

IN THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF WISCONSIN

MILWAUKEE ELECTRIC TOOL)
CORPORATION, METCO BATTERY)
TECHNOLOGIES, LLC, AC (COMMERCIAL)
OFFSHORE DE MACAU) LIMITADA, and)
TECHTRONIC INDUSTRIES CO. LTD.,)

Plaintiffs,)

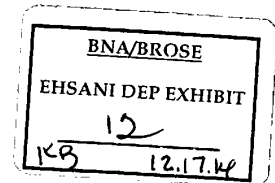
v.)

HITACHI KOKI CO., LTD., and HITACHI)
KOKI USA, LTD.,)

Defendants.)

Case No.: 09-cv-00948-WEC)
PATENT CASE)
JURY DEMANDED)

**REBUTTAL EXPERT REPORT OF DR. MEHRDAD ("MARK") EHSANI REGARDING
CLAIM CONSTRUCTION**



I. Qualifications

1. My qualifications for forming the opinions in this report are included in my Expert Report Regarding Claim Construction, which was served on January 14, 2011. I incorporate by reference those qualifications as if set forth entirely herein.

II. Subject matter of opinions

2. I have been engaged by Howrey LLP, counsel of record for Plaintiffs Milwaukee Electric Tool Corporation; Metco Battery Technologies, LLC; AC (Commercial Offshore De Macau) Limitada; and Techtronic Industries Co. Ltd. ("Plaintiffs") in this case, to provide my expert opinion on certain issues related to claim construction. Specifically I have been asked to provide an opinion on certain of the terms identified by the parties for construction in U.S. Patent No. 7,164,257 ("the '257 Patent"), U.S. Patent No. 7,176,654 ("the '654 Patent"), U.S. Patent No. 7,323,847 ("the '847 Patent"), U.S. Patent No. 7,508,167 ("the '167 Patent"), and U.S. Patent No. 7,554,290 ("the '290 Patent").

3. Additionally, I have been engaged by Howrey LLP, counsel of record for Plaintiffs in this case, to respond to the opinions expressed by Dr. van Schalkwijk in the Expert Report of Walter van Schalkwijk, Ph.D. on the Issues of Claim Construction as to U.S. Patent Nos. 7,554,290, 7,164,257, 7,176,654, 7,323,847, and 7,508,167, served January 14, 2011.

III. Materials reviewed

4. The materials I reviewed in preparing this report are included in my Expert Report Regarding Claim Construction, which was served on January 14, 2011. I incorporate by reference those materials as if set forth entirely herein. In addition to those materials, I also reviewed U.S. Patent No. 7,157,882, the Expert Report of Walter van Schalkwijk, Ph.D. on the Issues of Claim Construction as to U.S. Patent Nos. 7,554,290, 7,164,257, 7,176,654, 7,323,847, and 7,508,167, served January 14, 2011, and the exhibits thereto.

IV. The Law of Claim Construction

5. A summary of the relevant case law regarding claim construction is included in my Expert Report Regarding Claim Construction, which was served on January 14, 2011. I incorporate by reference that summary as if set forth entirely herein.

V. Person of Ordinary Skill in the Art

6. My opinion regarding the level of skill of a person of ordinary skill in the art for the '290 Patent, '257 Patent, '654 Patent, '847 Patent, and '167 Patent is included in my Expert Report Regarding Claim Construction, which was served on January 14, 2011. I incorporate by reference that opinion as if set forth entirely herein.

VI. The '290 Patent

7. After reviewing Dr. van Schalkwijk's Report, I understand that it is his opinion that the term "battery cells capable of producing an average discharge current greater than or equal to approximately 20 amps" should be construed as "each of a plurality of battery cells having the ability to discharge about 20 amps of current over any non-trivial period of time." I believe that his opinion regarding the proper construction of this term is incorrect for several reasons. Additionally, as I expressed in my January 14, 2011 Report, is my opinion that the term when properly construed means "the battery cells, when configured together in a battery pack, are capable of producing reasonably close to 20 amps of discharge current or greater over the course of delivering their entire rated capacity."

8. First, I disagree with Dr. van Schalkwijk's opinion that *each* of the battery cells in the plurality of battery cells must have the ability to discharge about 20 amps of current. To start, Claim 1 states that the claimed battery pack has "a plurality of battery cells supported by the housing" with "the battery cells being capable of producing an average discharge current greater than or equal to approximately 20 amps." See '290 Patent at Claim 1. In my opinion, the reference to "the battery cells" refers back to the "plurality of battery cells" as configured in the battery pack, and not to the individual cells themselves.

9. Additionally, I believe that Dr. van Schalkwijk's opinion that each of the plurality of battery cells must have the ability to discharge about 20 amps of current is contradicted by the intrinsic evidence in the file history of the '290 Patent, including the Declaration of Gary Meyer. Mr. Meyer's declaration makes clear that he tested "whether a *fully charged Prototype Pack* could deliver 20 amps of current without failing." Declaration of Gary Meyer Under 37 C.F.R. § 1.132 at 2 (emphasis added). As such, I believe that a person of ordinary skill in the art, having reviewed the intrinsic evidence including the Declaration of Gary Meyer, would understand the phrase "the battery cells being capable of producing an average discharge current greater than or

equal to approximately 20 amps” to mean that the battery cells, when configured together in a battery pack, are capable of producing reasonably close to 20 amps of discharge current, and not that each of the battery cells itself must have the ability to discharge about 20 amps of current.

