



INTELLECTUAL PROPERTY APPELLATE BOARD

Annexe-I, 2nd Floor, Guna Complex, 443 Anna Salai, Teynampet, Chennai-18
Tele: 24328902/03 Fax: 24328905 Website: <http://www.ipab.in.nic.in>

Misc. Petition No:19/2010, 32/2010 & 74/2010 IN ORA/9/2009/PT/CH & ORA/9/2009/PT/CH - for the
revocation of Patent No:202887 in PCT/2002/1840/CHIE) 8/60

Dated the 3rd December, 2010

Appellant	Representative
ENERCON (INDIA) LIMITED PLOT NO 33 DAMAN PATIALA ROAD, BHIMPORL DAMAN -396210	M/S LAKSHMI KUMARAN & SRIDHARAN NO.2 WALLACE GARDEN, II STREET, CHENNAI - 600 006
VS	
Respondent	Representative
11 ALLOYS WOBLEN ARGESTRASSE 19 26607 AURICH GERMANY	D.P. AHUJA & CO. 53, SYED AMIR ALI AVENUE CALCUTTA-700 019.

I am directed to send herewith the certified copy of the Order No. 244/2010 passed by the Board on 2nd December, 2010 in respect of Misc. Petition No:19/2010, 32/2010 & 74/2010 IN ORA/9/2009/PT/CH & ORA/9/2009/PT/CH.


(G. VIJAYARAGHAVAN)
Deputy Registrar

Copy forwarded to:

- 1 M/S LAKSHMI KUMARAN & SRIDHARAN
NO.2 WALLACE GARDEN, II STREET,
CHENNAI - 600 006
- 2 D P AHUJA & CO.
53, SYED AMIR ALI AVENUE
CALCUTTA-700 019.
- 3 THE CONTROLLER OF PATENTS, PATENT OFFICE, GST ROAD, GUINDY, CHENNAI
- 4 PTC (by email)
- 5 MANUPATRA INFORMATION SOLUTIONS PVT. LTD, 16A, 2ND FLOOR,
WELLINGDON ESTATE, 24, ETHIRAJ SALAI, CHENNAI-600 105 (by email)
- 6 LIBRARY, GUARD FILE.

INTELLECTUAL PROPERTY APPELLATE BOARD

Guna Complex Annexe-I, 2nd Floor, 443, Anna Salai, Teynampet, Chennai - 600 018

M.P.Nos. 19/2010, 32/2010 and 74/2010

IN

ORA No.9/2009/PT/CH

AND

ORA/9/2009/PT/CH

THURSDAY THIS THE 2ND DAY OF DECEMBER, 2010

HON'BLE MS. S. USHA
HON'BLE SHRI. S. CHANDRASEKARAN

... Vice-Chairman
... Technical Member

ENERCON INDIA LTD.
Plot No.33, Daman Patalia Road,
Bhimpore,
Daman - 396 210.

... Applicant

(By Advocate Mr. R.Parthasarathy)

Vs.

ALOYS WOBLEN
Argestrasse 19,
26607 Aurich,
Germany.

... Respondent

(By Advocate Mr. Samaresh Chakrobari)

ORDER NO. 244/2010

Hon'ble Shri S. Chandrasekaran, Technical Member

This is an original application for revocation filed under section 64 read with section 117 D of the Patents Act 1970 (herein after referred to as the Act) for revoking the patents No. 202887 dated 11-11-2002 granted to Mr. ALOYS WOBLEN the respondent a German citizen.

2 The impugned Patent was filed on 11-11-2002 claiming the priority date 11-5-2000 and the Patent was granted on 2-2-2007 by the Patent Office after due examination of the Patent application having the title "*Method for operating a wind power station and wind power station*". The applicant is a Company registered under the Companies Act 1956, a subsidiary of ENERCON GmbH Germany applied for the revocation of the Patent on the following grounds.

a. The subject matter of the patented invention is not new. [Section 64 (1) (e)]

- b. The subject matter of the Patent is obvious and does not involve any inventive step (Section 64 (1) f);
- c. The scope of the claims is not sufficiently and clearly defined. [Section 64 (1) (i)].

3 The applicant stated that they are one of the foremost leaders in the wind energy sectors in India and they manufacture and install wind turbines all over India and thus they are an interested person within the meaning of the Section 64 of the Act.

4 The respondent challenged the competency of the signatory to the application for revocation and the same was heard by this Appellate Board and passed an order disposing the matter to be decided along with the main matter. Aggrieved by this order, the respondent appealed in the Madras High Court, which was heard and disposed off by the Hon'ble High Court directing this Appellate Board to consider and dispose of this preliminary issue along with the main matter.

5 On completion of the pleadings, the matter was listed for final hearing on 21-10-2010 before this Bench. Mr. R. Parthasarathy advocate appeared for the Applicant and the respondent was represented by Mr. Samaresh Chakraborti.

6 On 21-10-2010, during the hearing the respondent submitted that amendments have been proposed, proposing amendments to the claims in the granted patent. The amendment proposal was not accompanied by any M.P and it was not even numbered by the Registry and was not listed before us. The applicant's counsel pointed out, that the amendments were proposed along with the counter statement which was filed on 19-3-2010 but the same was not submitted in the prescribed way till the commencement of the hearing. Consequently the amendments having been filed along with the counter statement, keeping the law of natural justice in consideration, the same was allowed to be argued for and against by the respective counsels.

7 The respondent filed a M.P. No. 74/2010 on 5-4-2010 questioning the locus standi of the applicant to maintain the present revocation application. Therefore this has to be considered first and disposed of. Before considering this question of locus

of the signatory, let us look into the facts and background of the case as to its origin briefly.

- a. The applicant is a joint venture company. The applicant is involved in the manufacturing of wind turbine generators and setting up of wind farms on a turnkey basis. There are two shareholder groups of the applicant company, viz., Enercon GmbH, a company incorporated under German law owns 56% of the shareholding of the applicant company as a first shareholder. The members of the Mehra family own the remaining 44% of the shareholding of the applicant company as a remaining shareholder.
- b. There are four members on the board of the applicant,
 - o Two representatives of Enercon GmbH
 - o Two representatives of the Mehra family
 - o The Chairman of the board is Dr. Aloys Wobben and the Managing Director of the applicant company is Mr. Yogesh Mehra.
 - o The actual day to day management of the affairs of the applicant company is to be carried out by the Managing Director of the company in India.
- c. In 2007, Enercon GmbH filed a petition under the Companies Act, 1956 in the Company Law Board, Principal Bench, New Delhi alleging oppression and mismanagement of the affairs of the applicant company by the Mehra group members. On 29.10.2007 the Company Law Board passed an interim order which directed "*Status quo with regard to all the issues pending in the proceeding should be maintained and no action in relation to the same shall be taken*" (emphasis supplied). CLB further directed that "*No changes shall be brought about in the managerial set up and their responsibilities.*" On 19.5.2008 the CLB passed a further order stating that no further board meetings of the applicant company should be convened without the leave of the Company Law Board thus freezing all the meetings except the day to day activities of the applicant company.
- d. The said revocation applications have been filed from January 2009. They were filed in the name of the applicant company and were signed by Mr. Yogesh Mehra, the Managing Director of the applicant company. The counter statements were filed nearly after a year later by the respondent. Along with the counter statement, miscellaneous applications were also filed



questioning the locus standi of Mr. Yogesh Mehra to sign the said revocation applications for and on behalf of the applicant company. Mr. Yogesh Mehra has signed the revocation applications on the strength of a Board resolution dated 26.4. 2007 which is quite evidently prior to the orders passed by the CLB dated 29-10-2007.

e. The main arguments of the respondent are as follows:

- o The Board resolution dated 26.4. 2007, by which Mr. Yogesh Mehra is authorized to file proceedings on behalf of the applicant company is bad in law since it falls foul of the orders dated 29.10.2007 and 19.5.2008 passed by the CLB;
- o The Board resolution only authorizes Mr. Yogesh Mehra to manage day to day activities of the applicant company and under the general powers, "to defend the Company and file suits on behalf of the company on matters that may arise out of contractual laws, corporate laws, taxation laws or any other statutory acts" but not to initiate these revocation proceedings;
- o Mr. Yogesh Mehra having filed a suit in a derivative capacity in the Bombay High Court could not now file this proceeding on behalf of the applicant company;
- o That the validity of the Board resolution has been challenged before the Company Law Board.
- o This Appellate Board having been formed substituting for the High Court as regards finalizing the applications for revocation of patents. this Appellate Board like the High Court has the full powers to decide on all the matters of law and those connected matters of legal disputes under CPC;

f. The aforesaid contentions have been refuted by the applicant. The applicant's senior counsel referred to the Supreme Court of India case in "Patel Roadways Ltd. v. Birla Yamaha Ltd., (2000) 4 SCC 91" to show how the Hon'ble Supreme Court of India has decided about "a suit".

g. On perusing the entire details available in the records, it is seen that Mr Mehra was authorized by the Board resolution dated 26-4-2007 to sign the pleadings i.e the revocation applications. The present revocation applications have been signed by Mr. Mehra by virtue of the said Board resolution dated 26.4. 2007 which empowers Mr. Mehra to do so as is clear from the contents of the resolution produced before us. This Appellate Board cannot decide upon the validity, legality and propriety of this Board resolution dated

26.4.2007 and this Appellate Board, in the absence of any judgment or order of a competent Court of Law declaring the resolution to be null and void or staying the resolution, has to proceed on the footing and directions given therein and assume that the said resolution dated 26.4.2007 is perfectly valid and legal. Counsel for the respondent during the course of arguments sought to urge grounds in support of the proposition that the resolution dated 26.4.2007 was not proper and legal. However as stated hereinbefore the legality and/or validity of the Board resolution dated 26.4.2007 cannot be questioned in the present proceedings which are instituted under the provisions of section 64 of the Act. The jurisdiction to test the validity and legality of the Board resolution does not rest with this Appellate Board. If that be so, then the obvious conclusion is that Mr. Mehra by virtue of the resolution dated 26.4.2007 is fully empowered to sign the suits / pleadings including all these revocation applications. As such there is no substance in the contention of the respondent that Mr. Mehra has no authority to sign the pleadings. Further the contention of the respondent is wrong that the applicant company cannot maintain the present revocation applications. In view of the above observations M.P.No.74/2010 is dismissed.

h. It was further contended by the counsel for the respondent that the present proceeding is not a suit and as such the resolution dated 26.4.2007 cannot be taken to have empowered Mr. Mehra to sign the same. This argument too is without any substance. It cannot be said that the present proceeding is not a suit especially in the light of the arguments of the counsel of the respondent made already, that this Appellate Board is a Court for all practical purposes, having regard to the nature of the powers and jurisdiction vested in it by statute, which appears that the respondent is contradicting his own arguments made already before us. Reliance can be placed in this regard on the law laid down by the Supreme Court of India in *Patel Roadways Ltd. v. Birla Yamaha Ltd.*, (2000) 4 SCC 91. The Hon'ble Supreme Court at paragraph 48 and 49 observed as follows

- i. *"Suit, Action – 'Suit' is a term of wider signification than action, it may include proceedings on a petition."*

49. From the above it is clear that the terms "suit" is a generic term taking within its sweep all proceedings initiated by a part for realization of a right vested in him under law. The meaning of the term "suit" also depends on the context of its user which in turn, amongst other things, depends on the Act or the rule in which it is used. No doubt the proceeding before a National Commission is ordinarily a summary proceeding and in an appropriate case where the Commission feels that the issues raised by the parties are too contentions to be decided in a summary proceeding it may refer the parties to a civil court.. A proceeding before the National Commission, in our considered view, comes within the term "suit",

- j. Therefore, as can be seen from the Supreme Court ruling, the term "suit" is not to be strictly construed but construed in the manner in which it is used. The term "suit" has been used in the Board resolution in the context of 'initiation of proceedings' and has to be liberally construed. That apart, the above mentioned Supreme Court decision, and particularly the admission of the counsel for the respondent that this Appellate Board is a Court, clearly establishes that the proceedings before this Appellate Board would also be in the nature of a suit and as such it is clear that Mr. Mehra is competent to sign the present revocation applications.
- k. As regards the derivative action, the circumstances in which the same were filed have no bearing on the present proceedings. The mere filing of a derivative action cannot and does not act as estoppel of Mr. Yogesh Mehra from filing these revocation applications. The argument of the counsel for the respondent in this regard is therefore completely irrelevant and not germane to the issue as to whether Mr. Mehra has the authority to sign the present proceedings.
- l. It was next contended that Enercon GmbH has filed an application before the Company Law Board, New Delhi praying for a stay of the operation of the Board resolution dated 26.4.2007. The said application was filed on 5.10.2010. The said application came up for admission on 19.10.2010 wherein a stay of the operation of the resolution was sought. The Company

Law Board has however not granted any interim order. Therefore, as on date, the Board resolution is valid and subsisting. It has not been set aside or stayed by any court / judicial body. Under these circumstances, it cannot be said that Mr. Mehra has no locus or authority to sign the revocation applications on the strength of the resolution dated 26.4.2007. As such it cannot also be held that the applicant company is not a person within the meaning of sections 2(1)(s) or 64 of the Act.

m Lastly, reliance by the respondent on the interim orders passed by the CLB dated 29.10.2007 and 19.5.2008 is completely misconceived and misconstrued for the sole reason that these orders have been passed after the resolution dated 26.4.2007 and cannot in any manner have any relevance on the issue as to whether Mr. Mehra has the authority to sign the revocation applications in the present case, particularly when the Board resolution has not been made null and void.

8 **Basics and objects of the invention to understand the background and nomenclature in respect of "Method for operating a wind power station and wind power station" are:-**

The power available from a wind turbine increases very rapidly with wind speed: a doubling of wind speed results in as much as an eight-fold increase in power. Therefore it is important to locate the wind generators in a place where the wind speed is high, as well as reasonably constant. In that respect rotor blades play an important role in the wind power installations. The length of the rotor blades is also important – doubling the diameter of the circle made by the blades produces a four-fold increase in power. Rotor blades are one of the most heavily used components of a wind power installation. They are meant to withstand the huge centrifugal forces, wind flows, turbulence, solar radiation, a wide range of temperatures and ice build-up over several years in continuous operation in order to enable economically efficient operation of the wind power installation. The blades are perhaps the most important part of a wind turbine – in fact they are the 'engine' that drives a generator in a wind power installation.

9 Coming to the important technical terms and the nomenclature used therein has to be understood first.

- a. The 'tip' of the blade is the end that's at the very outer diameter - farthest away from the alternator.
- b. The 'front' of the blade is the surface that faces towards the wind, it's flat and angled a bit. Therefore the side of the rotor blade which faces the direction of the wind is called the 'pressure side'
- c. The 'back' of the blade is facing away from the wind and that is the other side of the rotor blade, which is rounded in shape. This side is called as the 'suction side' or the 'lower pressure side'.
- d. The 'Root' is the inside of the blade, closest to the hub and the alternator.
- e. The 'Leading Edge' is the edge of the blade that faces or leads in the direction of rotation
- f. The 'trailing edge' is the edge of the blade that is opposite to the leading edge, i.e. the edge which trails behind.
- g. The 'Pitch' of the blade is the angle between the surface of the front of the blade, and the plane of the blade's rotation. It changes over the length of the blade.
- h. The Chord of the blade is the width (the distance between the leading edge and the trailing edge) and it gets less (the blade gets narrower) as the diameter gets larger.

10 A drawback of the wind power is that the wind can be erratic, changing direction by the hour. Rotor blades have to be strong, but light and durable. These qualities become more elusive as the blade length increases. With these background of knowledge, let us look at the arguments of the applicant and that of the respondent.

11 Arguments by respondents for seeking amendments.

- a. The respondent counsel raised first the issue of amendments of the claims proposed which were filed along with his counter statement. So he was given the opportunity first, to represent and defend the

amendments sought in the claims. Then the respondent admitted first that he is not pressing for the claims as granted, but requested for perusal of the claims as proposed for amendments for allowability under section 58 & 59 of the Act. The respondent's counsel also admitted that the onus is on the respondent first, to establish as to why he is seeking the amendments and also why the same should be allowed. The respondent showed that originally four patents were in issue before the UK Court of Justice, but one of that the equivalent Patent to the Indian patent, in United Kingdom (EP 1,282,774) was accepted to be invalid by the respondent himself. The respondent pointed out that the Patent was relevant only to infringement proceedings in U.K. and infringement was not pressed. However the respondent made it clear that the as-granted Patent with all the claims was revoked in United Kingdom.

