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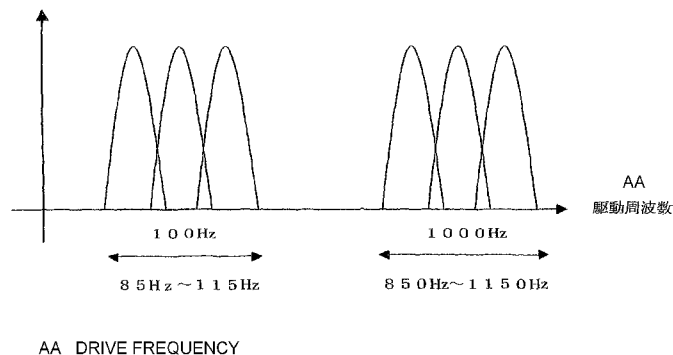
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- (71) 出願人 (米国を除く全ての指定国について): 株式会社オーバル(OVAL CORPORATION) [JP/JP]; 〒1618508 東京都新宿区上落合 3 丁目 1 0 番 8 号 Tokyo (JP).
- (72) 発明者: および
- (75) 発明者/出願人 (米国についてのみ): 北見 大一 (KITAMI, Hirokazu) [JP/JP]; 〒1618508 東京都新宿区上落合 3 丁目 1 0 番 8 号 株式会社オーバル内 Tokyo (JP). 嶋田 英樹(SHIMADA, Hideki) [JP/JP]; 〒1618508 東京都新宿区上落合 3 丁目 1 0 番 8 号 株式会社オーバル内 Tokyo (JP).
- (74) 代理人: 小林 保(KOBAYASHI, Tamotsu); 〒1010032 東京都千代田区岩本町 3-1-9 リブラ岩本町 4 階 Tokyo (JP).
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(54) Title: SIGNAL PROCESSING METHOD, SIGNAL PROCESSING DEVICE, AND CORIOLIS FLOW METER.

(54) 発明の名称: 信号処理方法、信号処理装置、およびコリオリ流量計

FIG. 2



(57) Abstract: Disclosed are a coriolis flow meter, a signal processing device, and a signal processing method which, even if the temperature of the fluid to be measured changes, if the fluid to be measured becomes contaminated with bubbles, or if the fluid to be measured has rapidly changed from a gas to a liquid, are capable of always measuring with constant precision, have a high filtering capacity, and can carry out phase measurement with low computational complexity. A coriolis flow meter wherein the phase difference and/or the vibration frequency proportional to the coriolis force acting on at least one or a pair of flow tubes is detected, and the mass flow rate and/or the density of the liquid to be measured is obtained, is provided with: an A/D convertor which converts analogue signals inputted from each of a pair of vibration detection sensors to digital signals; a frequency measurer which measures the vibration frequency (θ) of the flow tubes; a transmitter which generates a frequency signal at the frequency θ ($1-1/N$) of the digital frequency signal outputted from the frequency measurer; and a pair of orthogonal frequency converters which use the signal generated by the transmitter to frequency convert each of a pair of digital signals which correspond to the pair of vibration detection sensors and are output from the A/D converter, and generate a digital signal at a frequency of $1/N$. The flow meter uses the signal generated by the orthogonal frequency converters to obtain the phase difference.

(57) 要約:

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