10. I also disagree with Dr. van Schalkwijk’s opinion that (1) the specification of the ‘290 Patent fails to disclose sufficient information to enable of person of ordinary skill in the art to connect the battery cells in any configuration other than a pure serial connection without undue experimentation, and (2) the fact that the preferred embodiment includes battery cells connected in a serial configuration supports his opinion that each of the battery cells must have the ability to discharge about 20 amps of current.

11. As Dr. van Schalkwijk’s Report notes, the specification of the ‘290 Patent specifically states that “[t]he battery cells 346a-g can also be electrically connected in any suitable manner, such as, for example, in a serial arrangement, a parallel arrangement, a partial serial arrangement (e.g., some of the battery cells 346a-g are connected in a serial arrangement), a partial parallel arrangement (e.g., some of the battery cells 346a-g are connected in a serial arrangement), a combination of a serial, parallel, partial serial or partial parallel arrangement.” ‘290 Patent at 10:46-53. In my opinion, a person of ordinary skill in the art having read the specification of the ‘290 Patent would readily know how to connect the battery cells in any of the listed configurations without undue experimentation. While I agree with Dr. van Schalkwijk that if the battery cells are connected in a pure serial arrangement, the current through each of the cells (and the pack as a whole) would be the same, it is also my opinion that the same would not necessarily be true in others of the listed configurations. As a result, it is my opinion that these alternate disclosed embodiments only further support my conclusion that the phrase “the battery cells being capable of producing an average discharge current greater than or equal to approximately 20 amps” means that the battery cells, when configured together in a battery pack, are capable of producing reasonably close to 20 amps of discharge current.

12. Second, I disagree with Dr. van Schalkwijk’s opinion that the cells must only have the “ability to discharge about 20 amps of current *over any non-trivial period of time.*” I disagree with this opinion for several reasons, and instead believe that the battery cells, when configured together in a battery pack, are capable of producing reasonably close to 20 amps of discharge current or greater *over the course of delivering their entire rated capacity.*

13. To start, Dr. van Schalkwijk’s proposal of “any non-trivial period of time” is hopelessly vague, has no established meaning to one of ordinary skill in the art, and would make it impossible for one to determine what period of time would be required to meet the limitations of the claims. In addition, Dr. van Schalkwijk’s proposed construction could potentially render the claim invalid in light of the prototype pack tested by Gary Meyer and described in his declaration which is part of the intrinsic record. This is because the prototype pack was able to produce a discharge current of 20 amps for a period of time that could possibly be considered

“non-trivial” under Dr. van Schalkwijk’s definition. See Declaration of Gary Meyer Under 37 C.F.R. § 1.132 at 2-6. During prosecution, the applicants made clear, and the examiner understood, that the prototype pack was prior art. As I explained in my January 14, 2011 Report, I believe that Dr. van Schalkwijk’s construction cannot be correct because I am told that if a claim is amenable to more than one construction, it should, when it is reasonably possible to do so, be construed to preserve its validity. *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1384 (Fed Cir. 2001).

14. Finally, the extrinsic evidence cited by Dr. van Schalkwijk – a dictionary definition of “average discharge current” – is silent on the appropriate length of time over which the discharge current is measured, and provides no support for his position that the cells must only have the “ability to discharge about 20 amps of current over any non-trivial period of time.” The words “non-trivial” appear nowhere in the dictionary definition quoted and relied on by Dr. van Schalkwijk, and appear to be inserted by Dr. van Schalkwijk without any basis or support. Moreover, Dr. Schalkwijk’s focus on delivering current for a period of time as opposed to delivering current through full discharge ignores the distinction between the prior art prototype pack tested by Gary Meyer and the claimed invention. The pack “failure” described in the Declaration of Gary Meyer was not due to the length of the period of time that the prototype pack delivered a current. Instead, the pack “failed” because it was not able to provide a current of approximately 20 amps throughout delivery of its entire rated capacity. Thus, the Gary Meyer Declaration demonstrates that the desired performance was a pack capable of delivering a current of approximately 20 amps or greater over the course of delivering its entire rated capacity. For these reasons and the reasons stated in my January 14, 2011 Report, it is my opinion that a person of ordinary skill in the art having considered the specification and file history of the ‘290 Patent would understand that the phrase “battery cells capable of producing an average discharge current greater than or equal to approximately 20 amps” when properly construed means “the battery cells, when configured together in a battery pack, are capable of producing reasonably close to 20 amps of discharge current or greater over the course of delivering their entire rated capacity.”

VII. The ‘257 Patent

15. After reviewing Dr. van Schalkwijk’s Report, I understand that it is his opinion that the term “state of charge” should be construed as “the amount of charge remaining at a given time for a battery pack” when used to modify a battery pack and “the amount of charge remaining at a given time for a battery cell” when used to modify a battery cell. I believe that his opinion regarding the proper construction of this term is incorrect for several reasons. Additionally, as I expressed in my January 14, 2011 Report, is my opinion that the term when properly construed means “the amount of charge remaining.”

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