- b. The counsel for the respondent referred to the Para 5-15, page 94 of the book on "Patent Law" by P. Narayanan about the definition of claims and in this respect referred to Lord Russell of Killowen in *Electric and Musical Industries Ltd v Lissen Ltd (1938) 56 RPC 23, 39*: "The function of the claims is to define clearly and with precision the monopoly claimed, so that others may know the exact boundary of the area within which they will be trespassers. Their primary object is to limit and not to extend the monopoly". The counsel then referred to show what is "Disclaimer" by referring to Para 619 page 139 of the book on "Patent Law" by P. Narayanan and referred to *AMP Incorporated Vs. Hellerman Ltd, [1962] RPC 55 at 70* where Lord Denning stated in all the statutes relating to patents, the patentee has been permitted, on certain conditions, to enter a 'Disclaimer' of part of what he claims, and, so far as I can see, this has always been interpreted so as to enable him to reduce the ambit of his monopoly by limiting a wide claim (which covers two or more ways of construction) to a particular claim (which covers only one of the ways of construction). The counsel then referred to Para 6-20

Page 140 of the above said book, and referred to Baker Perkins Ltd's Appln. [1958] RPC 267 at 276, wherein it was held that "a disclaimer takes place whenever the patentee reduces the ambit of his monopoly for he thereby renounces his previous claim in its fullest scope and limits it to a narrower scope. This renunciation need not, however, be done in express terms. It is sufficient if it is done impliedly". Finally the counsel requested that the amendments sought may be allowed.

12 Arguments by applicants

i. Relevant Facts:

- a. The ORA and MPs were listed for hearing on 09.08.2010. On that day, time was granted till 06.09.2010 for parties to complete the pleadings i.e. particularly for respondent to file expert affidavits, if any, in response to the rejoinder and affidavit of the applicant. The matter was listed for hearing on 13.09.2010 and later adjourned to 14.09.2010 by the IPAB. However, on 12th October, 2010 the respondent filed their expert affidavits. The Board considered the respondent's expert affidavit for arguments, in the interests of justice, despite it being filed in the last minute.
- b. The respondent admitted that "as-granted" claims are invalid and would delete the as-granted claims. The respondent submitted that he has already proposed amended claims in its counter-statement. The respondent also stated that he would not press as-granted claims and would only argue on proposed claims. Thus, the applicant restricted his arguments on proposed claims only.
- c. The applicant showed that the equivalent Patent in United Kingdom (EP 1,282,774) was accepted to be invalid by the respondent himself. The applicant brought to the notice of this IPAB to revocation application (Page 37; Para 2,) where it is stated in the order that *originally four patents were in issue but one, European Patent (UK) No. 1,282,774, is now accepted to be invalid.* Thus it was submitted that the respondent herein having conceded to the invalidity cannot be allowed to take a different stand here. The respondent pointed out that the Patent was relevant only to infringement proceedings in U.K. and infringement was not pressed. In this regard, the applicant relied upon UK Patent Office manual of 2008 (copy annexed), where it was clearly stated that the EP patent 1,282,774 in UK was revoked by Court's order dated 22nd Nov. 2007. The applicant again pointed out from respondent's document that *EP 1282774 Patent was annulled by the Court's decision in United Kingdom (Page 5 of the document relating to EP Patent status by the*

respondent). Hence, it is very clear that the as-granted Patent with all the claims is revoked in United Kingdom.

- d. The applicant argued that the respondent was merely trying to add a few non-essential elements in the claim which has already been revoked by UK Court.
- e. In the present matter, both parties argued on the invalidity of the amended claims i.e. whether the amended claims satisfy the requirements of Section 59 of the Act. Later, both parties also argued whether as proposed claims are patentable under the provisions of the Act or not.

ii. **Legal Framework: Invention and inventive step:**

- a. The counsel for the applicant continued his argument inviting our attention to the definition of the "patent" as under section 2(1)(m), "invention" as under section 2(1)(j), "inventive step" as under section 2(1)(ja), respectively of the Act.
- b. A Patent is granted for a single invention only. Accordingly the claims and the complete specification shall relate to a single inventive concept.
- c. Invention can either be a product or process but should be new, having an inventive step and has an industrial application.
- d. Section 2(1)(l) of the Act defines a new invention. It was submitted that an invention is not new if all the elements of the invention, as contained in the claim or claims, are disclosed in a single prior art document.
- e. 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.
- f. The counsel submitted that inventive step being the first ground, its definition and analysis with respect to the claims, particularly the scope of definition of the claims, from which the feature regarding the technical advance or economic significance or both and that makes the invention not obvious to a person skilled in the art.
- g. Analysis of the inventive step is done in two steps normally; first, identify from the claims, the feature which shows the technical advance or the economic significance or both. When this first step is done, then only assess whether the features claimed in the claims are obvious to the person skilled in the art. So in step 1, if none of the features could be identified, then proceeding to the step 2 will be futile and the invention would be certainly lacking inventive step, or in other words, the invention would be obvious to the person skilled in the art.
- h. The attention of the IPAB was also invited to Section 7 (1) of the Act, to show that a patent is for a single invention only. Attention was also invited to section 10 (5) of the Act, according to which the claims and complete specification shall relate to a single inventive concept. It was, therefore, submitted that there will be only one common inventive step/concept pervading all the claims.

- i. It was submitted by reference to sections 64 (1) (e),(f) of the Act, that the revocation is with reference to the invention so far as claimed in the claims of the patent. Thus, the language employed in the claims is of paramount importance. If there is any ambiguity or the meaning of a particular term is not clear it is permissible to look at the specification (written description) to clear the ambiguity or the meaning of the term used. Thus revocation is of one or more of the claims of the patent and examination as to whether the claim is new or involves inventive step etc
- j. The counsel submitted that how the applicant satisfies the condition of "person interested" and what is the definition of "person interested" as given in section 2(1)(t) of the Act.
- iii. Arguments against proposed claims under section 59
- a. The respondent amended claims 1, 3 and 4 by adding certain features and correcting a mistake. Claim 1 (as-proposed) is a method claim and claim 4 (as-proposed) is product claim incorporating that method claim. Thus, the amendments in both the claims are same.
- b. For the sake of brevity, only amended claim 1 is produced below.

Claim	"As granted" Claim	Proposed Claim
1.	A method for operating a wind-energy generating plant with a generator for supplying electrical energy to an electricity grid, wherein the wind-energy generating plant has a rotor, having rotor blades with pitch control coupled to the generator, characterized in that energy supplied by the generator to the grid is controlled or adjusted as a function of the grid frequency of the electrical grid and the energy fed to the grid is reduced when the grid frequency is more than 3% above the desired value.	A method for operating a wind-energy generating plant with a generator for supplying electrical energy to an electricity grid, wherein the wind-energy generating plant has a rotor, having rotor blades with pitch control coupled to the generator, characterized in that energy supplied by the generator to the grid is controlled or adjusted as a function of the grid frequency of the electrical grid and the energy fed to the grid is reduced when the grid frequency is more than 3% <u>(that is 0.3%) above the desired value whereby the delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change.</u>

- c. Thus, it is clear from the table above that following two elements have been amended in claim 1:
- 3% is changed to 0.3%;
 - The delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change
- d. The respondent submitted that as-granted claim 1 claimed a method wherein the *energy fed to the grid is reduced when the grid frequency is more than 3% (that is 0.3%) above the desired value* and submitted that it

was a typographical error (instead of 0.3% it was erroneously indicated as 3%) 0.3% would fall within the scope of the specification as filed

- e. The respondent further submitted that 0.6% is shown in figure 1 and it is also mentioned at (internal page 3 of the patent specification) Page 29 line 24 to 30 of the revocation application and hence this element is well within the scope of section 59.
- f. The applicant submitted that the proposed claim 1 would not satisfy the requirements of section 59 because of the following points.
1. The limit 0.3% has not been disclosed in substance in the *as-filed* patent specification;
 2. The element *inverter delivering electrical energy to provide a reaction on an abrupt frequency change* is not supported by necessary description in the patent specification.
- g. The applicant submitted that the limit 0.6% is present in the patent specification (Figure 1 read with internal page 3 of the patent specification—i.e. Page 29 of the revocation application) but the limit 0.3% is totally contrary to the teachings of the patent specification.
- h. The applicant further pointed out lines 23 to 29 at Page 29 of revocation petition and read the following lines:
"The electrical power of the wind power installation is not yet regulated downwardly for example upon a rise in the network frequency by 0.6% (that is to say to 100.6%)".— Thus downward regulation from 0.3% was contrary to the teaching of the patent specification as filed.
- i. It is clear from the above that the electrical power is not regulated till the time the frequency reached 100.6% of the nominal value whereas now in the amended claim the respondent is claiming that power is regulated downwardly from the time the frequency reaches 100.3% of the nominal value, which is totally contrary to the teachings of the patent specification. The respondent is trying to claim that which is totally contrary to the teachings of the patent specification and hence this amendment should not be allowed. The applicant also relied upon its expert affidavit to show that the complete specification does not disclose that the regulation of the electrical power shall commence when the grid frequency is more than 0.3% of its desired value (applicant's Reply, Page 58).
- j. Further, the applicant pointed out that there is no technical data to show that there is some inventive feature in reducing the energy when the frequency reaches 100.3%. The applicant argued that the upper limit is basically set by the grid controller and the patentee has no role in fixing the upper limit i.e. 102%. It is common general knowledge that a wind power installation cannot function if the frequency reaches 102% or more. Thus, a person skilled in the art would obviously reduce the energy anytime after the nominal frequency is exceeded so as to be within the upper limit. Hence, there is no inventive step in having the limits of 0.3%

or 0.6% and the utility of such limits has not been explained anywhere in the specification.

- k. Further, the applicant argued that although the *inverter* is shown in figure 6 but the fact that this *inverter regulates the power in reaction on an abrupt change* is not disclosed anywhere in the specification. Further the specification does not teach what is meant by *abrupt change*. Thus, this element does not fall within the scope of as-filed specification and hence, this amendment should be rejected.
- l. Further, the applicant pointed out that this element does not wholly fall within the scope of any of the as-granted claims of the specification before the amendment and hence also this amendment should be rejected.
- m. The applicant submitted that the as-proposed claim 1 and 4 should be rejected as they do not satisfy the requirements of Section 59.
- n. The applicant also submitted that since claim 3 is dependent on claim 1, claim 3 should also be rejected.

iv. **Construction of the Invention**

- a. The present invention concerns a wind power installation which is connected to a weak electrical (island) network. In these weak grids the network frequency rises when a large consumer is separated from the electrical network.
- b. During that time those generators produce more energy than is taken from the electrical network. The energy is then consumed for accelerating the generators which means the network frequency rises.
- c. As many electrical equipment are not designed for fluctuating network frequencies or abrupt changes in network frequencies, the fluctuating network frequencies can result in damage to electrical machines, including as destruction thereof.
- d. Thus, according to this invention, if wind power installation is operated on such weak networks, their electrical power is to be controlled in dependence on the rising network frequencies. This is intended to prevent a further rise in the network frequency or to achieve a reduction in the network frequency.
- e. Thus, the crux of the invention is that the energy is reduced when the network frequency rises above the predetermined value.

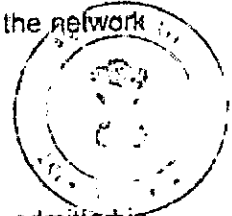
v. **Submissions on grounds relied in the revocation application**

a. **PROPOSED CLAIMS**

- 1. The arguments of the applicant are that the proposed claims do not fall within the scope of section 59 of the Act.
- 2. The applicant pointed out that the nominal and upper limit of the operating network frequency are fixed by the grid controller and the inventor has no say in that. The applicant pointed out that in India CERC has fixed the maximum grid frequency as 50.2 Hz and 49.5 as

lower limit (which is equivalent to 0.4% to 1% of nominal frequency of 50 Hz) Thus, there is no inventive feature in fixing the upper limit of operating frequency as 102% of nominal frequency or any other number

3. Further, the applicant pointed out that it is common general knowledge that power and frequency are inter-related and a person would obviously reduce the power in case the frequency increases.
4. Further, the applicant pointed out that the specification itself admits that there are only two following possibilities of controlling the network frequencies:
 - Changing the pitch angle of rotor blade; and
 - Reduce the power supplied
5. Further, the applicant pointed out that the respondent has admitted in the patent specification that *changing the pitch angle of rotor blade* would take time to regulate the network frequency and thus, the only option left is to reduce the power to control the network frequency. The applicant pointed out that the present case is a case where the person skilled in the art would have only 2 options to control the network frequency and that one option is not viable to control the network frequency in short time. Thus, the only option left with the person skilled in the art is *to reduce the power to control the network frequency*. Hence, it would be obvious to a person skilled in the art. The said reduction can only be through the inverter.
6. Then the applicant relied upon EP 0,858,153 (here in after referred to as EP '153 patent) published on 12.08.1998 (not 16.04.2003 as argued by the respondent) and argued that the teachings of this prior art discloses that *energy is reduced in case the network frequency increases*. The applicant relied upon claim 1 to show that EP '153 Patent discloses a method for controlling a power plant which delivers electrical power to an electrical grid wherein the power output of the said power plant is controlled as a function of a control frequency in such a manner that output power is decreased when the control frequency is increased beyond the nominal frequency (Claim 1 of the EP '153 patent; Page 93 and 94 of the revocation application)
7. The applicant relied upon Non-Patent (NPL) Literature *NGC Experience with Frequency Control in England and Wales – Provision of frequency response by generators* published in 1998 to show that in England and Wales, a similar method of reducing the energy was used to control the network frequency.
8. This NPL states the following at Page 189 of the revocation application; left column:
 - *The Grid Code also states that under exceptional circumstances the system frequency could rise to 52Hz or fall to 47 Hz. The*



design of plant and apparatus connected to the system must enable continuous operation in the 47.5-52 Hz range and at least 20 seconds operation for each frequency is in the range 47.5 to 47 Hz.

- *In response to a high frequency above 50.4 Hz all plant whether operating in frequency or limited frequency sensitive mode, are required to reduce active output power at a minimum rate of 2% per 0.1 Hz*

- 9 Thus, this NPL also teaches that the output power is reduced when the network frequency rises above the nominal frequency.
10. Then the applicant submitted that the only difference between these prior arts and the proposed claim 1 is that these prior arts do not teach the method by which this output power is reduced.
- 11 In this respect, the applicant pointed out that this teaching would come from WO 99/27629 published on 3rd June, 1999 (WO 99/27629 PCT document). This prior art was relied upon by the applicant in its reply after the respondent added the element *inverter* into the proposed claims (Page 12 of the applicant's Reply).
- 12 The applicant also pointed out that this prior art relates to anti-islanding inverters, power converters and generators connected to electric distribution utility grids.
13. The applicant further pointed out that this prior art discloses that the energy source includes wind energy generators.
14. The applicant further pointed out that in case the network frequency rises above the nominal value, then the inverter alters the output power (Page 10; line 26 of the WO 99/27629 PCT document).
15. Thus, a person skilled in the art would combine the teachings of EP'153 patent and WO 99/27629 PCT document to perform claim 1 (as-proposed) and hence claim 1 (as-proposed) is obvious to a person skilled in the art.
16. Further, the applicant argued that the combined teachings of NPL and WO 99/27629 PCT document would make claim 1 obvious to a person skilled in the art.
- 17 Hence proposed-claim 1 (if allowed under section 59) would be obvious to a person skilled in the art and thus, claim 1 (as-proposed) is liable to be revoked.
- 18 The applicant pointed out that there is no reply to WO 99/27629 PCT document cited by the respondent. Even the respondent's expert did not reply to the teachings of WO 99/27629 PCT document.

vi. ARGUMENTS AGAINST RESPONDENT'S COUNTER STATEMENT

- a. The applicant brought the attention of the IPAB to Para 4 (k) of the counter-statement. The respondent had admitted therein that induction

machines can usually be operated in motor and generator mode as well and thus, all explanations given there are applicable to induction generators as well.

