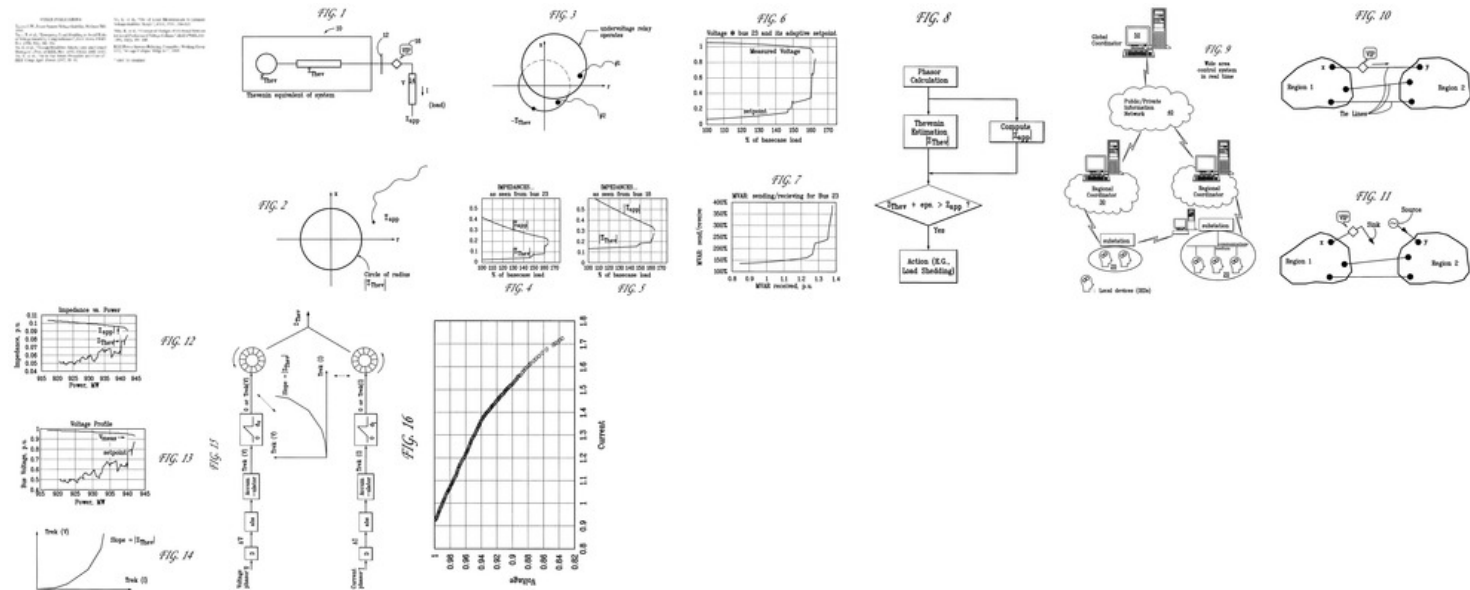


9 results for Forward and Backward citations - Collection: FAMPAT

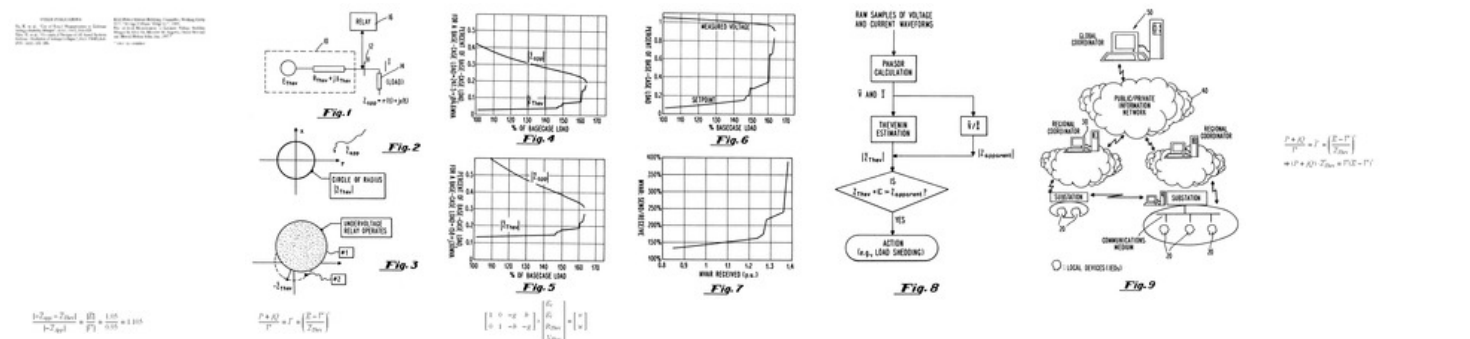
#	Title	Publication number	1st App. date	Applicant/Assignee	1st Publ. date
1.	Monitoring voltage stability of a transmission corridor	US2014343879	2013-11-04	QUANTA TECHNOLOGIES* QUANTA TECHNOLOGY	2014-11-20
A voltage stability monitoring apparatus (8) monitors the voltage stability of a transmission corridor (6) through which power flows between different parts of a power system (2). The apparatus (8) monitors an equivalent load impedance at an interface between the transmission corridor (6) and a part of the power system (2) designated as generating the power. This equivalent load impedance at the interface comprises a ratio of a voltage phasor at the interface to a current phasor at the interface. The apparatus (8) tracks a Thevenin equivalent voltage and impedance of the designated part by separately updating that voltage and impedance. Notably, the apparatus (8) updates the imaginary part of the Thevenin equivalent voltage to reflect the magnitude of any changes in the voltage phasor that are associated with large variations in the magnitude of the equivalent load impedance at the interface. The apparatus (8) computes an index indicating the voltage stability as a function of this tracked Thevenin equivalent voltage and impedance.					
2.	Determining parameters of an equivalent circuit representing a transmission section of an electrical network	EP1408595	2002-10-10	ABB RESEARCH CENTER*	2004-04-14
The method involves determining a voltage phasor and current phasor at different interfaces (5,6) by simultaneous measurement processes, and an impedance value is computed from the obtained phasors. DEPENDENT CLAIMS are also included for the following: (a) Computer program; and (b) Data processing system.					

A Voltage Instability Predictor (VIP) (16) estimates the proximity of a power system (10) to voltage collapse in real time. The VIP (16) can be implemented in a microprocessor-based relay whose settings are changed adaptively to reflect system changes. Only local measurements (voltage and current) at the bus (12) terminal are required. The VIP (16) detects the proximity to collapse by monitoring the relationship between the apparent impedance and the Thévenin impedance. In addition that the VIP (16) may be used in connection with non-radial topologies; a more robust method to track voltage collapse in terms of impedance using rolling sums; and a method for representing using distance to voltage collapse in terms of power margins.

