Remarks

This application has been carefully reviewed in light of the Office Action mailed August 31, 2009. By this amendment Applicants have amended claims 1, 22 and 27, canceled claims 2-6, 8-11, 21, and 23-30, and added new claims 31-47. 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.

Response to Non-Compliant Amendment

Applicant has amended previously presented and elected independent claims 1, 22, and 27 in this Response subject to the Non-Compliant Amendment. Specifically, claims 1, 22, and 27 have been examined on their merits in the Office Action mailed on August 31, 2009. Applicant has now amended claims 1, 22, and 27 and such amended claims are drawn to a system for conditioning the temperature of at least one fluid system that is passed through a fuel cell stack… (e.g., see claim 1) and an apparatus in a system for conditioning the temperature of a least one fluid stream that is passed through a fuel stack…(e.g., see claims 22 and 27). Again claims 1, 22, and 27 are drawn to elected claims. Claim 1 is not patentably distinct from claims 22 and 27 as confirmed in the Office Action mailed on August 31, 2009. Applicant respectfully submits that the present Amendment complies with the requirements as set forth in 37 C.F.R. § 1.111.

Claim Rejections - 35 U.S.C. 103

Claims 1-6, 9-11, and 21-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Logan* (U.S. Patent Publication No. 2006/0263652) in view of *Matsuoka* (International Publication No. WO 2004/055928). Applicants respectfully request reconsideration of this rejection because the proposed combination of *Logan* and *Matsuoka* fails teach, suggest or disclose features of the pending claims.

The proposed combination of *Logan* and *Matsuoka* fails to teach, suggest or disclose in claim 1, "an input port coupled to the outer shell to deliver the coolant from the fuel cell stack to the first pipe and to the second pipe to change the first temperature of the anode stream and the second temperature of the cathode stream."

In particular, the proposed combination of *Logan* and *Matsuoka* fails to teach an input port that delivers the coolant from the fuel cell stack to the first pipe and change the first temperature of the anode stream as presently claimed. At best, Logan provides "[t]he coolant supply subsystem is operated to cause the required **cathode gas temperatures** to be achieved." (See, Abstract, ll. 10-11, emphasis added). *Logan* fails to provide an input port that delivers coolant from the fuel cell stack to the first pipe to change the first temperature of the anode stream.

Matsuoka fails to cure the deficiencies of *Logan*. In particular, *Matsuoka* fails to teach, suggest, or disclose the presently claimed "an input port coupled to the outer shell to deliver coolant from the fuel cell stack to the first pipe and to the second pipe to change the first temperature of the anode stream and to change the second temperature of the cathode stream."

For at least these reasons, the proposed combination of *Logan* and *Matsuoka* fails to teach, suggest or disclose the limitations of claim 1.

The proposed combination of *Logan* and *Matusoka* fails to teach, suggest or disclose in claim 32, "a first temperature sensor positioned on an exterior portion of outer shell and being in fluid communication with the anode stream in the first pipe to measure the first temperature."

As noted in connection with claim 1, *Logan* fails to contemplate delivering the coolant to change the temperature of the anode stream. Further, *Logan* fails to teach that a temperature sensor is positioned on exterior section of the outer shell. The Examiner asserts that the coolant supply subsystem (30) is disposed within a housing that is made up of the dotted line in Figure 1

of *Logan* (see Final Office Action mailed August 31, 2009, pp. 44, first paragraph). Assuming, *arguendo*, that the dotted line in Figure 1 of *Logan* is the same as the presently claimed outer shell (a point in which Applicants disagree), *Logan* fails to provide a temperature sensor positioned on an exterior section of the dotted line in Figure 1.

In addition, the Examiner asserts that the *Logan* teaches a heat exchanger having a housing. *Id.* *Logan* fails to teach that the housing of the heat exchanger includes a temperature sensor positioned on an exterior section thereof that is capable of being in fluid communication with an anode stream.

Matusoka fails to cure the deficiencies of *Logan*. *Matusoka* fails to teach the presently claimed a first temperature sensor positioned on an exterior portion of outer shell and being in fluid communication with the anode stream in the first pipe to measure the first temperature.

For at least these reasons, claim 32 is patentable over the proposed combination of *Logan* and *Matusoka*.

The proposed combination of *Logan* and *Matsuoka* fails to teach, suggest or disclose in claim 22, "an input port being coupled to the outer shell to receive coolant and to deliver the coolant into the cavity to change the first temperature of the anode stream and the second temperature of the cathode stream."

In particular, the proposed combination of *Logan* and *Matsuoka* fails to teach an input port that delivers the coolant into the cavity to change the first temperature of the anode stream as presently claimed. At best, *Logan* provides "[t]he coolant supply subsystem is operated to cause the required **cathode gas temperatures** to be achieved." (See, Abstract, ll. 10-11, emphasis added). *Logan* fails to provide an input port that delivers the coolant into the cavity to change the first temperature of the anode stream.

Matsuoka fails to cure the deficiencies of *Logan*. In particular, *Matsuoka* fails to teach, suggest, or disclose the presently claimed "an input port being coupled to the outer shell to receive coolant and to deliver the coolant into the cavity to change the first temperature of the anode stream and the second temperature of the cathode stream."

For at least these reasons, the proposed combination of *Logan* and *Matsuoka* fails to teach, suggest or disclose the limitations of claim 22.

The proposed combination of *Logan* and *Matsuoka* fails to teach, suggest or disclose in claim 27, "an input port coupled to the outer shell to deliver coolant from a fuel cell stack to the first pipe to change the first temperature of the anode stream."

At best, *Logan* provides "[t]he coolant supply subsystem is operated to cause the required **cathode gas temperatures** to be achieved." (See, Abstract, ll. 10-11, emphasis added). *Logan* fails to provide an input port coupled to the outer shell to deliver coolant to the first pipe to change the first temperature of the anode stream.

Matsuoka fails to cure the deficiencies of *Logan*. In particular, *Matsuoka* fails to teach, suggest, or disclose the presently claimed "an input port coupled to the outer shell to deliver coolant to the first pipe to change the first temperature of the anode stream."

Further, the proposed combination of *Logan* and *Matsuoka* fails to teach, suggest, or disclose in claim 27 the presently claimed, "temperature sensor positioned on an exterior of the outer shell and in fluid communication with the anode stream to measure the first temperature." Such limitations are patentable for similar reasons noted above in connection with claim 32.

For at least these reasons, the proposed combination of Logan and Matsuoka fails to teach, suggest or disclose the limitations of claim 27.

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 April 25, 2012 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.

Please charge any fees or credit any overpayments as a result of the filing of this paper to Ford Global Technologies LLC, Deposit Account No. 06-1510.

Respectfully submitted,

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