- b. Further, the respondent admits that *in practice, it is impossible to vary the pitch of the blades fast enough to match changes in wind speed* (Para 4 (l) of the counter-statement). Thus, according to respondent's admission there is only one viable option to reduce the network frequency. This statement is also supported by the respondent's expert.
- c. Further, the respondent has argued that EP '153 Patent discloses gas turbine only and hence the teachings of gas turbines would not be applicable to wind power installations. In that respect the applicant pointed out that the principle of *reducing the power in case of increased network frequency* is the same in gas turbines and wind power installations and hence a person skilled in the art would use that principle in wind power installations and hence the principle of *reducing the power output* would be obvious to person skilled in the art.
- d. The applicant pointed out that in its counter-statement, the respondent has tried to differentiate the teachings of the prior arts on the ground that *there is no suggestion or indication to reduce the energy fed into the grid* (Page 16, Page 18 etc, of the counter statement). This is also a clear admission of the fact that the act of reducing the power is, if at all, the only inventive feature in claim 1 and not the *inverter reacting on abrupt changes*, which is already shown as obvious to a person skilled in the art.
- e. The only argument put forward by the respondent against NPL was that the teachings of the NPL is related to large power plants, being much larger than wind power installations and hence the teachings would not be used for wind power installations but the respondent never explained in its arguments as to why the teachings of large power plants would not be applicable to wind power installations. The applicant argued that the teachings relating gas turbines or other power plants would be easily applicable to wind power installations as all the plants have to keep under control the network frequency within the upper limit prescribed by the grid controller. All the operators knew in prior art that reducing the power output is the only option to control the network frequency.

vii. EXPERT AFFIDAVITS

- a. The applicant relied upon its expert to state that the proposed claims 1 and 4 are insufficiently disclosed and it would not be possible for a person skilled in the art to determine the scope of these claims (Page 58 of applicant's reply)
- b. The applicant further pointed out that expert has stated that *an inverter in order to provide a reaction on an abrupt frequency change* whereby the

- delivered electrical energy is controlled by means of* the inverter is not disclosed anywhere in the patent specification.
- c. Further, the expert has pointed out that the complete specification does not disclose that the regulation of the electrical power shall commence when the grid frequency is more than 0.3% of its desired value. Hence, in the absence of any support in the specification, it would not be possible for a person skilled in the art to either understand or practise the alleged invention as claimed in independent Claim 1 and Claim 4 of the IN 202887 patent.
 - d. The applicant pointed out that there is no response by the respondent or by the respondent's expert to these observations of applicant's expert.
 - e. The applicant further raised an objection regarding respondent's affidavit by pointing out that how an Australian engineer can give opinion on German technical language and computer systems.
 - f. The applicant further argued that the teaching regarding the invention has to come from the specification and not from any other source. In this regard, the applicant pointed out that the opinion of the expert does not find support in the Patent specification. The opinion of the expert is not based on the teachings of the specification and hence his opinion cannot be relied upon.
 - g. The applicant also pointed out that the respondent's expert himself accepts that there are only two possibilities of controlling the network frequency as already stated by the applicant. It is already shown that only one option is viable to a person skilled in the art to meet abrupt changes in grid frequency and hence that option cannot be inventive.
 - h. Further, the expert did not suggest what is meant by "abrupt changes". Further, the expert has not given any reasons as to why the teachings of "gas-turbine" would not be applicable to wind power installations.
 - i. Further, the expert differentiated the NPL only on the basis that the NPL is related to large power plants and not to wind power plants but the expert has not explained as to why the teachings of large power plants would not be applicable to wind power plants, in particular regarding control of raise in grid frequency.
 - j. Thus, in the light of such short-comings in the expert opinion, the applicant argued that the respondent's expert cannot be relied upon.
- viii. The other submissions contained in the revocation were reiterated. In the light of the above it was submitted that the Patent ought to be revoked both with reference to amended and "as-granted" claims. In any case, the respondent had agreed orally to delete as-granted claims, which is an implied admission as to their invalidity.
 - ix. In light of the above submissions the applicant prayed that the revocation petition must be allowed and the patent (as-granted) and all claims must be

revoked together with the patent (as-amended) and all amended claims must be revoked awarding the costs to applicant.

13 A request has been made on 21st October 2010 with revised set of claims amending the claims as granted. It was also pointed out that the amendments claims now filed are the same as granted in EPO by limiting the scope of the claims which are narrower than the claims as granted in India. Prayer is made by respondent to Appellate Board to consider these revised and amended claims as filed under section 58 of the Act, in case the Appellate Board decides to conclude that the granted claims cannot be held valid and revoking the entire patent.

14 The counsel for the respondent started his arguments first referring to the M.P No 74 of 2010, where the respondent had challenged Mr.Yogesh Mehra's competency to depose an affidavit and has no *locus standi* to initiate revocation application on behalf of Enercon (India) Limited. The counsel said that the matter was heard and decided that this matter would be disposed off along with the other matters of the main application. When they appealed against this order, the Hon'ble Madras High Court had also directed the Appellate Board to consider this issue in the miscellaneous petition along with the other matters in the main application and also to hear and dispose of the matter preferably within three months from the date of their order. Hence the request was made to decide the locus standi issue along with other grounds of the revocation application.

15 Without prejudice to the above issue, the counsel submitted as follows.

i. Corresponding patents have been granted in Australia, Canada, China, Korea, New Zealand and U.S.A.

ii. Problems described in IN 202887

IN 202887 states in the second paragraph that in the case of weak electrical networks, such as island networks, the network frequency can rise ver^l abruptly when a relatively large consumer (load) is separated or disconnected from the electrical network. Under such circumstances conventional generators, such as diesel engines, water wheels, steam or gas turbines, or similar prime movers (drive machines) require some time to respond and reduce their power feed-in. During the time taken to reduce their power output, these generators produce more energy than is absorbed by the electrical network. In other words, a portion of the energy produced by

those generators during this period cannot be fed into the electrical network and this surplus energy is dissipated by accelerating the rotary speed of the generators and as a consequence the frequency of the connected network rises.

iii. Object of the present Indian patent

In paragraph 4 internal page 2 of the description in the patent specification, it is explained that the increase in frequency on the network might damage some consumers' equipment connected to the associated electrical network, such as computers or electric motors. Accordingly, an object of the Indian patent IN '887 is to avoid such frequency variations.

iv. Solution according to the claims

Claim 1 claims a method for operating a wind energy generating plant having the following features:

F1: A method for operating a wind energy generating plant with

F2: a generator for supplying electrical energy to an electricity grid wherein

F3: the wind-energy generating plant has a rotor, having

F4: rotor blades with pitch control coupled to the generator, characterized in that

F5: energy supplied by the generator to the grid is controlled or adjusted as a function of the grid frequency of the electrical grid and

F6: the energy fed into the grid is reduced when the grid frequency is more than 3% above its desired value.

v. Claim 4 is directed to a wind energy generating plant for carrying out the method of claim 1.

vi. The method claimed in claim 1 involves a wind power generating plant having rotor blades with an adjustable pitch angle. By adjusting the pitch angle of the rotor blades, that is, to adjust the angle of the rotor blade with respect to the incident angle of the wind it is possible to control the amount of wind energy captured by the rotor blades and subsequently converted to electrical energy power by the wind turbine. The normal practice adopted by wind power installation owners is to control the pitch angle of the rotor to maximize energy production under the prevailing wind conditions. For a wind power installation, the primary energy source is the wind, which does not cost any money but cannot be saved or reserved. Therefore, feeding less energy into the grid than can be produced is undesirable from an economical perspective. However, contrary to this and in order to support power quality on the grid, claim 1 proposes to reduce the energy fed into the grid, when the grid frequency is more than 3% (sic) above its desired value.

vii. It should be noted that 3% of the frequency of an electrical grid is a very large amount (1.5 Hz on a 50 Hz system). In this respect, it is also noted that

claim 6 states 6 % of the grid frequency, which is even a higher value (3.0 Hz @ 50 Hz), which is well in excess of the frequency operating bands typically imposed on electrical power systems.

- viii. When looking into the description, in the internal page 3 of the patent specification discloses in line 20 a value of 100.6%. In the next paragraph in line 25, an example of 0.6% is given, which is explained as 100.6 %. Figure 1 in the sheet no.1 of the drawing accompanying the patent specification, also discloses 100.6% as the value, where the power output reduction commences. Accordingly, to a skilled person it must be assumed that stated numbers of 3% and 6% in the originally granted claims are in fact obvious typographical errors. There is disclosed an absolute maximum of operating the wind power installation at 102%.
- ix. However, for a skilled person reading the Indian patent IN '887, it is clear that the over-frequency value of feature F6 must be 0.3% (and in claim 3 it must be 0.6%).
- x. In the present proceeding, an amended claim 1 and correspondingly amended claim 4 have been proposed. According to this revised proposal, the 3% and 6% values have been corrected to 0.3 % and 0.6 % respectively. Additionally, the following feature has been added:
- xi. F7. The delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change.
- xii. The general structure of the wind power installation being connected to the grid according to the present Indian patent is illustrated in figure 3 and figure 4 in the sheet no. 2 of the drawing accompanying the patent specification. Both figures show similar situations, but with different symbols and thus with different appearance. However, within both figures the energy produced by the generator is rectified by means of the rectifier (in both figures the block on the left side of the figure) and the rectified voltage, i.e. the DC voltage, is then converted to AC voltage for feeding into the grid by means of an inverter. This inverter is controlled by means of a microprocessor (μP). In other words, the generator is not directly coupled to the grid but effectively de-coupled by means of the rectifier-inverter system. This is also detailed in figure 5 in sheet 3 of the drawing accompanying the patent specification, which shows an inverter (designated by reference numeral 10) between the wind power installation and the grid (network). As a result, the electrical power feeding into the grid can - at least partly - be controlled independently from that produced by the generator. Of course, the inverter can only ultimately feed the electrical energy generated by the generator into the grid

However, to a degree the inverter power output can be controlled and react in a manner that is much faster than the generator itself

- xiii. The above paragraph is an essential part of the teaching underlying this Indian patent IN '887. In the beginning of the description (second paragraph) of the patent specification, it has been explained that the reaction of drive machines (prime movers) to rapidly changing conditions in the electrical grid is fairly slow, mainly because of the inertia of the corresponding prime mover and delays in their energy source control systems (fuel, water, steam, etc). When using an inverter as illustrated in figures 3, 4 and 5 of the drawing accompanying the Indian patent, this drawback is overcome.
- xiv. It should be noted that such a quick response by an inverter requires an intermediate energy storage or dissipation device. This device is illustrated by a capacitor 3 in figure 3 in the sheet 2 of the drawing accompanying the patent specification, which can be used as storage for a small amount of energy. That is, a difference between the energy produced by the generator and the energy fed into the grid can be buffered for a short time by such intermediate circuit. The other option available when using inverters, is to disperse generated energy into "chopper resistors" This provides a short-term means (depending on resistor ratings) of reducing the WTG power output rapidly allowing time for other controls such as the pitch controller, to operate and control the output to reduced levels. Additionally, as the generator is decoupled from the grid by the rectifier-inverter pair, it is possible to absorb energy produced by the generator by accelerating the generator independently of grid frequency and without impacting on grid frequency. The claim is not specific on how the reduced power output is obtained, rather the power in-feed into the network is reduced in an effort to control frequency rise resulting from other factors on the network.
- xv. Within this short period of time, the energy generated by the generator has to be reduced as well. This can be done by means of pitching the rotor blades, i.e. adjusting the angle of incidence of the rotor blades to the wind direction so that they capture less energy. Using this strategy, it is possible for suitable wind power installations to provide a quick response on a frequency change in the grid. This response time would be much quicker than would be possible for traditional energy producer using the prime-movers.
- xvi. The feature F6 also claims to reduce the energy fed into the grid, when the deviation of the grid frequency is more than 0.3 %. As the response of the inverter to frequency changes in the grid can be performed very quickly as explained above, and would be adjustable, control of the grid frequency for frequency deviations below 0.3 % can be avoided and larger settings (such

as a value of 0.6 % as stated in claim 3 and as explained in detail in figure 1 in the sheet 1 of the drawing accompanying the patent specification) chosen to minimize unnecessary operation of the control scheme.

- xvii. Accordingly, the Indian patent IN '887 opens the possibility to use a wind power installation for stabilizing the grid frequency in a manner that is not available to conventional power plants. That is, when an unacceptably large rise in the frequency of the grid occurs, the inverter of the wind power installation can instantaneously react. Within a short time the pitch angle can also be adapted also reducing the energy produced by the generator.
- xviii. The method of controlling grid frequency proposed in the IN '887 patent involves reducing the power fed into the grid by a wind power installation. The approach used by conventional power production to control system frequency generally involves adjusting the energy input to the prime mover by adjusting the fuel supply (be that water, oil, distillate, steam, etc.) and thus altering the rotational speed of the generating units and hence system frequency. This option is not available to wind energy systems as the prime energy source is the wind which cannot be controlled in such a fashion.
- xix. Cited Art WO 99150945 (hereinafter referred to as WO '945 PCT document)
- a. This Exhibit 3 is directed to a wind power installation using an induction generator. Such induction generators are capable of being directly coupled to an electrical AC grid will inherently adapt their frequency and phase angle automatically to the frequency and phase angle of the grid. Claim 1 of this WO '945 explains that" ... the electric generator is an alternating current induction generator (usually a three-phase generator), which is connected to an alternating-current grid ... ". Accordingly, there is a completely different concept underlying an inverter based wind powered generator as described in IN '887 patent.
- b. However, this claim - and this document WO '945 PCT document in general - is concerned with the connection process of connecting the induction generator to the grid at start-up in a manner that reduces disturbances on the grid. The claim explains a so-called "soft start" (page 6, line 14 of the WO '945 PCT document) and the problem of dissipating the generated power during this soft start is addressed using a dump loader. In fact, claims 4 to 6 are directed to an electric dump loader.
- xx. Cited EP 085153 (hereinafter referred to as EP '153 patent)

- a. Exhibit 4 is a European patent with the number EP 0 858 153 is directed to a method for controlling a power plant. It should be noted that according to pages 90 to 111 of the application for revocation EP '153 patent was granted and published in April 2003. The underlying "application" was published on 12 August 1998, but the document EP '153 patent according to pages 90 to 111 of the application for revocation is not the application. However, in the following it has been assumed that at least the description of the EP '153 patent, which was published after the present IN '887 patent, would reflect similar teaching as the underlying application. Even though EP '153 patent might disclose some dead band strategies according to paragraph [001 81], this dead band is discussed in relation to a gas turbine, which is very different in its response time and method in comparison to the approach in the IN '887 patent which incorporates amongst other things an inverter. For a skilled person combining such a feature in a gas turbine with an inverter according to the IN '887 patent would not make much sense. The European patent EP '153 patent is directed to gas turbines as described in paragraph [0006]. A wind power installation is not disclosed and the concept of controlling gas turbines is completely different to the concept of controlling wind power installations. It is to be noted that different provisions applied for connecting of large power plants to the grid on the one hand and connection of smaller decentralized generating units, such as wind farms, on the other hand.
- b. According to the general connection and operational provisions applied grid operators at the time, the concepts of EP '153 patent and the concept of wind power installations are different. Consequently, the skilled person involved with the control concept of the wind power installation is different to the skilled person working in the field of large conventional power plants.
- xxi. Cited US Patent 4.400,659 (hereinafter referred to as US '659 patent).

- a. Exhibit 5 is a US '659 patent which is directed to a method and apparatus for maximizing and stabilizing electric power derived from a wind driven source according to the title. The diagram in US '659 patent shows the complex control concept of the wind power installation, in particular the generator of the wind power installation. As can be seen in the figure, the three-phase output lines 35&b,c from generator 11 are directly coupled to lines 41 b" respectively of the 3-phase AC mains, via contacts KI b., of a relay KI. This is also explained in column 3, fifth to first line from the bottom. Accordingly, the three-phase output of the generator is directly connected and

coupled to the grid making very precise control of the generator necessary. This control technique is described in this US '659 patent. The generator is not connected to, or de-coupled from the grid via an inverter as per IN '887 patent. The behavior of the grid is in fact not the subject of this US patent. Accordingly, this US patent cannot provide any hit for the teaching of the Indian patent IN '887 patent.

