

01 October 2012

**PATENTS ACT 1977**

APPLICANT                      Mr Sherif Zukic and Sherif Zukic Ltd

ISSUE                              The Patents Act 1977:  
Whether patent application GB0813409.0  
complies with sections 1(1) and 14(3).

HEARING OFFICER              Dr Lawrence Cullen

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**DECISION**

**Introduction**

- 1 This decision relates to patent application GB0813409.0 entitled “*Electricity from deep oceanic water pressure*”, and concerns two issues. Firstly, whether the invention as claimed is capable of industrial application as defined by section 1(1)(c) of the Patents Act 1977 (hereafter ‘the Act’) and, secondly, whether the invention is described in a manner clear enough and complete enough to allow the invention to be performed by a person skilled in the art as required by section 14(3) of the Act. The application was filed on 22 July 2008 and was published as GB2461948 on 27 January 2010.
- 2 In his first examination report, dated 16 November 2011, the examiner raised a number of objections to this application. In summary, these were that the invention was not capable of industrial application (under Section 1(1)(c) of the Act); the specification did not describe the invention in a way that was clear enough and complete enough to allow it to be carried out by a person skilled in the art (see Section 14(3) of the Act); and that the invention, in so far as it was possible to tell from the specification, was not novel or inventive (see Sections 1(1)(a) and 1(1)(b) of the Act). The applicant responded in a letter dated 10 January 2012 providing further explanation of his invention but did not respond specifically to the objections raised by the examiner.
- 3 Two further rounds of correspondence followed (i.e., official examination reports dated 2 February 2012 and 1 June 2012 with corresponding detailed responses from the applicant dated 3 April 2012 and 12 June 2012) but the applicant was not able to persuade the examiner to alter his view and these objections were maintained.

- 4 The matter came before me at a hearing on 1 August 2012 at the Intellectual Property Office (IPO) in Newport. Present at the hearing were the applicant, Mr Sherif Zukic, who represented himself; Mr Kingsley Robinson, the examiner dealing with the application, and Dr Natalie Cole, my assistant for the hearing.
- 5 In reaching my decision, I have considered whether the invention is described in a manner clear enough and complete enough to allow the invention to be performed by a person skilled in the art as required by section 14(3) of the Act and whether the invention as claimed is capable of industrial application as defined by section 1(1)(c) of Act. It is only if I consider that the application successfully meets these two criteria, that I will then turn to consider the issue of whether the invention lacks novelty or an inventive step.

### **The Law**

- 6 Section 1(1) of the Act sets out the requirement that an invention protected by a patent must, amongst other things, be capable of industrial application:

*“A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –*

*(a).....;*

*(b).....;*

*(c) is capable of industrial application;*

*(d).....;*

- 7 Section 4(1) of the Act states that:

*“An invention shall be taken to be capable of industrial application if it can be made or used in any kind of industry, including agriculture.”*

It is understood that the term ‘industry’ is used here to refer to industry in its broadest sense, and thus the concept of ‘industrial application’ encompasses anything which is practical or useful. It is also understood that an invention which is considered to operate in a manner which is contrary to well-established physical laws is regarded as not being capable of industrial application.

- 8 Section 14 of the Act sets out certain criteria that a patent application must fulfil and Section 14(3), in particular, sets out the need for a sufficient technical disclosure, i.e:

*“The specification of an application shall disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by a person skilled in the art”.*

- 9 This reflects the importance of the bargain between the patent holder and society. While the successful patent applicant is granted a monopoly right for a limited period (of up to 20 years), they must in turn provide enough information within the specification to allow someone that has some technical skill to be able to carry-out or

work the invention. A patent is potentially a very strong tool because it can be used to prevent anyone, except the owner or someone with the owner's permission, from making using, importing or selling the invention in the country where the patent was granted. Thus, it is appropriate that the application is required to provide enough information to explain how the invention works so that this knowledge can be made publically available and others can take account of it.

### **The invention**

- 10 According to the application, the invention aims to generate electricity using deep oceanic water pressure. The application describes the use of a large diameter pipeline or tunnel, one end of which comprises an inlet unit and is positioned at deep oceanic/sea depths and the other end of the pipeline is located at surface or ground level and is connected to a platform comprising a turbine. It is suggested that due to the deep ocean pressures, water would travel through the openings in the inlet unit up the pipeline, and onto the surface where it can be used to power turbines located on the platform in order to produce electricity.
- 11 The original claims, as filed, comprise seven independent claims. The wording of the claims is not an issue in this decision so I have not reproduced them here.

