generation will not make the obvious step non obvious. There is no other novel feature as

claimed in claim 1 as granted except continuous wounding of windings. There is no technological advance beyond the skill shown in US 784, and EP

'072. Minor adaptation in the scheme of winding i.e. 'position of upper and lower conductor bundles are interchanged in predetermined order'. [As

claimed in claim 7] in view of large size is only adaptation of prior art based on what is commonly available and understood in the art. Therefore, the

invention as claimed is within the grasp of MS. P. Sita skilled in making of generators on the bases of inventions described in US '784 and EP '072.

61. In Miscellaneous Petition No. 63/2011, the patentee sought amendment in OCT, 2012 without prejudice to his right to sustain his granted claims but

the respondent had already amended the claims extensively in reply to office

action in the corresponding US patent application 1085429, US patent

7432610, Divisional US patent 7436097 and Divisional US patent 7478777 as stated in para ante. But no steps were taken by the respondent to amend

the Indian patent' 935 accordingly. Yet they kept their unamended claims until the hearing. We bear in mind this conduct of respondent also. Here, we

find the invention is anticipated and does not involve inventive step. The amendment sought for cannot be granted for the same reasons as we held in

ORA/6/2009/PT/CH. In the present application in view of the reasoning above, the amended claims cannot be granted both on merits and on account

of delay.

62. As regards amendment in ORA/6/2009/PT/CH we had held that the principles on which the discretion for allowing amendments are ""full and fair

disclosure of all relevant matters, compliance with the statute, public interest requirement of seeking amendment promptly and above all the conduct.

In ORA/6/2009/PT/CH, we found that the respondent failed on almost all counts.

63. In ORA/6/2009/PT/CH we dismissed the amendment application but since we were of the opinion that there was an inventive step we directed

the respondent to file amendment claim conforming to our finding. Finally we find the claims as originally filed cannot be accepted as they are

anticipated and does not involve inventive step and when the conduct of the respondent is one of the reasons for not allowing the amendment, we are

inclined to allow the revocation application ORA/10/2009/PT/CH and patent no 202935 is revoked. The Miscellaneous Petition Nos. 23/2010, 33/2010

and 81/2010 are closed. The Miscellaneous Petition No. 63/2011 is dismissed. No costs.