- b. Additionally, from the figure it is clear that the structure disclosed in this US '659 patent does not provide rectifying the output of the generator and using an inverter for feeding electrical energy into the grid, but to directly connect the generator to the grid.

xxii. Cited US Patent 5,083,039 (hereinafter referred to as US '039 patent)

- a. Exhibit 6 is a US '039 patent which is directed to a variable speed wind turbine. This document is also basically directed to the operation of the wind power installation and, in particular the controlling of an AC induction generator, which is explained in the abstract. The control strategy of the generator is disclosed in figure 11, which shows the underlying concept, i.e. a field oriented control, indicated by the transformation of the currents i_{s1} , i_{s2} and i_{s3} into the currents $i_{s\alpha}$ and $i_{s\beta}$, and a subsequent transformation into currents i_{d0} and i_{q0} . Both transformations are illustrated in the upper left corner of figure 11 of the US '039 patent illustrated by the block "3/2 trans" and the block "S/R trans.". The control is based on these transformed currents and subsequently, the measured voltages are transformed back by means of the transformation blocks "R/S trans." and "2/3 trans."

- b. However, figure 1 of US '039 patent shows a transformer 36 connecting the complex control structure to the utility grid and figure 2 of the US '039 patent also shows the filter 32 being connected to the grid. Besides that, any indications of a control concept responding to frequency deviations on the grid are not disclosed. A pitch control 48 is disclosed and there are also inverters 28 and 30 disclosed in figure 1 of the US '039 patent. However, the use of these means for providing a control concept according to the Indian patent IN '887 patent is neither disclosed nor suggested.

xxiii. Cited US Patent 4,511,807 (hereinafter referred to as US '807 patent)

- a. Exhibit 7 is a US '807 patent which discloses an electrical generator control system. As explained in the abstract of this document, a stand-alone electrical generator driven by a prime mover such as a wind turbine is disclosed. In order to react to changes in the

frequency of the generator output, switches are provided to connect resistors to change the load connected to the generator. Figure 3 of the US 807 patent explains this as the "resistive dump load", which is connected to the power regulator to control the use of the dump load.

- b. Besides considering the output of a stand-alone electrical generator, rather than the situation in a supply grid, US '807 patent is teaching to connect an additional load and thus proposing to dissipate energy if necessary. Contrary to this teaching, the Indian patent IN '887 patent teaches to monitor conditions in a supply network and control the energy fed into the grid as a means of controlling the grid frequency. Thus, the US '807 patent cannot teach the claimed solution of the IN '887 patent.

xxiv. Exhibit 8 - Paper prepared to be presented at the EWEC 94 Conference in Thessaloniki, Greece (NPL-1) :

- a. According to the first line of this NPL-I above the title headline, it is explained that the present paper was to be presented. Whether this paper has been presented and whether it was available to the public, is not clear.
- b. However, assuming that the NPL-I was laid open to public, this document is directed to non-power quality measures for wind-diesel systems (diesel generator for controlling frequency - also an asynchronous generator). The system tested in this NPL-I document is shown on page 121, left column (internal page 121 of the NPL-1 document—page 178 of the revocation application). The system seems to comprise a wind power installation with an asynchronous generator (AG), a dump load (DL), a diesel engine (DE) connected to a synchronous generator (SG) and a consumer. Two paragraphs below this system structure, it is explained that the system controllers control grid voltage and frequency. It is explained that "frequency is controlled by the diesel governor (downwards) and the dump load controller (upwards), both of them P-controllers." There is no explanation given regarding a frequency control.
- c. In order to understand this paragraph, it is to be noted that in the shown system, there is only one element, i.e. the synchronous generator (SG), which is capable of providing at least an almost constant frequency. In this regard, the synchronous generator is powered by the diesel engine with a rotational speed being as constant as possible. The frequency of the output of the synchronous generator is proportional to the rotational speed of the generator. Accordingly, this synchronous generator can provide a specific

frequency. This is also the reason why this is called "diesel governor" as it governs the diesel motors speed and consequently the SG and system frequency. All other elements adapt to this frequency. That is, an asynchronous generator tries to feed in electrical power with the same frequency. The dump loader can be formed of resistors (similar to the resistive dump load according to the US '807 patent) and is thus basically non frequency dependent. The consumers can be considered to be passive, but they often require a certain frequency.

- d. These are general remarks on what must be assumed according to the structure shown in the figure in the left column of the internal page 121 of the NPL -1 document. However, how the actual controlling of the frequency is performed is not exactly explained. Basically, if the diesel governor is dominant, i.e. large, it can by itself control the frequency and one possibility to control it even further is by regulating the diesel engine (DE) accordingly. However, this is not explained there and it is also not explained what exactly the "dump load controller" (upwards) is supposed to mean. However, the skilled person would assume that the underlying concept is as explained in the US '807 patent, as explained previously. In other words, the dump loader might be used to dissipate energy if there is too much energy in the grid.
- e. However, a specific and quick control by means of an inverter and in particular in combination with adjustment of the rotor blade pitch in order to support the grid frequency this way is neither disclosed nor suggested in this document NPL-1.

xxv. Exhibit 9 (I. A. Erinmez et al., NGC Experience With Frequency Control in England and Wales - Provision of Frequency Response by Generators - NPL-2)

- a. The document directs to a study of the behavior of generators in a grid, in particular the frequency response by generators. Besides that, the present paper is also discussing the frequency control strategy in England and Wales.
- b. In the first sentence under the headline "Introduction" it is explained that system frequency on the British grid system is managed by the NGC (National Grid Company) as the grid operator through instructions to individual generating units for energy commitment, frequency response and reserves and through a partnership role with Scottish power and Scottish hydroelectric. Frequency control requirements are explained under item III on the internal page 591 of

the NPL 2 document. In the right column, there are sudden losses of generation or demand of up to 300 MW explained for one scenario, and losses of more than 1000 MW for other scenarios. From these sizes, it is clear that this paper is directed to large power plant, and not to wind power installations. Wind power installations are also not mentioned in this paper. Instead, the table on the internal page 595 of the NPL-2 document, left column, indicates the three kinds of power plants, which are considered in this NPL-2, i.e. coal, oil, and CCGT (Combined Cycle Gas Turbine).

- c. It has already been explained above that controlling wind power installations on the one hand and controlling large power plants on the other hand requires different skilled persons. In particular, in the year 2000, these were quite different technical fields. Any control techniques involving an inverter and changing pitch angles according to the IN '887 patent are also neither described nor suggested.
- d. The subject-matter of the IN '887 patent is to provide a solution to support the grid by means of a wind power installation. In particular, it proposes a method for reducing the energy fed into the grid by a wind powered generating system when the grid frequency deviates from its nominal value by more than a certain percentage amount. This is achieved rapidly by using an inverter and in addition to pitch control of the wind turbine rotor blade in order to reduce the energy generated by the wind power installation.
- e. This concept is contrary to what was common Utility practice in the year 2000, when wind power installations were to be disconnected from the grid under adverse operating conditions.
- f. The documents cited do neither disclose nor suggest the above concept. In particular, none of these documents proposes the use of a wind power installation with an inverter and a pitch control to support grid frequency control.
- g. Person skilled in the art may be aware of how to feed in power into the grid by means of an inverter, but the claimed invention is directed to the circumstances as to when to feed power into the grid.

16 SUBMISSIONS FOR AND BEHALF OF RESPONDENT

- a. The present patent is directed to a method for operating a wind energy generating plant and a corresponding wind energy generating plant, whereby the energy supplied to the grid is controlled as a function of the grid frequency of the electrical grid. Amendments of the claims have been proposed and at the beginning of the hearing, the applicant's

Learned Counsel agreed to relying on the amendments only and thus, the claims as originally granted have not been discussed, but only the amended version.

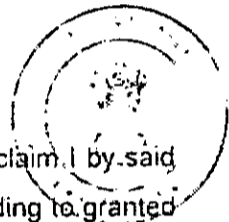
b Claim 1 as amended reads:

- F 1 A method for operating a wind energy generating plant with
 F2: a generator for supplying electrical energy to an electricity grid, wherein
 F3: the wind energy generating plant has a rotor, having
 F4: rotor blades with pitch control coupled to the generator, characterized in that
 F5: energy supplied by the generator to the grid is controlled or adjusted as a
 function of the grid frequency of the electrical grid and
 F6: the energy fed into the grid is reduced when the grid frequency is more than
 3 % (that is 0.3 %) above its desired value, whereby
 F7 the delivered electrical energy is controlled by means of an inverter in order
 to provide a reaction on an abrupt frequency change.

c. New claim 4 is directed to a wind energy generating plant for carrying out a corresponding method.

17 Amendments

- i. New claim 1 has been amended with respect to granted claim 1 by said additional feature F7. Additionally, the value of 3 % according to granted claim 1 (and claim 4 as well) has been corrected to 3 % (that is 0.3 %). Claim 3 has also been amended by correcting 6 % in 6 % (that is 0.6 %). These corrections have been admitted to be obvious by the applicant's Counsel having regard to the original disclosure as well as with respect to scope of invention.
- ii. As on record, performing the control by means of an inverter was originally disclosed in the specification. However, the applicant alleged that the delivered electrical energy being controlled by means of an inverter in order to provide a reaction on an abrupt frequency change would not have been originally disclosed. In this respect, the applicant pointed to the internal page 4 of the patent specification (page 30 of the application for revocation) according to which it would be explained that reducing the energy in accordance with a frequency change would be performed by reducing the energy generated by the generator, in particular by means of changing the angle of the rotor blades (by pitching).
- iii. However, the description of the impugned patent in the second paragraph of the internal page 2 of the patent specification (revocation application, page 28) clearly explains that abrupt frequency changes are a problem, which normal drive machines, such as for example diesel engines, water wheels or the like cannot handle or compensate quickly



enough. In the next paragraph, it is explained that such abrupt changes in the network frequency can result in damages to electrical machines. The even further paragraph explained that these explained problems were the object of the present invention.

- iv. Accordingly, providing a control in order to provide a reaction on an abrupt frequency change is clearly disclosed.
- v. The applicant seemed to focus on whether such control was performed by controlling the generator or by means of the inverter
- vi. The respondent's Expert, Robbert Starn, having a long experience on integration of connection of high voltage transmission systems in South Australia, including extension to the grid, the connection of a large scale generation, and interconnection with transmission grids in other Australian states, explains in his affidavit on the fourth page, last full paragraph, his understanding of a quick response by an inverter according to the present patent.
- vii. It is also clear from the patent that the energy produced by the generator is finally fed into the grid (indicated by the three lines L1, L2 and L3) by means of an inverter 4 (according to figure 3) or the inverter 18 (according to figure 4). In other words, any frequency dependent control of the energy fed into the grid must be performed by the inverter. That the generator is also controlled in this respect is not excluded by the claim. Therefore, the feature of controlling the delivered electrical energy by means of an inverter in order to provide a reaction on an abrupt frequency change was originally disclosed.

18 Sufficient disclosure

- a. The applicant alleged with respect to claim 1 (and probably claim 4 respectively) that reducing the energy when the grid frequency is more than 3 % (0.3 %) above its desired value would not find any support in the specification.
- b. In Law, the claims as such, i. e. claim 1 and claim 4, are part of the specification as well. However, figure 1 and the corresponding description on the internal page 3 of the patent specification, last two full paragraphs (revocation application, page 29) clearly explain the area of frequency change in a range from 100 % as the nominal value and 102 % as the maximum limit, where the wind power installation has to be shut off. Within this range, it is further explained the value of 6 % (0.6 %) above the nominal value, i.e. the value of 100.6 %. The value of 3 % (0.3 %) above the nominal value (i.e. 100.3 % is thus another value described within that clearly described range) The applicant's Counsel has conceded to this after that was pointed out during the hearing.

- c. Therefore, for a skilled person, the subject-matter of claim 1 (and claim 4 accordingly) IS sufficiently disclosed and described

19 Obviousness

As a general remark, the applicant was stressing on a parallel litigation proceeding before the London High Court, according to which the corresponding UK-patent was "accepted to be invalid". It was explained by the patentee that said UK-patent was - even though used for litigation at the beginning - not pressed during said proceedings, but said litigation proceedings were commenced only based on the "remaining" UK-patents. The applicant further submitted that the European patent would have been revoked according to a court decision of said proceeding before the London High Court. However, it is to be pointed out that no appeal was filed against the decision of the London High Court, and that was for economical reasons. For clarification, it has also been pointed out that not the European patent as such was revoked, but that only the parts of the European patent for some countries (GB, Me, NL, TR) have lapsed.

Obviousness over claim 1 as granted?

However, amended claim 1 of the Indian patent is different from claim 1 of said UK-patent and thus, the question of patentability, in particular of obviousness must be evaluated for the complete claim. Only evaluating obviousness of the amended claim over the granted claim, i. e. only regarding the amendment is not sufficient

20 EP 0858 153

- i. The applicant pointed to the European patent EP 0 858 153 and to claim 1 of this European patent. However, the corresponding patent application was published before the priority date of the present Indian patent, but the claims of the European patent application, as published, were different from the claims of the European patent, as granted, whereas the applicant did indeed point to claim 1 of the European patent. Claim 1 of the corresponding European patent application, as published, is attached and marked "X".
- ii. The European patent EP 0858 153 B1 discloses a method for controlling a power plant being a gas turbine, but, that document does not disclose a method for operating a wind energy generating plant (feature F1), a wind energy generating plant having a rotor (feature F3) and rotor blades with pitch control coupled to the generator (feature F4) reducing the energy fed into the grid, when the grid frequency is more than 3 % above its desired value (feature F6) and that the delivered electrical energy is controlled by means of an inverter in order to provide a reaction of an abrupt frequency change (feature F7).

iii. Just to allege that all these missing features (F1, F3, F4, F6 and F7) would be obvious for a skilled person is not sufficient.

iv. In this respect, it has been explained in particular by relying on the expert evidence of Robbert Starn, that feeding electrical energy into a utility grid by means of a wind power installation was handled in completely different manner, from what is done for feeding electrical energy into the grid by means of a large power plant, such as a power plant mentioned in the EP'153. In other words, in the year 2000, wind power installations were not used to control the grid, but just to feed in electrical power into the grid, which was controlled by means of the large power plants.

v. Grid Codes

The applicant itself has mentioned the so-called grid codes, which provide provisions on how to feed energy into the grid. Such grid codes, in the year 2000, clearly distinguished between large power plants on the one hand and small, decentralized power plants, such as wind power installations, on the other hand.

vi. Frequency rise = too much power?

The applicant also alleged that it would have been known that "when the frequency rises, the energy to be fed into the grid must be reduced" However, this seems to be in compliance with the explanation of the second paragraph of the description of the Indian patent, but in fact, this statement is simplified in order to allege that such reducing of energy to be fed into the grid is obvious.

vii. Clearly reading and understanding said second paragraph of the description of the Indian patent makes clear that the frequency rises only because, and accordingly only when a relatively large consumer is separated from the electrical network and the drive machines, such as for example diesel engines, water wheels or the like require some time in order then to reduce their (mechanical and electrical) power, as that excess energy is consumed for accelerating the generators. Accordingly - as is clear for a skilled person - the phenomena of increasing frequency as an indication of too much energy in the grid is clearly related to a grid, which is basically controlled by such large power plants (such as the one disclosed in EP' 153).

21 1 MW Wind power installation controlling 500 MW Grid?

Therefore, is it really obvious for a skilled person that when a 500 MW power plant (which is a small size power plant) feeds too much energy into the net resulting in the rise of a frequency, an one MW wind power installation (which is a

large wind power installation in the priority date 2000) is used to control the excess energy of that large power plant?

22 Saving Wind Energy?

In addition, what has also been explained, there is one particular further difference of a wind power installation with respect to normal power plants, such as the gas turbine disclosed in EP' 153. That is, a wind power installation cannot save primary energy. The primary energy of the gas turbine is the gas, which can be saved if the energy produced is reduced. The primary energy of the wind power installation is the wind, what cannot be saved. Therefore, and contrary to regular power plants, a wind power installation always attempts to feed as much energy into the grid as possible.