### **Arguments and Analysis**

- 12 Throughout his correspondence with the applicant, the examiner has maintained his opinion that the invention operates in a manner contrary to well-established scientific principles. In the examination report dated 16 November 2011, the examiner argued that the pressure at a point within a body of water is the result of the weight of the water above it. This applies to both the water on the outside of the pipe and to that on the inside of the pipe. As a consequence, the pressure at the inlet of the pipe trying to force the water up the pipe is balanced by pressure due to the weight of water within the pipe and therefore there will be no flow up the pipe, and the device would not operate in the manner described. Furthermore, the examiner has argued that the application does not contain enough information about the invention for it to be performed by a person skilled in the art. Specifically, it is not clear how a pressure differential is created within the pipeline to cause water to flow upward through it.
- 13 Within the correspondence he submitted in response to the examination reports, in advance of the hearing and during the hearing itself, Mr Zukic suggested that the pressure at any given point within a body of water is not only as a result of the weight of the column of water above it but is also due to the gravitational force from the earth's core, whereby gravity and, hence pressure, is a product of the electromagnetic field of the earth's core. He went on to explain an experiment that he conducted which involved placing an iron cylinder in a body of water and measuring the pressure at various depths of water inside the cylinder. He then measured the pressure levels at corresponding depths in the open body of water, and found that the pressure within the cylinder was not increasing at the same rate as the pressures measured in the open water. He suggested that the gravitational force emitted from the earth's core is emitted at certain frequencies whereby certain materials, such as iron, act to shield that gravitational force and thus gravity and, as a consequence, the pressure within the pipeline would be lower than that in open water. He concluded that the gravitational force of water within an iron pipeline is different to the

gravitational force within open water, due to the shielding of the earth's electromagnetic field.

- 14 Mr Zukic went on to suggest that his invention uses an iron (or nickel) pipeline having a water inlet at one end, such that when it is placed at deep oceanic depths, a pressure differential would result where the pressure inside the pipe would be lower than that in the open water, this would have the effect of causing water to move through the inlet into the pipeline and then to rise up the pipeline. The water within the pipeline would then be under high pressure. Mr Zukic further explained that the opposite end of the pipeline located at surface ground level would need to be closed for the high pressure water to remain within the pipeline and it is this high pressure water which could then be utilised to turn a turbine to generate electricity.
- 15 During the course of the hearing Mr Zukic admitted that not all of the features of the invention had been disclosed within the specification as he did not want his invention to be made public. In particular, as discussed above, he highlighted that the pipeline must be formed from a material which scatters or cancels out the earth's magnetic field, in order to create the required pressure differential within the pipe. He also indicated that the end of the pipeline at ground surface level which would be exposed to atmospheric pressure would need to be closed for the water to remain at high pressure within the pipeline. It was not clear from the correspondence or from the comments of Mr Zukic at the hearing how the pipeline can be open at one end to let in the water and closed at the other end in order to maintain high pressure.
- 16 After careful examination of the disclosure within the application as filed, I can see no basis for the arguments presented by Mr Zukic at the hearing. In this regard, it is considered that a number of essential features have not been disclosed within the application as filed. The applicant acknowledged this at the hearing. In particular, it would appear that the pipeline being formed of material that scatters or cancels out electromagnetic radiation is a key feature to the operation of the invention. However, there is no disclosure or suggestion within the application as filed that this is case. In this regard there is no disclosure within the application to direct the skilled worker in using a material such as iron to scatter or cancel out the electromagnetic radiation. Furthermore, there is also no indication within the application how the pipeline, platform and turbine are connected in order for the high pressure water to able to turn the turbine.
- 17 After careful consideration of all the correspondence and having considered the comments made by Mr Zukic at the hearing itself, I can see no way by which the invention could work as outlined in the specification as filed without further information being provided within the application. I therefore that the application has not been described in a manner that is clear or complete enough for the invention to be performed by a person skilled in the art, as required under Section 14(3) of the Act.
- 18 I find that I am also not convinced that the invention will work in the manner proposed in the application, as filed, and that a pressure differential between the water in the ocean and that within the pipe will occur in the manner proposed. Furthermore, given the additional explanation provided by the applicant in his correspondence and at the hearing (as discussed above), I am still not convinced that the invention would work in the manner proposed and, that the invention is

capable of industrial application. I find that I am in agreement with the argument presented by the examiner (see above) that the invention would appear to operate in a manner contrary to well-established scientific principles. I consider that the examiner is correct in his view that the pressure at a point within a body of water is the result of the weight of the water above it and this applies to both the water outside the pipe and to that inside the pipe. As a consequence, the pressure at the inlet of the pipe trying to force the water up the pipe is balanced by pressure due to the weight of water within the pipe and therefore there will be no pressure differential as described by the applicant.

- 19 Thus, I consider that, on the basis of the application as filed, the invention is not capable of industrial application as required by Section 1(1)(c) of the Act.

### **Novelty/inventive step**

- 20 As I have found that the application in this case is insufficient and lacks industrial applicability, I do not need to consider the issue of novelty or inventive step.

### **Conclusion**

- 21 I find that patent application GB0813409.0 does not comply with the requirement of Section 14(3) of the Act as insufficient information is provided to allow one to carry-out the invention. It also does not comply with the requirement of Section 1(1)(c) of the Act as it is not capable of industrial application.
- 22 After further consideration of the specification, I can see nothing in the application that would form the basis of an allowable amendment that would overcome these objections.
- 23 Thus, the application is refused under Section 18(3) of the Act for failure to comply with the requirements of the Patents Act 1977.

### **Appeal**

- 24 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

**Dr L CULLEN**

Deputy Director, acting for the Comptroller