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Declarations under Rule 4.17:

[Continued on next page]

(54) Title: HIGH TEMPERATURE, HIGH BANDWIDTH PRESSURE ACQUISITION SYSTEM

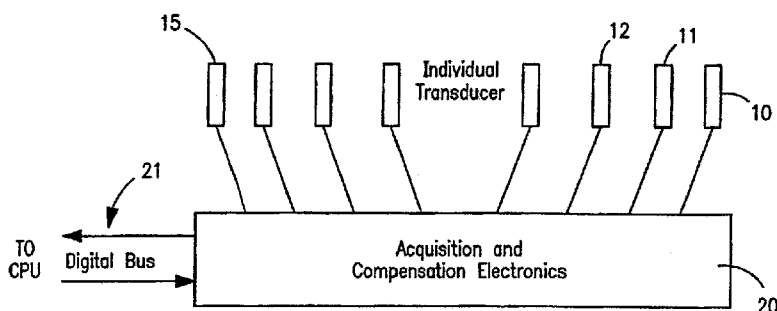


FIG. 1

(57) Abstract: A system for measuring a multiplicity of pressures as those experienced by a model in a wind tunnel is depicted. The system includes individual sensor devices which are connected to an Acquisition and Compensation electronics module. The individual sensor or transducer devices are semiconductor piezoresistive devices and are connected to the Acquisition and Compensation electronics module by means of a cables in a first embodiment. In an alternate embodiment the system uses connectors which connect each of the individual sensor devices to the Acquisition and Compensation electronics module via a mating connector located therein. The connectors may also include a memory which stores compensation coefficients associated with each of the various sensor devices. In this manner as described, the transducers which are small devices are connected via electrical lines or cables to the central Acquisition and Compensation electronics modules. This module houses electronics which digitally converts the data from the sensors and then compensates the data for temperature effects. The advantage of the system is that each individual sensor does not have any compensation and it can be made very small to operate at very high temperatures without any loss of accuracy. Thus, a large number of sensors can be utilized in a very small volume, even under extreme environmental conditions. It is noted that the Acquisition and Compensation electronics module can be located remotely in a safe environment outside of the wind tunnel and therefore respond extremely accurately to the pressure and temperatures subjected by the model in the wind tunnel.



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- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
 - *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
 - *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, EPODOC, ESP@CE, GOOGLE, USPTO, JPO: Keywords (pressure, sensors, array, wind tunnel, temperature, compensation, unique, processor) and similar terms.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4399515 A (GROSS) 16 August 1983 See abstract, figure 1, claim 1, column 2 lines 11-45 and column 3 lines 43-50	1-3, 7, 8, 10-12, 14, 15
Y		4-6, 9, 13
Y	US 2007/0151347 A1 (MAITLAND, JR. et al.) 5 July 2007 See figures 1 and 2	5, 6, 9, 13
Y	US 4946010 A (DI BONO) 7 August 1990 See abstract and figures	4

 Further documents are listed in the continuation of Box C See patent family annex

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"A" document defining the general state of the art which is not considered to be of particular relevance

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"O" document referring to an oral disclosure, use, exhibition or other means

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"P" document published prior to the international filing date but later than the priority date claimed

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5506794 A (LANGE) 9 April 1996 See figure 3	1 - 15
A	US 4192005 A (KURTZ) 4 March 1980 See whole document	1 - 15

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2010/021733

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
US	4399515	ES	8303694		
US	2007151347	CN	101375134	EP	1963788
		WO	2007075484	US	7258016
US	4946010	NONE			
US	5506794	AU	55486/90	BR	9007336
		EP	0470140	EP	0639261
		FI	892071	HK	136494
		MW	7191	NO	914098
		US	5654907	WO	9013794
US	4192005	NONE			
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
END OF ANNEX					