23 NPL-2

- a. As a further document, the non-patent literature NPL-2, starting at page 188 of the application for revocation was cited by the applicant during the hearing. This document is directed to power plants using coal, using oil and to combined cycle gas turbines (CCGT) as explained on page 193 of the application for revocation, i.e. page 595 of the NPL-2, in the table on the left column.
- b. This document also does not disclose the features F1, F3, F4 and F7 either.
- c. For any allegation that a skilled person would adapt any teachings of such document to a wind power installation has absolutely no support in any of the cited documents. Contrary to this, in the year 2000, the control strategies of large power plants, on the one hand, and wind power installations, on the other hand, were handled differently. This has also been explained by the expert, Robbert Starn, in his affidavit under item 8. [Summary, second paragraph.] According to that paragraph, the concept of the Indian patent is contrary to what was common utility practice in the year 2000, when wind power installations were to be disconnected from the grid under adverse operating conditions.

24 WO 99/27629

Finally, the applicant's Counsel handed over a copy of the international patent application WO 99/27629, corresponding to an anti-islanding method and apparatus for distributed power generation. He referred to the figure of the abstract and the abstract, according to which variations in the voltage and frequency of a grid (5) are detected and measured. He also pointed to page 9, last paragraph, according to which an independent power source 10 can be, inter alia, from wind

He further pointed to the paragraph bridging pages 10 and 11, according to which a utility measurement section 30 monitors the grid for voltage, frequency, phase and current levels. It further says in that paragraph that the inverter responds to the control unit 70 and alters the power source 10 that is connected to the grid 5. The applicant's Counsel summarized that this document would disclose wind power installations changing power fed into the grid in dependence on grid frequency. However, this summary is not in view of the true content of this application, as explained below.

25 True content of WO 99/27629

- a. First of all, this document is directed to an anti-islanding method according to the title. On page 2, lines 21 to 25, it is explained, what is islanding. According to that paragraph, islanding is the continued operation of a grid-coupled power converter, generator or independent power source in general, in cases where the utility grid has been switched off, cut-off or the distribution lines have been damaged, so that no electric energy is delivered from the utility side. In other words, this document is concerned with the situation when there is no connection from the generator to the grid.
- b. In accordance with that understanding, the invention under the headline "Summary of the invention" is explained in page 7, lines 19 to 22, explaining.

"This invention relates to the problem of ensuring that distributed power generation equipment (equipment that is designed to feed power into the power grid) will de-energize when the connection to the main utility power source is lost."

- c. Accordingly, this document is not directed to stabilizing the utility grid as such, but to control a disconnected branch such that it can be reconnected.
- d. Coming back to the paragraph bridging page 10 to page 11 cited by the applicant, this refers to monitoring the grid for voltage, frequency, phase and current level. It further says that the power source 10, that is connected to the grid 5, can be altered. This paragraph has to be understood in view of the corresponding figure, i. e. the figure presented on the cover page, which is also the figure the applicant referred to. That figure shows a grid 5 and also a utility AC power source 60 on page 11, lines 15 to 21, it is explained that the utility power source 60 may be a national power grid, a single generator as in a remote village or a plurality of generators as in a power station with several gensets feeding a mini-grid. The utility power source 60 is a primary controller of the grid and generates the power source at the proper frequency and voltage levels for that grid. The standards for frequency, phase, voltage and current can vary and the utility power source

is responsible for maintaining consistent and dependable power.

- e In other words, the utility power source 60 is in fact the electricity grid in the meaning of feature F2 of the Indian patent. The grid 5 mentioned in figure 1 (the figure of the cover sheet) is in fact the disconnected branch. Figure 1 also clearly discloses the utility disconnect 50.

26 Summary WO 99127629

- a. To summarize, if there is a disconnection of a branch (grid 5) by means of the utility disconnect 50, disconnecting said branch (grid 5) from the electricity grid (utility AC power source 60), the power converter system 100 tries to control the disconnected branch (grid 5) in such a way that it can be reconnected to the electricity grid (utility AC power source 60). Accordingly, the described system is clearly not disclosing or even suggesting any strategy to control the electricity grid (utility AC power source 60) by means of the power source 10. In fact, the cited paragraph on page 11, i. e. lines 15 to 21 clearly explains that said utility power source is responsible for maintaining consistent and dependable power

- b. Even further, this document supports what has already been explained by the patentee, in particular by the expert Robert Starn, according to which independent energy sources, such as wind, can sell the utility company excess power from their source (first paragraph on page 2 of WO 99/27629)

- c. The third paragraph explains:

"Utility companies are concerned that power converters used for distributed electric power generation may continue to generate and feed the grid, or parts of the grid, even if the utility connection to the grid is disabled."

- d This clearly explains, what has been stated above, i. e. that the utility companies do not consider distributed electric power generation to be part of their grid capable of supporting their grid, but just a distributed power source, which sells some energy to these utility companies.

- e. The voluntary amendments proposed for the claims and description fully comply with the statutory conditions laid down in Section 59 of the prevalent Indian Patents Act.

[Reference is made to various established propositions of Law, discussed in Paragraph 5-15; 6-19; 6-20 and 16-113 of 'Patent Law' by P. Narayanan (4th Edition)]

- 27 The respondent pointed out that the applicant has not relied on the grounds of the novelty of the subject patent and so it is admitted that the subject patent does not lack novelty thereof.

28 **Amendment of claims**

A miscellaneous petition has been filed on 21st October 2010 with revised set of claims amending the claims as granted. It was also pointed out that the amendments are merely directed to combining of granted claims 1 and 2 thereby limiting the scope of the claims. Even though the amendments as such have been recently filed, the amendments made in the claims were part of the claims as originally filed and granted. Prayer is made to the Hon'ble Board to consider these revised and amended claims as filed under section 58 of the Act and in case the Hon'ble Board decides to conclude that the granted claims cannot be held valid and revoking the entire patent.

29 **Reply to respondent's arguments**

- a. In the *Windsurfing case* the patentee tried to amend the claims at the last stage during the trial. The Court opined that claim amendment may be made to overcome the objection of novelty. However if the impugned patent is lacking inventive step, no amendment can be made to include any change in the inventive concept by such amendment. Unless there are surprising results such an amendment cannot be allowed. Moreover the amendment cannot be used as a last minute tool to make the case survive the attack by converting a non-essential element into an essential element by combining the dependent claims into the independent claims. Thus the amendment moved by the respondent should not be allowed since there is no inventive step in the impugned patent.
- b. Finally the applicant's counsel ended his arguments with the prayer that as the impugned patent does not have any inventive step, the same may be revoked.

30 We have heard the arguments of both the counsel and have gone through the pleadings and the documents filed in support thereof.

31 **Person interested**

In this case, the respondent has first raised a question of *locus standi* for the person who has filed the application for revocation for and on behalf of the applicants that he is not authorized and is not "the person interested" to file a

revocation petition. The respondent has taken the ground that in terms of the articles of association of the company, Mr. Yogesh Mehra, the Managing Director lacks the competence to file a revocation application for and on behalf of the applicants for revoking the patent granted to the respondent, as the reliance placed on the articles of association is wrong and the power is not conferred on him to execute any such legal action, and more so when the matter is still pending before the company law board. The applicant had stated that Mr. Yogesh Mehra, being the Managing Director has been authorized by the Board resolution dated 26th April 2007 to defend and initiate suits and proceedings on behalf the applicant and that in terms of the articles of association of the company, Mr. Yogesh Mehra, being the Managing Director has the requisite *locus standi* to file and institute the revocation proceedings. Appellate Board has the power only to check as to whether the applicant filing the revocation, namely the applicant company, herein M/s. Enercon (India) limited is a "person interested" or not according to the Act under which this proceeding has been initiated.

32 Now we wish to point out that this issue of locus standi of Mr. Mehra has already been discussed and decided earlier in Para 7(g) *ante*. The Company Law Board having not granted any interim order after 29.10.2007 and 19.5.2008, as on date, the Board resolution is valid and subsisting. It has not been set aside or stayed by any court / judicial body. Under these circumstances, it cannot be said that Mr. Mehra has no *locus* or authority to sign the revocation applications on the strength of the resolution dated 26.4.2007. Miscellaneous Petition No.50/2010 is therefore dismissed. As such it cannot also be held that the applicant company is not a person within the meaning of sections 2(1)(s) or 64 of the Act.

33 Now we have to see whether the applicant is a person interested or not to file a revocation application. According to section 2(1)(t) of the Act, "person interested" is defined as below:

"Person interested" includes a person engaged in, or in promoting, research in the same field as that to which the invention relates;"

34 The word or expression "person interested" appears under sections 25 as well as 64 of the Act, dealing with opposition proceedings to the grant of patent

before the Controller and revocation proceedings before this Appellate Board. In fact the actions taking place in opposition proceeding is almost analogous and similar to the revocation proceedings before this Appellate Board, excepting for the creation or constitution of an opposition Board under section 25(3) (b) of the Act, to examine and submit the recommendation to the Controller who is to hear the opposition parties. As per Patent Law by P. Narayanan, it could be clearly seen or stated that there are three grounds upon which the opponent can establish his *locus Standi* to oppose the grant of patent or to seek the revocation of the patent, which are mainly.

- 1) possession of patents in the same field as the invention relates;
- 2) manufacturing interest relating to a similar product being manufactured by the patentee; and
- 3) trading interest..

35 In AIR 1983 DELHI 496 *Ajay Industrial Corporation Vs. Shiro Kanao* of Ibaraki city, para B in page 496, it was held that, "person interested" must be a person who has a direct, present and tangible commercial interest which was injured or affected by the continuance of the patent on the register. The applicant's counsel stated at the very beginning, that they are the one of the foremost leaders in the wind energy sectors in India and they manufacture and install wind turbines all over India and thus they are an interest person within the meaning of the Section 2(1)(t) as well as the Section 64 of the Act. In view of this judgment, we have to check and find out whether this applicant is a person interested as per the requirement of the Act under which these proceedings are taking place

In the above same reported case law, it was held that *"the person interested within the meaning of section 64 of the Act must be a person who has a direct, present and tangible commercial interest or public interest which is injured or affected by the continuance of the patent on the register."*

36 In *Globe Industries Corporation's Patent (1977) R.P.C 563* in the Supreme Court of Judicature – Court of Appeal, Lord Justice Scarman observed that, *"where the statute uses the words 'any person interested', the interest has to be genuine; the possibility of prejudice has to be genuine and in addition, and quite independently, the Court must be satisfied that the opposition or*

the application for revocation, as the case may be, is not a frivolous, vexatious or blackmailing operation."

And in the same case law, *Globe Industries Corporation's Patent (1977) R.P.C 563* in the Supreme Court of Judicature – Court of Appeal, Lord Justice Goff observed that, *"what an opponent on an application for revocation has got to establish is that there is genuine interest which may be prejudiced; Of course, the prospect of prejudice must be real, not speculative or fanciful and it must be a prejudice to present a commercial interest."*

37 In *Mediline A.G's Patent, (1973) R.P.C 91* before the patents Appeal Tribunal, Mr.Justice Graham has held that, *"there must be a real, definite and substantial interest to prove the commercial interest and that it must be a genuine interest. There must be the existence, or the likelihood of real prejudice."*

Therefore applying the same analogy here, we find that, as regards first ground, there is no evidence before us to show that the applicants are in possession of any patents in the same field. As regards the second ground i.e., the manufacturing interest, the applicants are one of the foremost leaders in the wind energy sectors in India and they manufacture and install wind turbines all over India and this establishes the manufacturing interest. As regards the trading interest, looking at the ruling of the Solicitor General, Sir Thomas Inskip in *Clavel's application, 45 R.P.C 222* and a previous ruling by Sir Stanley Buckmaster in *New Thing's application, 31 R.P.C 40* that *"a trading interest to be effective, must be a real, definite and substantial interest and must not arise from something that the opponent proposes to do"*.

38 It is very clear that the applicants have been manufacturing and installing the wind turbines shows the trading interest of the product, too, as *"a person interested"* in opposing the grant or revocation of the patent. Therefore what an applicant for revocation of patent, (the applicants herein) has to establish is that there is a real and genuine interest together with a commercial interest, which may be prejudiced when such a patent is granted. The applicants have shown that they have been manufacturing and installing wind turbines all over India and this shows that they

have a real and genuine interest together with a commercial interest in the product. In view of the above said findings, we find that undoubtedly *locus Standi* is established by the applicants and they are "the person interested" in this case sufficiently meeting the requirement of section 2(1)(t) of the Act.

39 Common general knowledge

Now we shall see as to whether a common knowledge on the date of the patentee's claim would amount to anticipation by way of public knowledge destroying the novelty or affecting the inventive step. First we should see what is a common general knowledge?

"Criteria for "Common General Knowledge"

It is important to have a clear understanding of the meaning of the common general knowledge. It is the background technical knowledge available to all in a particular trade while doing or carrying out a product development activity

40 The common general knowledge as described by Laddie J in *Raychem Corp's Patents* [1998] RPC 31 at 40, "The common general knowledge is the technical background of the notional man in the art against which the prior art must be considered ... It includes all that material in the field he is working in which he knows exists, which he would refer to as a matter of course if he cannot remember it and which he understands is generally regarded as sufficiently reliable to use as a foundation for further work or to help understand the pleaded prior art. This does not mean that everything on the shelf which is capable of being referred to without difficulty is common general knowledge nor does it mean that every word in a common text book is either. In the case of standard textbooks, it is likely that all or most of the main text will be common general knowledge."

41 The law as to what constitutes common general knowledge is also set out in the decisions of the Court of Appeal in *General Tire & Rubber Co v Firestone Tyre & Rubber Co Ltd* [1972] RPC 457 at 482-483 and *Beloit Technologies Inc v Valmet Paper Machinery Inc* [1997] RPC 489 at 494-495;

In *General Tire v Firestone* [1972] RPC 457 at 482: it is held, 'on the other hand, common general knowledge is a different concept [sc. from public knowledge]

derived from a commonsense approach to the practical question of what would in fact be known to an appropriately skilled addressee - the sort of man, good at his job, that could be found in real life.'

In **Beloit v Valmet [1997] RPC 489 (CA)**. Aldous J held: "At the same time, the skilled man should not be taken to represent some sort of lowest common denominator of persons actually engaged in the field, possessed only of the knowledge and prejudices that all of them can be said to possess. The common knowledge of different groups employed on the same tasks in different organizations is likely to be different, and it is unlikely that the expert witnesses will be truly representative of the skilled person, as not only may they be too well qualified but they will come to the case with personal prejudices or preferences that must be discounted:"

42 Luxmoore J. in **British Acoustic Films (53 R.P.C.221 at 250)** stated: "It is not sufficient to prove common general knowledge that a particular disclosure is made in an article, or series of articles, in a scientific journal, no matter how wide the circulation of that journal may be, in the absence of any evidence that the disclosure relates. A piece of particular knowledge as disclosed in a scientific paper does not become common general knowledge merely because it is widely read, and still less because it is widely circulated. Such a piece of knowledge only becomes general knowledge when it is generally known and accepted without question by the bulk of those who are engaged in the particular art; in other words, when it becomes part of their common stock of knowledge relating to the art."

43 The correct explanation was given by the Court of Appeal in **Beloit Technologies Inc V Valmet Paper Machinery Inc (1997) RPC 489 at pages 494-495:-** "The information in a patent specification is addressed to such a man and must contain sufficient details for him to understand and apply the invention. It only lacks an inventive step if it is obvious to such a man. It follows that evidence that a fact is known or even well-known to a witness does not establish that fact forms part of the common general knowledge. Neither does it follow that it will form part of the common general knowledge if it is recorded in a document."

