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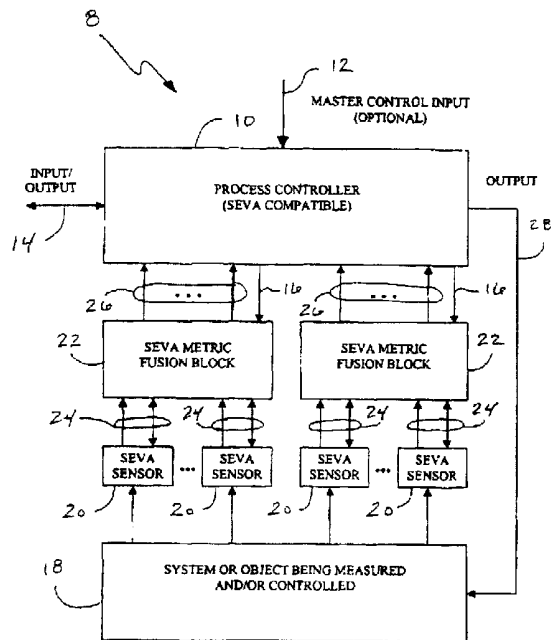
(71) Applicant(s):
Invensys Systems Inc
(Incorporated in USA - Massachusetts)
33 Commercial Street, Foxboro,
Massachusetts 02035-2099,
United States of America

(72) Inventor(s):
Manus Patrick Henry
Mihaela D Duta

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(54) Abstract Title: **Sensor fusion using self evaluating process sensors**

(57) A measurement processing system is disclosed for fusing measurement data from a set of independent self-validating (SEVA) process sensors (20) monitoring the same real-time measurand in order to generate a combined best estimate for the value, uncertainty and measurement status of the measurand. The system also provides consistency checking between the measurements. The measurement processing system includes a first process sensor (20) and a second process sensor (20). Each of the first and second process sensors (20) receive a measurement signal from a transducer and generate independent process metrics (24). A measurement fusion block (22) is connected to the first and second process sensors (20), the measurement fusion block (22) is operable to receive the independent process metrics and execute a measurement analysis process to analyse the independent process metrics and generate the combined best estimate of the independent process metrics.



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(74) Agent and/or Address for Service:
Lloyd Wise
Commonwealth House,
1-19 New Oxford Street, LONDON,
WC1A 1LW, United Kingdom