

- [54] PHASE DIFFERENCE MEASUREMENT SYSTEM
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[57] ABSTRACT

A system and technique is disclosed which enables the production of in-phase and quadrature phase signals useful for deriving phase difference measurements. In an in-phase and quadrature phase difference measurement system, the phase shifter employed must receive an input signal and produce an output signal which is 90° out of phase and equal in amplitude to the input signal over the full frequency range of the input signal. This is accomplished by using a phase locked loop which locks onto the input signal and uses the output of a voltage controlled oscillator located in the loop to derive the sine and cosine of the input signal. The resulting sine and cosine outputs are then 90° out of phase and form in-phase and quadrature phase signals which have equal amplitudes. These two signals maintain lock over the frequency range of the input signal and may be used as inputs in the phase difference measurement system.

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1 Claim, 5 Drawing Figures