44 In *ICI Chemicals & Polymers Ltd., Vs. Lubrizol Corps*, 45 IPR 577 Emmett J stated, *"the common general knowledge is the technical background to the hypothetical skilled worker in the relevant art...but also includes the material in the field in which he is working which he knows exists and to which he would refer as a matter of course."*

45 Thus from the above cases, common general knowledge is the common knowledge in the field to which the invention relates. It is generally known as common knowledge and regarded as a good basis for further research activity by those engaged in that art before it becomes part of their common stock of knowledge relating to the art, and then becoming part of the common general knowledge. Therefore it means the information which at the date of the patent in question is known and accepted without question by those who are engaged in the art or science to which the alleged invention relates. It would also appear therefore, that when it is a question of common general knowledge i.e, knowledge available in a country for a long time, which every skilled worker in that field is, expected to know. Then such knowledge would be sufficient to invalidate a patent. Again such knowledge need not even be found in a particular document. In other words a patent application has to be assessed on the basis of not only what will be available from prior documents but also from the common general knowledge on the subject, which may or may not be available in any such document. It can be taken as a well settled principle, that the common general knowledge is a knowledge that must be attributed to a skilled person, without which he may not be taken to be a skilled person in the art. Therefore it is a knowledge that every skilled person should acquire before he embarks on the problem for which the patent provides the solution. A patent can therefore be taken to be addressed to the skilled addressee, someone skilled in the subject matter of the invention. It is also important to differentiate between matter which was in the public domain at the priority date of the patent and matter which can properly be regarded as common general knowledge. Evidence that a particular fact is known or even well-known to a witness does not mean that it is common general knowledge. Likewise, a piece of information disclosed in a scientific paper does not become common general knowledge merely because it is widely read. On the other hand, it is not necessary

to show that the information is known in the sense that the skilled person has memorized it. Material which is known to exist and to which the skilled person would refer as a matter of course if he cannot remember it is clearly part of the common general knowledge.

46 Skilled person in the art

A patent specification is addressed to those likely to have a practical interest in the subject matter of the invention, and such persons are those with practical knowledge and experience of the kind of work in which the invention is intended to be used. The addressee reads the specification with the common general knowledge of persons skilled in the relevant art. He is unimaginative and has no inventive capacity. So a patent must be considered through the eyes of the notional person skilled in the art. The 'notional skilled person' who is the addressee of the specification is normally described in various ways for various purposes. The skilled person is essentially a legal construct, and not a mere lowest common order of all the persons engaged in the art at a particular time.

47 The Patentee shall disclose all the features of the invention in the specification, without any ambiguity, in return to the exclusive monopoly right which is granted to him. A patent can be granted only when all the three following criteria are satisfied or complied with. They are,

- a. New and useful
- b. Inventive step or non-obviousness
- c. Capable of industrial application

48 The first criterion is the novelty of the product, which is to be patented. Novelty is not defined in the Indian law, but the 'invention' and "inventive step" are defined as below under section 2(1)(j) and 2(1) (ja) of the Act respectively;

"(j) "invention means a new product or process involving an inventive step and capable of industrial application;"

(ja) "inventive step" means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art;"

49 Amendment of claims

Respondent in the revocation application came up with a specific request on 21-10-2010 with a revised set of claims, stating that the amendments are merely in the form of clarity and correction of typographical errors in the granted claims thereby he is limiting the scope of the claims and requested that the revised claims filed under section 58 of the Act may be considered rather than revoking the entire patent.

50 Respondent in the revocation application proposed amendments in the claims when they filed the counter statement on 19-3-2010. During the hearing on 21-10-2010 the respondent submitted that amendments have been proposed, proposing amendments to the claims in the granted patent. The amendment proposal was not accompanied by any M.P and it was not even numbered by the Registry and was not listed before us. The amendments having been filed along with the counter statement, keeping the law of natural justice in view and consideration, and respondent having admitted first that he is not pressing for the claims as granted, but requested for perusal of the claims as proposed for amendments for allowability under section 58 & 59 of the Act. Therefore the respondent having agreed for the proposed amended claims he was allowed to argue and defend and also establish the onus as to why he is seeking the amendments and also why the same should be allowed. Finally the respondent requested that the revised claims filed under section 58 of the Act may be considered rather than revoking the entire patent.

51 The amendments which have been proposed must be complying with the requirements of section 59 of the Act. Section 59 (1) of the Act reads as follows:

"(1) No amendment of an application for a patent or a complete specification or any document relating thereto shall be made except by way of disclaimer, correction or explanation, and no amendment thereof shall be allowed, except for the purpose of incorporation of actual facts, and no amendment of a complete specification shall be allowed, the effect of which would be that the specification as amended would claim or describe matter not in substance disclosed or shown in the specification before the amendment, or that any claim of the specification as amended would not fall wholly within the scope of a claim of the specification before the amendment."

52 The respondent amended the claims 1, 3 and 4 by adding certain features and correcting a mistake. Claim 1 (as-proposed) is a method claim and claim 4 (as-proposed) is product claim for carrying out the method claimed in claim 1.

53 The respondent submitted that as-granted claim 1 claimed a method wherein *the energy fed to the grid is reduced when the grid frequency is more than 3% (that should have been 0.3%) above the desired value* and submitted that it was a typographical error (instead of 0.3% it was erroneously indicated as 3%) and 0.3% would fall within the scope of the specification as filed. The respondent further submitted that 0.6% is shown in figure 1 in sheet 1 of the drawing accompanying the patent specification. Further the respondent submitted that new claim 1 has been amended with respect to granted claim 1 by including an additional feature of performing the control by means of an inverter. Additionally, the value of 3 % according to granted claim 1 (and claim 4 as well) has been corrected to 3 % (that is 0.3 %). Claim 3 has also been amended by correcting 6 % in 6 % (that is 0.6 %) Further the respondent also mentioned that at internal page 3 lines 24 to 30 of the patent specification and hence this element is well within the scope of section 59.

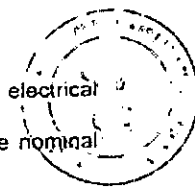
54 The applicant submitted that the proposed claim 1 would not satisfy the requirements of section 59 because of the following points:

1. The limit 0.3% has not been disclosed in substance in the as-filed patent specification;
2. The element *inverter delivering electrical energy to provide a reaction on an abrupt frequency change* is not supported by necessary description in the patent specification.

55 The applicant submitted that the limit 0.6% is present in the patent specification (Figure 1 read with internal page 3 of the patent specification—i.e. Page 29 of the revocation application) but the limit 0.3% is totally contrary to the teachings of the patent specification. The applicant further pointed out lines 23 to 29 at Page 29 of revocation petition and read the following lines.

"The electrical power of the wind power installation is not yet regulated downwardly for example upon a rise in the network frequency by 0.6% (that is to say to 100.6%)".— Thus downward regulation from 0.3% was contrary to the teaching of the patent specification as filed.

56 The applicant submitted that it is clear from the above that the electrical power is not regulated till the time the frequency reached 100.6% of the nominal value whereas now in the amended claim the respondent is claiming that power is regulated downwardly from the time the frequency reaches 100.3% of the nominal value, which is totally contrary to the teachings of the patent specification. The respondent is trying to claim that which is totally contrary to the teachings of the patent specification and hence this amendment should not be allowed. The applicant has also relied upon its expert affidavit to show that the complete specification does not disclose that the regulation of the electrical power shall commence when the grid frequency is more than 0.3% of its desired value (applicant's Reply; Page 58). Further, the applicant pointed out that there is no technical data to show that there is some inventive feature in reducing the energy when the frequency reaches 100.3%. The applicant argued that the upper limit is basically set by the grid controller and the respondent has no role in fixing the upper limit i.e 102%. It is common general knowledge that a wind power installation cannot function if the frequency reaches 102% or more. Thus, a person skilled in the art would obviously reduce the energy anytime after the nominal frequency is exceeded so as to be within the upper limit. Hence, there is no inventive step in having the limits of 0.3% or 0.6% and the utility of such limits has not been explained anywhere in the specification. Further, the applicant argued that although the *inverter* is shown in figure 6 in the drawing accompanying the patent specification, but the fact that this *inverter regulates the power in reaction on an abrupt change* is not disclosed anywhere in the specification. Further, the specification does not teach what is meant by *abrupt change*. Thus, this element does not fall within the scope of as-filed specification and hence, this amendment should be rejected. The applicant also pointed out that this element does not wholly fall within the scope of any of the as-granted claims of the specification before the amendment and hence this amendment also should be rejected. The applicant submitted that as-proposed claim 1 and 4 should be rejected as they do not satisfy the requirements of Section 59 and also submitted that since claim 3 is dependent on claim 1, claim 3 should also be rejected.



57 We have heard the arguments of both the counsels as regards the amendments of the claims, which is to be decided first, before taking up the other grounds of objections for revocation.

58 Amended claim 1 is produced below:

Claim	"As granted" Claim	Proposed Claim
1	A method for operating a wind-energy generating plant.....characterized in that energy supplied by the generator to the grid is controlled or adjusted as a function of the grid frequency of the electrical grid and the energy fed to the grid is reduced when the grid frequency is more than 3% above the desired value.	A method for operating a wind-energy generating plant.....characterized in that energy supplied by the generator to the grid is controlled or adjusted as a function of the grid frequency of the electrical grid and the energy fed to the grid is reduced when the grid frequency is more than 3% <u>(that is 0.3%)</u> above the desired value <u>whereby the delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change.</u>

From the table above the following two elements have been amended in claim 1:

- 3% is changed to 0.3%;
- The delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change.

59 We find that on a perusal of the whole patent specification, it is very clear that the limit 0.3% has not been disclosed in substance in the as-filed patent specification and no amendment in the claims or in the specification has ever been carried out till date before the start of this proceedings before us, we also find that it is correct that limit of 0.6% is present in the patent specification [Figure 1 (shown below)read with the description in the internal page 3 of the patent specification— i.e. Page 29 of the revocation application] but the limit of 0.3% is not found in the patent specification and totally contrary to the teachings of the patent specification

Further as pointed out by the applicant the inverter element delivering an electrical energy to provide a reaction on an abrupt frequency change in the network grid side, is not supported by necessary description in the patent specification.

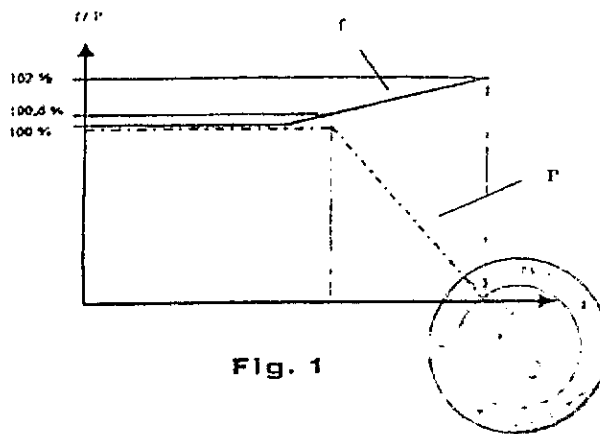


Fig. 1

60 This is also quite clear from the above that the electrical power is not regulated till the time the frequency reached 100.6% of the nominal value whereas now in the amended claim the respondent is claiming that power is regulated downwardly from the time the frequency reaches 100.3% of the nominal value, which is totally contrary to the teachings of the patent specification. Therefore it is clear that the respondent is trying to claim a feature, that is devoid of necessary supportive description in the specification as filed or which is totally contrary to the teachings of the patent specification as filed and hence this amendment in claim 1 is beyond the scope of the provisions contained in section 59 of the Act. Similarly making such amendment like in claim 1 in the dependent claim 3 is not allowed. Similar is the situation making such amendment in claim 4 which is an apparatus claim to carry out the method claimed in claim 1, but this amendment of 3% into 0.3% in the apparatus claim 4 is also not supported by necessary description in the patent specification as filed. In the absence of such supporting description in the patent specification as filed, making any amendment later date in the claim or in the specification will not be equivalent to the specification before amendment so as to allow the amendment to fall wholly within the scope of the same. Therefore the amendment sought in the claim 4 is also not allowed. Further, as pointed out by the applicant that although the *inverter* is shown in figure 6 in the drawing

accompanying the patent specification, the fact that this *inverter regulates the power in reaction on an abrupt change* is neither disclosed anywhere in the specification nor there is any supporting description in the patent specification. Thus, we find that the specification does not teach what is meant by *abrupt change*. Thus, this element also does not fall within the scope of as-filed specification and hence, this amendment is also beyond the scope of the provisions contained in section 59 of the Act. Further we find that these amendments do not wholly fall within the scope of any of the as-granted claims of the specification before the amendment and hence this amendment cannot be allowed.

61 From the section 59 of the Act, permissible amendments could be as follows:-

1. Amendment must be by way disclaimer, correction, clarification or explanation;
2. The amendment must be for incorporation of actual fact; and
3. The effect of amendment should not enable the specification as amended to describe any matter not in substance disclosed or shown in the specification before amendment; or
4. That any claim of the specification as amended would fall wholly within the scope of the claim of the specification before the amendment.

62 Section 58 of the Act, gives the court the power, in revocation proceedings in which the validity of a patent is put in issue, to allow the proprietor of the patent to amend the specification of the patent "in such manner, and subject to such terms ... as the court ... thinks fit". Plainly seen, this is a wide statutory discretion. The general principles on which such discretion should be exercised were summarised by Aldous J in *Smith, Kline & French Laboratories Ltd v Evans Medical Ltd* [1989] FSR 561 as follows:

"First, the onus to establish that amendment should be allowed is upon the patentee and full disclosure must be made of all relevant matters. If there is a failure to disclose all the relevant matters, amendment will be refused."

Secondly, amendment will be allowed provided the amendments are permitted under the Act and no circumstances arise which would lead the court to refuse the amendment.

Thirdly, it is in the public interest that amendment is sought promptly. Thus, in cases where a patentee delays for an unreasonable period before seeking amendment, it will not be allowed unless the patentee shows reasonable grounds for his delay. Such includes cases where a patentee believed that amendment was not necessary and had reasonable grounds for that belief.

Fourthly, a patentee who seeks to obtain an unfair advantage from a patent, which he knows or should have known should be amended, will not be allowed to amend. Such a case is where a patentee threatens an infringer with his unamended patent after he knows or should have known of the need to amend.

Fifthly, the court is concerned with the conduct of the patentee and not with the merit of the invention."

63 Accordingly checking the principles before exercising such discretion, we find that to establish the onus, the respondent has argued and defended the amendments proposed as to why it is done showing full operation of the invention, thus to meet the requirements of the provisions of law in force. The patent was filed on 11-11-2002 claiming the priority date of 11-5-2000 and was granted on 2-2-2007. The application for revocation was filed only on 27-1-2009 raising the question of patentability under the law and the patentee who is the respondent in the revocation application has not sought necessary amendments immediately within a reasonable period, to avert such patentability issue, but the necessity of which never arose until the same was challenged now by the applicant herein. The amendment sought has not been made in the prescribed manner. The patentee, who is the respondent herein, has delayed for an unreasonable period before seeking this amendment of the claims. The respondent has not shown any reasonable grounds for his delay. This shows the conduct of the party, viz. the respondent and when it is causing concern to the Court while considering the matter, the merits of the amendment do not find a place for allowing the same. Moreover the revised claim 1 of the specification as amended should fall wholly within the scope of the claim of the specification before the amendment. When these requirements have not been complied with, in a sincere and genuine manner by the respondent, we refuse the amendment sought and accordingly the amendments sought have not been allowed. We have also considered the case

laws quoted by the respondent counsel, but in view of the analysis made herein above the amendments sought cannot be allowed.

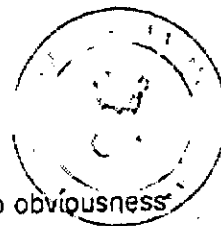
64 The applicants have argued by referring to quite a few US and EPO patents and Non patent Literatures in respect of obviousness and lack of inventive step and we consider only those arguments made before us relying on the specific grounds taken by them.

65 The best-known statement of status and function of claims in a patent specification, is given by Lord Russell of Killowen in *Electric and Musical Industries Ltd v Lissen Ltd* (1938) 56 RPC 23, 39: "The function of the claims is to define clearly and with precision the monopoly claimed, so that others may know the exact boundary of the area within which they will be trespassers. Their primary object is to limit and not to extend the monopoly. What is not claimed is disclaimed. The claims must undoubtedly be read as part of the entire document and not as a separate document; but the forbidden field must be found in the language of the claims and not elsewhere."

66 Obviousness

We shall see the claims of the impugned patent with respect to obviousness or lack of inventive step. A patent will be invalid for lack of inventive step if the invention claimed in it was obvious to a person skilled in the art having regard to the state of the art at the priority date. In fact at the date of the patent, all these prior art patents are already known and open to the public knowledge and the person skilled in the art must be aware of the said patents.