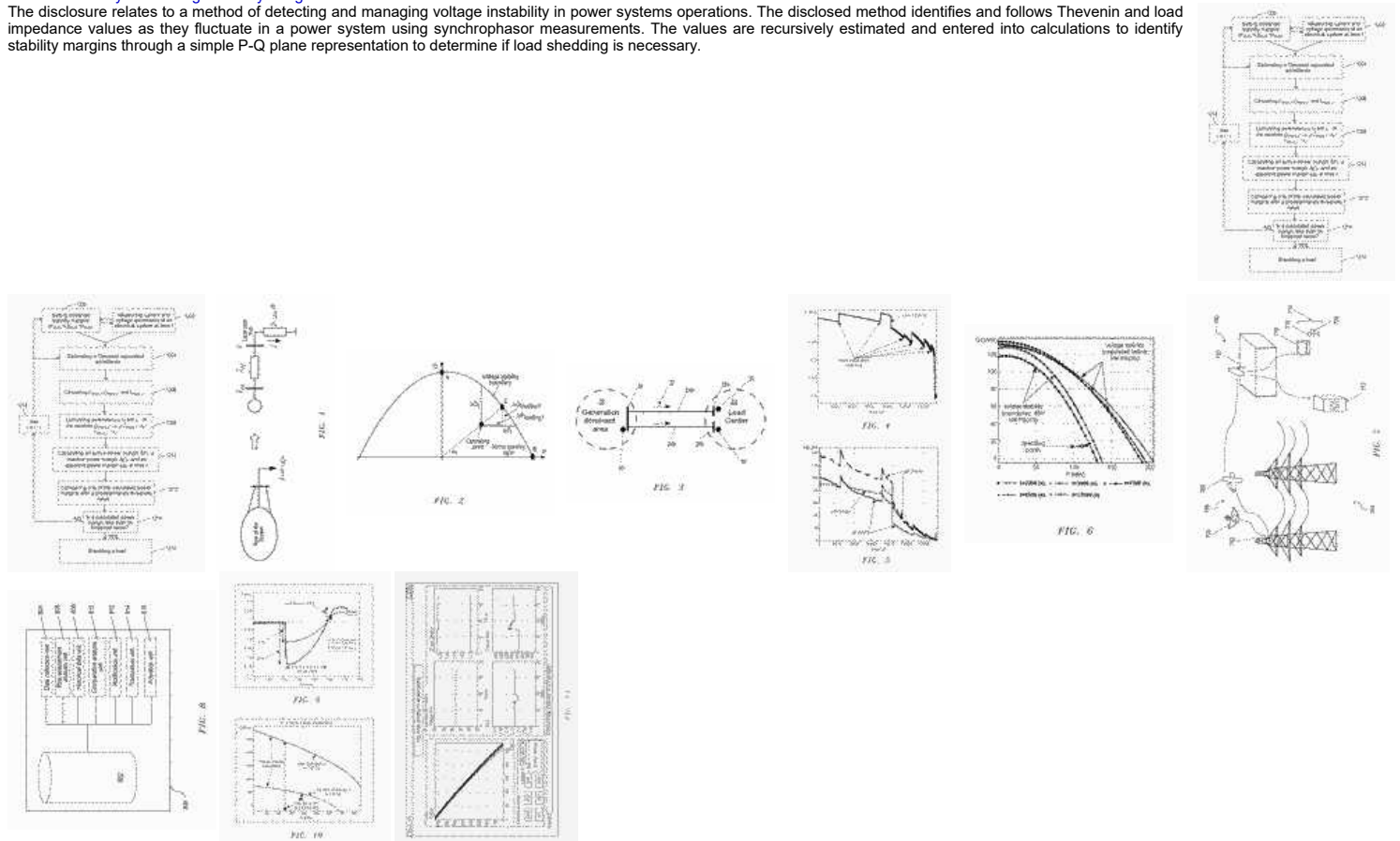


4. Voltage instability predictor (vip)--method and system for performing adaptive control to improve voltage stability in power systems US6219591 1998-05-15 ABB* 2001-04-17

A Voltage Instability Predictor (VIP) estimates the proximity of a power system to voltage collapse in real time. The VIP can be implemented in a microprocessor-based relay whose settings are changed adaptively to reflect system changes. Only local measurements (voltage and current) at the bus terminal are required. Contrary to the most common strategy to maintain voltage stability, which is to shed blocks of load when the voltage drops below a certain fixed threshold, which threshold is difficult to select since voltage magnitudes are a poor indicator of how close the system is to a collapse, the inventive VIP detects this proximity to collapse by monitoring the relationship between the apparent impedance (overscore (Z))app and the Thevenin-impedance circle.



The disclosure relates to a method of detecting and managing voltage instability in power systems operations. The disclosed method identifies and follows Thevenin and load impedance values as they fluctuate in a power system using synchrophasor measurements. The values are recursively estimated and entered into calculations to identify stability margins through a simple P-Q plane representation to determine if load shedding is necessary.



