Remarks

This application has been carefully reviewed in light of the Office Action mailed October 4, 2013. By this amendment, Applicant has amended claims 1 and 27. No new matter has been introduced by these amendments. Applicants do not admit that these amendments were necessary as a result of any cited art. Applicants respectfully request reconsideration of the above application in view of the following remarks.

Claim Rejections - 35 U.S.C. §103

Claims 1, 22, 27, 31 – 35, 38 – 44 and 47stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatoh *et al.* ("Hatoh") (U.S. Patent Publication No. 2006/0251943) in view of Valensa *et al.* ("Valensa") (U.S. Publication No. 2006/0251943). Applicants respectfully request reconsideration of this rejection because the proposed combination of Hatoh and Valensa fails teach, suggest or disclose features of the pending claims.

The proposed combination of Hatoh and Valensa fails to teach, suggest, or disclose in claim 1 the presently claimed "outer shell defining a cavity therein; a first pipe extending through the cavity to deliver the anode stream to the fuel cell stack at a first temperature; a second pipe extending through the cavity to deliver the cathode stream to the fuel cell stack at a second temperature [.]"

The Office agrees that Hatoh does not explicitly disclose the conditioning device as claimed. (*See*, Office Action, pp. 3, §4, ¶3). For example, Hatoh does not disclose the presently claimed conditioning device including an outer shell (*e.g.*, a single outer shell) that defines a cavity and first and second pipes extending through the cavity of the outer shell. Specifically, Hatoh discloses separate (or multiple) heat exchangers 117 and 118 for an anode side and a cathode side, respectively, that are not included within a cavity of a single outer shell (see Figure 1).

The Office also states the following in connection with Hatoh:

> The system [of Hatoh] further comprises a *[sic]* conditioning devices 117, 118 operable to receive the anode inlet stream and coolant outlet stream, and the cathode inlet stream and coolant outlet stream. *While Hatoh et al. appear to disclose separate heat exchangers, the court has held it would have been obvious to one of ordinary skill in the art at the time of the invention to use a one piece construction because it would be a merely a matter of obvious engineering choice*. In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

(*See*, Office Action, pp. 3, §4, ¶3)

Applicant respectfully disagrees with the above analysis. Specifically, the Office misapplies *Larson* in this case. For example, the claims at issue in *Larson* require "a brake drum *integral* with clamping means" and the prior art in *Larson* disclosed the brake drum *being rigidly secure* to the clamping means. In re *Larson*, 340 F.2d 968 (emphasis added). Thus, the essential difference between the claims of *Larson* and the prior art was the term "integral." This condition does not apply here. As noted above, Hatoh provides multiple heat exchanges 117, 118; one for the anode side and the other for the cathode side. Hatoh does not disclose a single outer shell (or single heat exchanger) that includes both a first pipe extending in the cavity to deliver the anode stream to the fuel cell stack at a first temperature and a second pipe extending through the cavity to deliver the cathode stream to the fuel cell stack at a second temperature. Hatoh implementation does not differ from the foregoing limitations due to the term "integral" as noted in *Larson*. Thus, *Larson* cannot be applied in the manner asserted.

The Office relies on aspects of Valensa to cure the deficiencies of Hatoh. Specifically, the Office states the following:

> Valensa et al. disclose a compact oxidant preheater for a fuel cell system comprising inlet ports 14, 25 and outlet ports 24, 26, where **a first pipe** *[of the heat exchanger 1]* extends through the cavity of an outer shell, as claimed. See Figure 3.

(*See*, Office Action, pp. 3, §4, ¶3, emphasis added, italics added)

Assuming, *arguendo*, that the first pipe of the heat exchanger 1 of Valensa as noted in the above analysis is similar to the presently claimed first pipe extending through a cavity to deliver the anode stream to the fuel cell stack at first temperature, Valensa fails to teach, suggest, or disclose that the heat exchanger 1 also includes a second pipe extending through the cavity to deliver the cathode stream to the fuel cell stack at a second temperature.

At best, Valensa discloses that the heat exchanger 1 provides heated air 10 and a combined cathode air flow 12 to the fuel cell stack 100. (*See*, Figure 1). Valensa fails to disclose including the presently claimed second pipe along with the first pipe within the heat exchanger 1. Further, Valensa fails to disclose that the second pipe in addition to the first pipe to deliver the anode stream to the fuel cell stack 1.

For at least these reasons, claim 1 is patentable over the proposed combination of Hatoh and Valensa.

Independent claims 22 and 27 include limitations similar to those of claim 1 and are patentable over the proposed combination of Hatoh and Valensa for similar reasons as noted above.

Claims 36, 37, 45 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hatoh in view of Valensa and further in view of Nelson *et al.* (U.S. Publication No. 2002/0177017).

The forgoing claims are patentable over the proposed combination of Hatoh, Valensa, and Nelson due to their dependency on an independent claim noted above in addition to their own patentable limitations.

Conclusion

Applicants do not acquiesce to the Examiner's characterizations of the art. For brevity and to advance prosecution, Applicants may not have addressed all characterizations of the art

and reserve the right to do so in further prosecution of this or a subsequent application. The absence of an explicit response by Applicants to any of the Examiner's positions does not constitute a concession to the Examiner's positions. The fact that Applicants' comments have focused on particular arguments does not constitute a concession that there are not other arguments for patentability of the claims. Applicants submit that all of the dependent claims are patentable for at least the reasons given with respect to the claims on which they depend.

For the foregoing reasons, Applicants believe that the Office Action mailed October 4, 2013 has been fully responded to. Consequently, in view of the above amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, for which allowance is respectfully requested.

If the Examiner believes a telephone interview would advance prosecution of the application in any manner, the Examiner is invited to contact Martin J. Sultana, representative of Applicants, at the Examiner's convenience at (248) 358-4400.

The Petition fee of $200.00 pursuant to 37 C.F.R. § 1.17(a) is being charged to our Deposit Account No. 02-3978 via electronic authorization submitted concurrently herewith. Please charge any fees or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,

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