67 The test to ascertain whether an invention involves an inventive step is expressed in Halsbury Laws of England as: 'was it for practical purposes obvious to the 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 should or would make the invention the subject of the claim concerned' In other words, the question to be answered in determining inventive step is 'Would a non-inventive mind have thought of the alleged invention?' If the answer is 'no', then the invention is non-obvious. If the patent claimed merely includes the development of some



existing trade, in the sense that it is a development as would suggest itself to an ordinary person skilled in the art, it would fail the test of non-obviousness.

68 Keeping apart the question of the amendments, considering for the time being the proposed claims in a hypothetical manner as regards the obviousness as well as the definition of the scope of the claims along with the insufficiency of description of the impugned patent. Now let us analyze claim 1 first as regards its inventive features.

The main inventive features as claimed in claim 1 are as below:-

A method for operating a wind-energy generating plant with a generator for supplying electrical energy to an electricity grid, wherein the wind-energy generating plant has a rotor, having rotor blades with pitch control coupled to the generator, characterized in that energy supplied by the generator to the grid is controlled or adjusted as a function of the grid frequency of the electrical grid and the energy fed to the grid is reduced when the grid frequency is more than 3% (that is 0.3%) above the desired value whereby the delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change.

69 The main features as per proposed amended claim 1 are as follows:-

- F1: A method for operating a wind energy generating plant with
- F2: a generator for supplying electrical energy to an electricity grid wherein
- F3: the wind-energy generating plant has a rotor, having
- F4: rotor blades with pitch control coupled to the generator, characterized in that
- F5: energy supplied by the generator to the grid is controlled or adjusted as a function of the grid frequency of the electrical grid and
- F6: the energy fed into the grid is reduced when the grid frequency is more than 3% (i.e. 0.3%) above its desired value, whereby
- F7: the delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change

70 The inventive step lies in the features viz., "energy supplied by the generator to the grid is controlled or adjusted as a function of the grid frequency of the electrical grid and the energy fed into the grid is reduced when the grid frequency is more than 3% (i.e. 0.3%) above its desired value, whereby the delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change

71 In India, CERC has fixed the maximum grid frequency as 50.2 Hz and 49.5 as lower limit (which is equivalent to 0.4% to 1% of nominal frequency of 50 Hz) Thus, there is no inventive feature in fixing the upper limit of operating frequency as 102% of nominal frequency or any other number.

72 It was pointed out that it is common general knowledge that power and frequency are inter-related and a person would obviously reduce the power in case the frequency increases.

73 The applicant relied on EP '153 patent which is published on 12.08.1998 and argued that the teachings of this prior art discloses that *energy is reduced in case the network frequency increases*. The applicant relied upon claim 1 to show that EP '153 Patent discloses a method for controlling a power plant which delivers electrical power to an electrical grid wherein the power output of the said power plant is controlled as a function of a control frequency in such a manner that output power is decreased when the control frequency is increased beyond the nominal frequency (Claim 1 of the EP '153 patent; Page 93 and 94 of the revocation application). EP '153 patent discloses some dead band strategies in relation to a gas turbine, which is very different in its response time and method in comparison to the approach in the IN '887 patent which incorporates amongst other things an inverter. The respondent stressed that for a skilled person, combining such a feature in a gas turbine with an inverter according to the IN '887 patent would not make much sense. The European patent EP'153 patent is directed to gas turbines as described in paragraph. A wind power installation is not disclosed in this EP '153 patent and the concept of controlling gas turbines is completely different to the concept of controlling wind power installations. It is to be noted that different provisions applied for connecting of large power plants to the grid on the one hand and connection of smaller decentralized generating units, such as wind farms, on the other hand. According to the general connection and operational provisions applied, grid operators at the time, the concepts of EP '153 patent and the concept of wind power installations are different. Consequently, the skilled person involved with the control concept of the wind power installation is different to the skilled person working in the field of large conventional power plants.

74 Considering these arguments, we find that EP '153 patent discloses a method of regulating the frequency of power output by measuring the grid frequency and then adjusting the power output to the network grid to control the frequency thus the problem sought to be addressed by the impugned patent has already been addressed by the EP '153 patent being in the same field of the art regarding control of the grid frequency and regulating the frequency of the power output to the grid. Therefore it is a relevant prior art so that the person skilled in the art would adopt this inventive concept in his power plant control procedures which delivers electrical power to an electrical grid. Further this EP '153 document is already a published document involving the latest technology about the grid frequency control with respect to power output to the same. Accordingly this EP '153 patent is a fit and relevant prior art document anticipating the inventive features of the impugned patent. Further the respondent has also not shown any technical advance over the existing prior art, other than the difference in the plant machinery where it is used. The respondent's expert Mr R. A. STAM aged 55 years holds B.Tech, degree in electrical engineering from the university of south Australia having rich experience in the transmission and distribution of electrical network. The view of the respondent's expert has been considered, but one has to see whether the inventive concept available in the prior art can be adopted in the later one irrespective of the fact that it is a large power plant or a small power plant. Considering the applicant's expert Mr Dilip Trasi aged 59 years holds a B.E. degree in electrical engineering from Bombay University and Masters degree in Electrical technology from I.I.T Bombay with 34 years experience of working in the electrical and power electronics field. This expert commented that the EP '153 patent is not restricted to gas turbine as is evident from the claims which relate to "power plants" and may thus include wind power installations as well. Since the EP '153 patent relates to output control as a consequence of change in the grid frequency, a person skilled in the art seeking to address the problem sought to be solved by the impugned patent would consider it as a relevant prior art. Another expert of the applicant Mr. D.V.Ramakrishna Rao aged 62 years holds a B.E., degree in electrical engineering from Osmania University, having 36 years of experience of working in power electronics and instrumentation fields. This EP '153 patent teaches regulation of power output as a

function of the grid frequency. In page 2 col.1 of this EP '153 patent, it says that the power generation station referred uses gas turbine. It should be noted that the grid to which the station is connected is weak and frequency fluctuation occur and the power control is used as a means to control frequency fluctuations. Thus the patent is quite relevant, it may be different with respect to fluctuations in input power from wind turbine, the principle of reducing power when frequency rises beyond limit is applicable. Therefore from the above comments, we find that there is no inventive step in the impugned patent and the invention is obvious.

75 The applicant relied on Non-Patent (NPL) Literature *NGC Experience with Frequency Control in England and Wales – Provision of frequency response by generators* published in 1998 to show that in England and Wales, a similar method of reducing the energy was used to control the network frequency. This NPL states the following at Page 189 of the revocation application; left column:

- *The Grid Code also states that under exceptional circumstances the system frequency could rise to 52Hz or fall to 47 Hz. The design of plant and apparatus connected to the system must enable continuous operation in the 47.5-52 Hz range and at least 20 seconds operation for each frequency is in the range 47.5 to 47 Hz.*
- *In response to a high frequency above 50.4 Hz all plant whether operating in frequency or limited frequency sensitive mode, are required to reduce active output power at a minimum rate of 2% per 0.1 Hz.*

76 Thus, this NPL-2 also teaches that the output power is reduced when the network frequency rises above the nominal frequency. The respondent submitted that this NPL-1 document directs to a study of the behavior of generators in a grid, in particular the frequency response by generators. Besides that, the present paper is also discussing the frequency control strategy in England and Wales. This paper is directed to large power plant, and not to wind power installations. Wind power installations are also not mentioned in this paper. Controlling wind power installations on the one hand and controlling large power plants on the other hand requires different skilled persons. In particular, in the year 2000, these were quite different technical fields. Any control techniques involving an inverter and changing pitch angles according to the IN '887 patent are also neither described nor

suggested. The subject-matter of the IN '887 patent is to provide a solution to support the grid by means of a wind power installation. In particular, it proposes a method for reducing the energy fed into the grid by a wind powered generating system when the grid frequency deviates from its nominal value by more than a certain percentile amount. This is achieved rapidly by using an inverter and in addition to pitch control of the wind turbine rotor blade in order to reduce the energy generated by the wind power installation. Therefore this document not stand as a relevant prior art. Mr R.A.Stam , respondent's expert commented that this NPL-2 document is directed to a study of the behaviour of generators in a grid, in particular the frequency response by generators, the present paper is also discussing the frequency control strategy in England and Wales. It is clear that this paper is directed to large power plant, and not to wind power installations. Wind power installations are also not mentioned in this paper. The applicant's expert Mr D.V.Ramakrishna Rao commented that this NPL-2 document specifically teaches at page 591, right column that the energy supplied to the grid is controlled or varied with relation to the system frequency. This document dates back to 1998, thus was part of the art before the priority date of the impugned patent. Also the 1994 paper titled "On power quality measures for wind -diesel system: A conceptual frame work and a case study teaching means for the regulation of the power fed into the grid in terms of the frequency change in the grid, clearly indicate that as on the date of the impugned patent, regulation of the power output of a power generating unit in terms of the grid frequency was already known in the art. The other applicant's expert Mr.Dilip Trasi commented that NPL-2 is relevant and makes the subject matter of the '887 patent obvious to a person skilled in the art. NPL-2 teaches the requirements of electricity generating unit to ensure frequency control and discloses that the energy supplied to the grid is controlled or varied with relation to system frequency, such that when the system frequency rises above the desired value, then the power output is reduced.

77 From the above arguments and comments of the experts, we find that the inventive concept of the control of energy output supplied to the grid as a function of the grid frequency, and depending on the variation of the grid frequency, energy fed to the grid is reduced or increased is the same as the teachings of the NPL-2

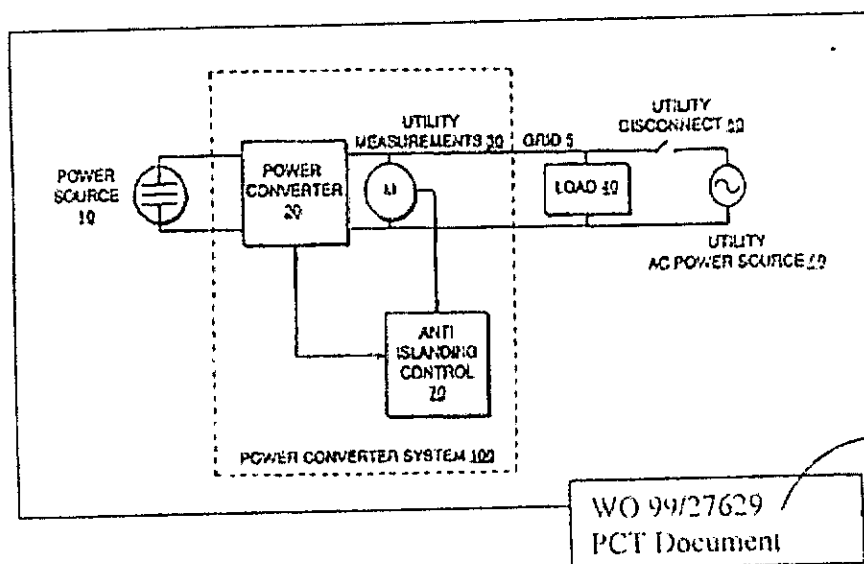
document wherein regulation of the power output of the power generating unit in terms of the grid frequency was employed as this was already a known technology in the prior art. Therefore we find the same inventive concept has been adopted in this wind power installation generator output feed control to the network grid making the invention of the impugned patent lack inventive step and therefore the invention is obvious to the person skilled in the art. Moreover there has been no indication of any technical advance over the existing art or technology as required in the definition of inventive step under the law. Therefore in the absence of any such technical advance in the inventive features of the invention over the prior art, the invention claimed will be lacking inventive step and the invention will be obvious to the person skilled in the art.

78 The applicant relied on WO 99/27629 published on 3rd June, 1999 (WO 99/27629 PCT document). The applicant in its reply relied on this PCT document, after the respondent added the element *inverter* into the proposed claims (Page 12 of the applicant's Reply). The applicant also pointed out that this prior art relates to anti-islanding inverters, power converters and generators connected to electric distribution utility grids. The applicant further pointed out that this prior art discloses that the energy source includes wind energy generators. There was further reference by the applicant that in case the network frequency rises above the nominal value, then the inverter alters the output power (Page 10; line 26 of the WO 99/27629 PCT document). Therefore, a person skilled in the art would combine the teachings of EP'153 patent and WO 99/27629 PCT document to perform claim 1 (as-proposed) and hence claim 1 (as-proposed) is obvious to a person skilled in the art. Further, the applicant argued that the combined teachings of NPL – 2 document and WO 99/27629 PCT document would make claim 1 obvious to a person skilled in the art. Hence proposed-claim 1 (if allowed under section 59 of the Act) would be obvious to a person skilled in the art and thus, claim 1 (as-proposed) should be revoked. Further the applicant pointed out that there is no reply to WO 99/27629 PCT document cited by the respondent. Even the respondent's expert did not reply to the teachings of WO 99/27629 PCT document.

79 The respondent submitted that this PCT document is directed to an anti-islanding method according to the title. Islanding is the continued operation of a grid-coupled power converter, generator or independent power source in general, in cases where the utility grid has been switched off, cut-off or the distribution lines have been damaged, so that no electric energy is delivered from the utility side. In other words, this document is concerned with the situation when there is no connection from the generator to the grid. The invention under the headline "Summary of the invention" explains in page 7, lines 19 to 22, explaining: "This invention relates to the problem of ensuring that distributed power generation equipment (equipment that is designed to feed power into the power grid) will de-energize when the connection to the main utility power source is lost." Accordingly, this PCT document is not directed to stabilizing the utility grid as such, but to control a disconnected branch such that it can be reconnected. This PCT document refers to monitoring the grid for voltage, frequency, phase and current level. It further says that the power source 10, that is connected to the grid 5, can be altered. This paragraph has to be understood in view of the corresponding figure, i.e. the figure presented on the cover page, which is also the figure the applicant referred to. That figure shows a grid 5 and also a utility AC power source 60 on page 11, lines 15 to 21, it is explained that the utility power source 60 may be a national power grid, a single generator as in a remote village or a plurality of generators as in a power station with several gensets feeding a mini-grid. The utility power source 60 is a primary controller of the grid and generates the power source at the proper frequency and voltage levels for that grid. The standards for frequency, phase, voltage and current can vary, and the utility power source is responsible for maintaining consistent and dependable power. To summarize, if there is a disconnection of a branch (grid 5) by means of the utility disconnect 50, disconnecting said branch (grid 5) from the electricity grid (utility AC power source 60), the power converter system 100 tries to control the disconnected branch (grid 5) in such a way that it can be reconnected to the electricity grid (utility AC power source 60). Accordingly, the described system is clearly not disclosing or even suggesting any strategy to control the electricity grid (utility AC power source 60) by means of the power source 10. In fact, the cited paragraph on page 11, i.e. lines 15

to 21 clearly explains that said utility power source is responsible for maintaining consistent and dependable power. Therefore this document does not stand to anticipate the inventive features of the impugned patent

80 On consideration of the above arguments, from the abstract of WO 99/27629 PCT document which is published on 3rd June 1999, we find that this document published a year earlier to the date of priority of this impugned patent and therefore this document having a latest developed technology, a person skilled in the art would certainly adopt this inventive concept to arrive at this invention point. This PCT document in its abstract discloses a method and an apparatus that detects and measures variations in the voltage and frequency of the grid as seen in the figure below;



81 From page 10 lines 20 to 30 of this PCT document, the converter which could be an inverter along with the utility measurement unit monitors the grid for voltage, frequency, phase and current levels. The inverter responds to the control unit which measures and processes or processes the measured data and alters the power source that is connected to the grid. From these details of the technology available in the prior art person skilled in the art will have no difficulty in understanding the circuit operation and therefore adopt, modify or utilise this inventive concept available in the prior art to suit his need when he is facing a problem as the one noticed in the impugned patent. Further the respondent has not shown any differences by way of technical advance over the technology available in this prior art, except that this document is concerned, with the situation when there is no connection from the generator to the grid, but fail to understand the inventive

concept available regarding the method of controlling and an apparatus for controlling the delivery of electrical energy from the generator point to the network grid with the help of an inverter which provides help or a situation to the controlled supply of energy as a function of the grid frequency due to possible reaction on an abrupt frequency change in the electrical grid network. Therefore we find that there is no inventive step in providing an inverter to control the delivery of electrical energy to the grid based on a reaction on an abrupt frequency change in the utility grid network point in view of the above said inventive concept perceivable from the said WO 99/27629 PCT document, which deals with the method and apparatus deducting and measuring variations in the voltage and frequency of the grid with the help of power converter system including an inverter and therefore the invention is obvious.