6. Method and apparatus for determining voltage stability margin for load shedding within an electrical power system

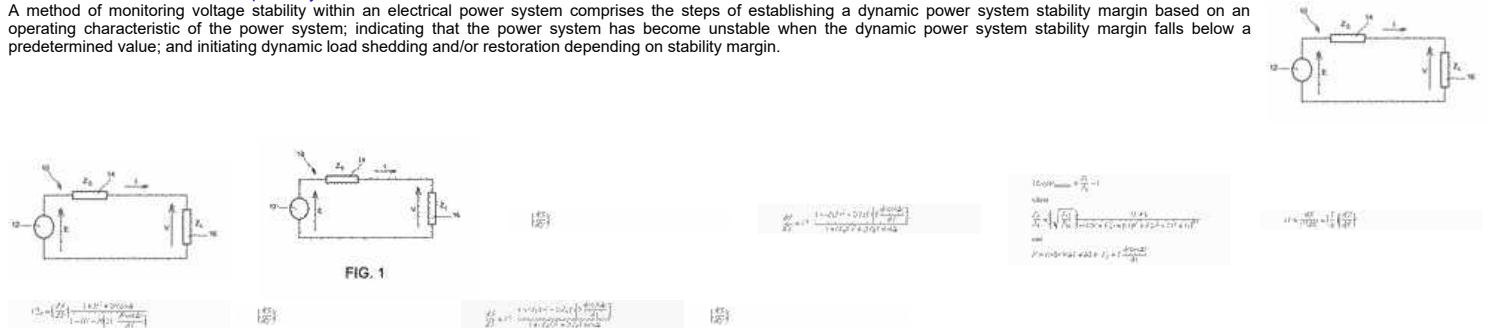
CA2636524

2007-12-28

ALSTOM TECHNOLOGY*
AREVA T&D
SCHNEIDER ELECTRIC ENERGY*

2009-01-02

A method of monitoring voltage stability within an electrical power system comprises the steps of establishing a dynamic power system stability margin based on an operating characteristic of the power system; indicating that the power system has become unstable when the dynamic power system stability margin falls below a predetermined value; and initiating dynamic load shedding and/or restoration depending on stability margin.



7. Method for voltage instability load shedding using local measurements

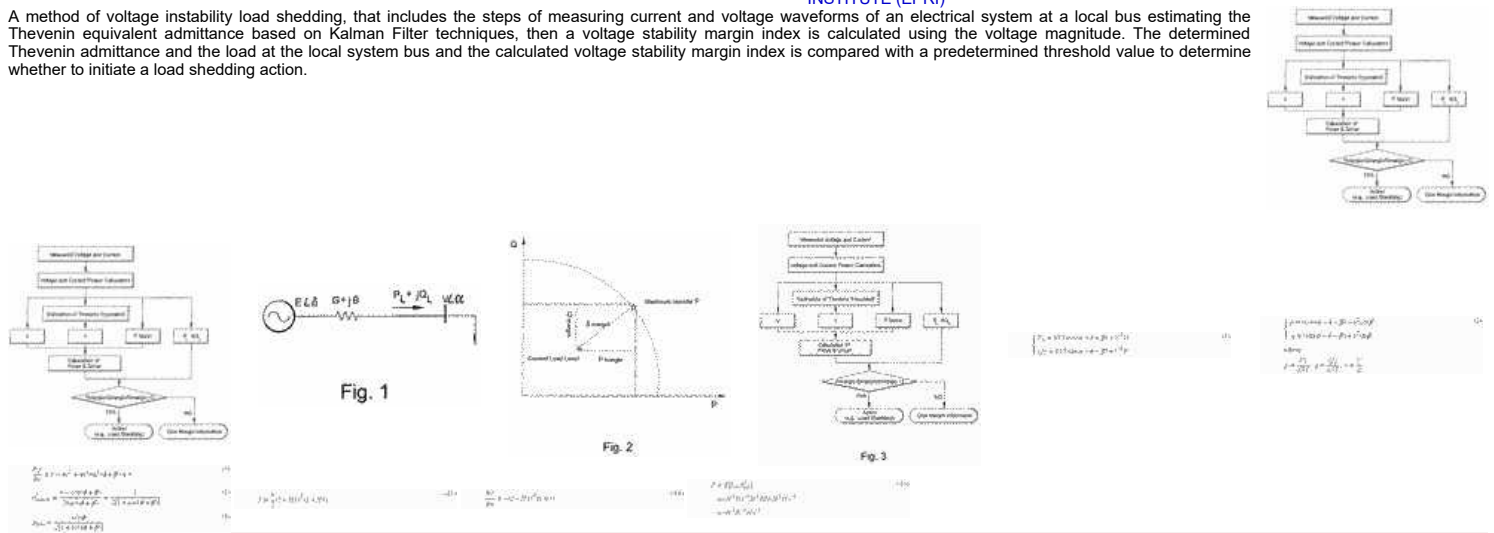
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2006-10-09