82 The contention of the respondent is correct. that, when the equivalent patent of the impugned patent is revoked or granted in US or EPO is not relevant to the proceedings here because the test for obviousness or inventive step is quite different with respect to US and EPO from India. viz, the provision as defined in section 2(ja) of the Act, which requires, "technical advance over the existing knowledge" before considering the fact as to whether the invention is obvious to the person skilled in the art. Moreover the grant of patent in other countries does not give any assurance or a presumption as to the validity of grant of patent or even investigation during revocation proceedings which is covered in section 13(4) of the Act which lays down that there is no presumption as to the validity to the grant of a patent.

83 As per the Act, all the claims in a complete specification will have one inventive step or making them to be having group of inventive features to have a single inventive concept. Since that inventive step in claim 1 has been shown to be obvious, all the subsidiary claims dependent on the principal claim 1, which tend to add only minor variations of features will not impart any inventive step to the dependent claims. Further the apparatus claim 4 to carry out the method claimed in the claim 1 is also found to be obvious and having no inventive step in view of the analysis made herein above on the topic of obviousness.

84 We shall now consider a few case laws as regards obviousness or inventive step and particular reference is made to **M/s. Bishwanath Prasad Radhey Shyam Vs. M/s. Hindustan Metal Industries, (1979) 2 SCC 511**, where it was held that, "was it for practical purposes obvious to a skilled worker, in the field concerned, in the state of the 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?"

85 Buckley LJ in **Valensi -v- British Radio Corporation [1973] RPC 337**, held that, "The hypothetical addressee is not a person of exceptional skill and knowledge, and he is not to be expected to exercise any invention nor any prolonged research, enquiry or experiment. He must, however, be prepared to display a reasonable degree of skill and common knowledge of the art in making trials and to correct obvious errors in the specification if a means of correcting them can readily be found and arrive at the result..."

86 A patent will be invalid for lack of inventive step if the invention claimed in it was obvious to a person skilled in the art having regard to the state of the art at the priority date. The familiar structured approach to the assessment of allegations of obviousness first articulated by the Court of Appeal in ***Windsurfing International Inc v Tabur Marine (Great Britain) Ltd [1985] RPC 59***; It is convenient to address the question of obviousness by using the structured approach as explained by the Court of Appeal in ***Pozzoli v BDMO [2007] EWCA Civ 588; [2007] FSR 37***. This involves the following steps:

1. Identify the notional 'person skilled in the art' and the relevant common general knowledge of that person
2. Identify the inventive concept of the claim in question or, if it cannot be done, construe it.
3. Identify if any the differences existing between the matters cited as forming state of the art and the inventive concept of the claim or the claim as construed.
4. Ask whether, when viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?"

87 The first step is; "who is the notional person skilled in the art in this field of wind power installation technology?"

This is a person who is likely to have a practical interest in the subject matter of the invention. The relevant common general knowledge of that person must be such as the knowledge of electrical engineering regarding power transmission and distribution with a broad specialisation in power electronics utilised in this field of power distribution or having requisite experience in the wind power technology connected with the electrical distribution network systems. In this case, both the applicant and the respondent are the person skilled in the art or otherwise such person must have the knowledge of wind power installations.

88 The second step is; "Identify the inventive concept of the claim in question."

The main inventive features as per the proposed amended claim 1 are:-

- F 1: A method for operating a wind energy generating plant with
- F2: a generator for supplying electrical energy to an electricity grid wherein
- F3: the wind-energy generating plant has a rotor, having
- F4: rotor blades with pitch control coupled to the generator, characterized in that
- F5: energy supplied by the generator to the grid is controlled or adjusted as a function of the grid frequency of the electrical grid and
- F6: the energy fed into the grid is reduced when the grid frequency is more than 3 % (i.e. 0.3 %) above its desired value, whereby
- F7: the delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change

89 The third step is; "Identify if any the differences existing between the matters cited as forming state of the art and the inventive concept of the claim or the claim as construed".

- EP '153 patent discloses a method of regulating the frequency of power output by measuring the grid frequency and then adjusting the power output to the network grid to control the frequency thus the problem sought to be addressed by the impugned patent has already been addressed by the EP '153 patent being in the same field of the art regarding control of the grid frequency and regulating the frequency of the power output to the grid. Therefore it is a relevant prior art so that the person skilled in the art would adopt this inventive concept in his power plant control procedures which delivers electrical power to an electrical grid. This EP '153 patent teaches

regulation of power output as a function of the grid frequency. In page 2 col.1 of this EP '153 patent, it says that the power generation station referred uses gas turbine. It should be noted that the grid to which the station is connected is weak and frequency fluctuation occur and the power control is used as a means to control frequency fluctuations. Thus the patent is quite relevant, it may be different with respect to fluctuations in input power from wind turbine, the principle of reducing power when frequency rises beyond limit is applicable. Therefore from the above comments, a person in the art will find that there is no inventive step in the impugned patent and the invention is obvious.

- WO 99/27629 PCT document in its abstract discloses a method and an apparatus that detects and measures variations in the voltage and frequency of the grid. Page 10 lines 20 to 30 of this PCT document, the converter which could be an inverter along with the utility measurement unit monitors the grid for voltage, frequency, phase and current levels. The inverter responds to the control unit which measures and processes or processes the measured data and alters the power source that is connected to the grid. From these details of the technology available in the prior art person skilled in the art will have no difficulty in understanding the circuit operation and therefore adopt, modify or utilise this inventive concept available in the prior art to suit his need when he is facing a problem as the one noticed in the impugned patent. Further the respondent has not shown any differences by way of technical advance over the technology available in this prior art, except that this document is concerned with the situation when there is no connection from the generator to the grid, but fail to understand the inventive concept available regarding the method of controlling and an apparatus for controlling the delivery of electrical energy from the generator point to the network grid with the help of an inverter which provides help or a situation to the controlled supply of energy as a function of the grid frequency due to possible reaction on an abrupt frequency change in the electrical grid network. Therefore we find that there is no inventive step in providing an inverter to control the delivery of electrical energy to the grid based on a reaction on an abrupt frequency change in the utility grid network point in view of the above said inventive concept perceivable from the said WO 99/27629 PCT document, which deals with the method and apparatus deducting and measuring variations in the voltage and frequency of the grid with the help of power converter system including an inverter and therefore the invention is obvious.

- Thus on or before the priority date of the invention claimed in the impugned patent, there does not exist any difference between the prior art cited and the features claimed in the impugned patent.

90 The last step is: "ask whether, when viewed without any knowledge of the alleged invention as claimed: do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?"

- a. For the lack of inventive step in the invention claimed when it is obvious to a person skilled in the art having regard to the state of the art at the priority date of the patent application, that patent will become invalid.
- b. From the teachings of the EP '153 patent and NPL-2 document together with the WO 99/27629 PCT document, a person skilled in the art will find it comfortable, without the knowledge of the impugned patent, arrive at this invention point, when such a problem is placed before him.
- c. Hence the claim 1 as worded does not involve any inventive step. We also find that the invention is found to be obvious
- d. When the basic technology has already reached a particular, probably, a saturated level or point, for any optimization, then in any research made in that field should have or show any technical advance to the present level. In the absence of any such technical advance in the work done, compared to the knowledge present and available in the state of art, then that piece of work does not deserve the right of any monopoly.
- e. In view of this analysis and the finding herein, it is very clear there is no inventive step in the invention claimed in the impugned patent and the invention claimed is obvious to any skilled person in the art

Therefore combining the said cited EP patent and NPL-2 document together with the WO 99/27629 PCT document, a person skilled in the art can arrive at the invention claimed in the claim 1 of the impugned patent. Hence the invention cannot be said to have any inventive step and the invention is obvious

91 Insufficiency – Law

A patent will be insufficient if the specification does not disclose the invention clearly enough and completely enough for it to be performed by a person skilled in the art. The duty of the patentee is to provide the description which enables the skilled person in the art to perform the invention with a will and to make the invention work. Such a person is not supposed to have exceptional skill and

knowledge and he is not expected to exercise any invention or any prolonged research, enquiry or experiment. He must have a reasonable degree of skill and common general knowledge of the art in performing the trials and to correct the obvious mistakes if there is a way of correcting them is conceived

92 Investigation for insufficiency of description of the invention is made at three stages under the Act;

- a. At the examination stage under section 12(1) (a) read with section 10(4) of the Act;
- b. In opposition proceedings under section 25 (1) (g) and section 25(2) (g) of the Act;
- c. In revocation proceedings under section 64(1) (h) of the Act.

93 It would appear from the wordings of these provisions that the standard of sufficiency to be applied varies according to the nature of the proceeding, the standard to be applied in opposition proceeding being more rigorous than that applicable at the examination stage; and that applied in revocation proceeding being still more rigorous.

94 Of course by virtue of Section 64 (1) (h) & (i) of the Act, a patent may be revoked if it "does not disclose the invention clearly enough and completely enough for it to be performed by a person skilled in the art". It is fundamental to the validity of a patent that it not merely discloses a novel product or process, but that the disclosure is "enabling".

95 The term 'sufficiency of disclosure' refers to adequacy of pertinent information to be provided in the complete specification to enable an average skilled person in the art to perform the invention. It is stated in *Halsbury's Law* 3rd Edition, Vol.29. page 66, para 138 that insufficiency of description has two branches,

- 1 The complete specification must describe an embodiment of the invention claimed in each of the claims and that the description must be sufficient to enable those in the industry concerned to carry it into effect 'without their making further inventions' and

2 That the description must be fair i.e it must not be unnecessarily difficult to follow.

96 In **Press Metal Corporation limited Vs. Noshir Sorabji Pochkhannawallah**, (1982) PTC, 256, Bombay HC, it was held that, *"it is the duty of the patentee to state clearly and distinctly, the nature and limits of the invention what he claims in his specification. If the language used by the patentee is obscure and ambiguous, no patent can be granted and it is immaterial whether the obscurity in the language is due to design or carelessness or want of skill."*

97 In **Cyanamid Vs. Berk Pharmaceuticals** [1976] RPC 231 at 234 J. **Whitford** held that *"it is not to be expected that every patent will be comprehensible to everybody who picks it up, for patents are directed to persons who have skills in the particular fields with which each patent is conceived – the so called skilled men in the art. The description of the invention has only to be a description sufficient to enable the notional skilled man to put it into practice. Only those familiar in the field in question can be expected to make anything of the claims"*.

98 In **Mentor**, at [1993] RPC 14 lines 28 to 45, **Lloyd LJ** said this. *"It was at first argued that the skilled man should not have to carry out any research enquiry or experiment at all, whether prolonged or otherwise."*

99 Finally adopting the expression used by **Lord Hoffmann** in **Biogen Inc. Vs. Medeva plc** [1997] RPC 1 at 50 line 39, a patent would be insufficient on either basis if it cannot "deliver the goods" or, if the claim is cast more widely than the teaching justifies, the claim will be Biogen insufficient; if the claim on the face of it appears to be cast narrowly enough, it may nonetheless be classically insufficient if the teaching of the specification is not enabling.

100 In **Pottier's Appln.**[1967] RPC 170, **Lloyd Jacob, J** said. *"the purpose of a patent specification is to disclose how an alleged invention in its full width may be put into practice and not to enable that width to be adjustable as subsequent practice develops."*

101 The complete specification does not disclose that the energy fed into the grid shall be regulated when the grid frequency is more than 0.3% of its desired value. The complete specification does not disclose the inverter element sought to be added by the proposed amendment which would control the delivered electrical energy to provide a reaction on any abrupt frequency. In the internal page 4 at lines 5 to 8 the patent specification discloses an inverter 4 in relation to figure 3 of the drawings accompanying the patent specification as converting DC voltage into an alternating current for delivery to the network. Nowhere does the specification indicate that the inverter shall control the delivered electrical energy to provide a reaction to an abrupt change in frequency. In relation to figure 3, a separate microprocessor element has been disclosed as regulating device 5 which will measure the network frequency and control the power switches of the inverter to ensure that output frequency corresponds to the network frequency, as described in the said page 4, lines 8 to 13. Thus, the specification has indicated a separate microprocessor element for regulation of the output frequency, separate from the inverter. The complete specification does not disclose how the inverter is to undertake such regulation so as to provide reaction on an abrupt frequency change. Thus the element "whereby the delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change" has not been sufficiently and clearly described in the complete specification.

102 Hence whenever the claim is drafted in wide or loosely worded terms, an ambiguity will arise to check whether the description in the specification is sufficiently clear and definitive to enable a person of an ordinary skill to do or perform such an invention.

103 Hence the description is insufficient and the whole specification suffers from insufficiency of description.

104 Conclusions

1. Obviousness

- a. Comparing the inventive features in the patent and the inventive features as construed from the principal claim 1, with the EP '153 patent and the NPL -2 document together with the WO 99/ 27629

PCT document, no difference in the invention claimed in the claim of the impugned patent could be perceived or noticed.

- b. Invention claimed would be obvious to a person skilled in the art having regard to the state of the art, when no technical advance over the prior art, is established, then the patent lacks inventive step, and will become invalid.
2. As per the Act, all the claims in a complete specification will have one inventive step or making them to be having group of inventive features but to have a single inventive concept. Since that inventive step in claim 1 has been shown to be obvious, all the subsidiary claims dependent on the principal claim 1, which tend to add only minor variations of features will not impart any inventive step to the dependent claims. Then the subordinate claims which are dependent on the principal claim 1 would also become invalid and does not stand as a separate independent or individual claim as no exclusive technical improvement in the feature could be shown therein.
3. From the teachings of the EP '153 patent and NPL-2 document together with the WO 99/27629 PCT document, a person skilled in the art will find it comfortable, without the knowledge of the impugned patent, arrive at this invention point, when such a problem is placed before him. Hence the invention cannot be said to have any inventive step and the invention is obvious.
4. The amendment sought has not been made in the prescribed manner. The patentee, who is the respondent herein, has delayed for an unreasonable period before seeking this amendment of the claims. The respondent has not shown any reasonable grounds for his delay. This shows the conduct of the party, viz, the respondent and when it is causing concern to the Court while considering the matter, the merits of the amendment do not find a place for allowing the same. Moreover the revised claim 1 of the specification as amended should fall wholly within the scope of the claim of the specification before the amendment. When these requirements have not been complied with, in a sincere and genuine manner by the respondent, we refuse the amendment sought and accordingly, the amendments sought have not been allowed. We have also considered the case laws quoted by the respondent

counsel, but in view of the analysis made herein above the amendments sought cannot be allowed

5. Insufficiency

The complete specification does not disclose the inverter element sought to be added by the proposed amendment which would control the delivered electrical energy to provide a reaction on any abrupt frequency. The specification has indicated a separate microprocessor element for regulation of the output frequency, separate from the inverter. The complete specification does not disclose how the inverter is to undertake such regulation so as to provide reaction on an abrupt frequency change. Thus the element "whereby the delivered electrical energy is controlled by means of an inverter in order to provide a reaction on an abrupt frequency change" has not been sufficiently and clearly described in the complete specification, which makes the whole specification suffers from insufficiency of description.

105 Hence after taking into consideration of the above said case laws and findings and analysis made herein above, together with foregoing statements in the conclusions, we hereby allow the application for the revocation of the patent. M.P.No.19/2010 for stay has been dismissed as nothing remains in the miscellaneous petition and also that the main application has been disposed of. M.P.No. 32/2010 for early hearing is dismissed as infructuous. As per the directions of the Hon'ble High Court of Madras, all the miscellaneous petitions have been heard and decided along with the main application. Consequently the patent granted to the respondent is revoked and also direct the Controller of Patents to remove the patent No. 202887 from the register of patents. The parties shall bear their own costs.

Sd/-
(S. CHANDRASEKARAN)
TECHNICAL MEMBER

Sd/-
(S.USHA)
VICE-CHAIRMAN



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