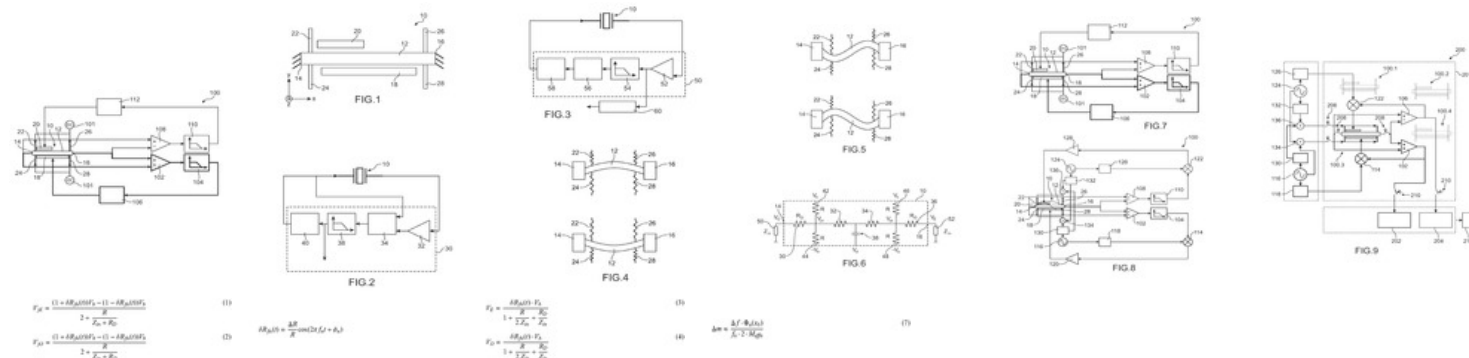
ELECTRIC POWER RESEARCH INSTITUTE
ELECTRIC POWER RESEARCH INSTITUTE (EPRI)*

2008-04-10

A method of voltage instability load shedding, that includes the steps of measuring current and voltage waveforms of an electrical system at a local bus estimating the Thevenin equivalent admittance based on Kalman Filter techniques, then a voltage stability margin index is calculated using the voltage magnitude. The determined Thevenin admittance and the load at the local system bus and the calculated voltage stability margin index is compared with a predetermined threshold value to determine whether to initiate a load shedding action.



and in which the resonator and the calculators form two self-oscillating loops making the oscillator resonate simultaneously in the two modes.
(From US9515608 B2)



9. Apparatus and method for controlling adaptive reclosing based on transient stability

KR101467249

2014-03-11

SUNGKYUNKWAN UNIVERSITY*

2014-12-02

An apparatus and method for controlling adaptive reclosing based on transient stability of a power transmission line are disclosed. The apparatus includes a power angle calculation unit, an integral square error (ISE) second-order differential calculation unit, a stability determination unit, and a disconnection signal generation unit. The power angle calculation unit acquires the instantaneous value of a power angle based on voltage and phase angle measurement signals. The ISE second-order differential calculation unit acquires the instantaneous value of the second-order differential of the ISE of the power angle. The stability determination unit determines whether a system is stable or unstable based on the transitions in the instantaneous value of the second-order differential of the ISE. The disconnection signal generation unit generates a first disconnection signal and a second disconnection signal adapted to open or reclose the circuit breaker at the leader end and the circuit breaker at the follower end.

