Driving point impedance power system

Measurement of Power System Subsynchronous Driving Point Impedance and Comparison with Computer Simulations Published in: IEEE Power Engineering Review (Volume: PER-4, Issue: 3, March 1984)

RL Driving Point Impedance: The RL networks consist of only R and L components. There is no capacitor present in such networks. The RL Driving Point Impedance of such networks is denoted as Z RL (s). The properties of driving point impedance function of RL networks [Z RL (s)] and the driving point admittance function of RC networks [Y RC (s)] are exactly identical.

and 0 O. The port driving point impedance for this case is seen to be that of two resistors in parallel. Parallel admittances are easier to handle, adding the values directly and taking the reciprocal of this sum for the impedance as in Eq. (2.2) ion circuit for

This paper presents a technique to extract the subsynchronous positive sequence driving point impedance in relation to frequency of an operating power system from a staged phase-to ...

2014. In this study, the Authors propose the discussion of nonlinearity of the human body"s dynamic response. The variables that affect nonlinearity of the human body"s dynamic response in the experimental measurements can be distinguished in two categories: intrinsic variables, relating to the individual subjects; and extrinsic variables, relating to the experimental conditions.

Figure 3.2(a) shows the single line representation of the power distribution system with the point of common coupling (PCC). The source/system voltage (v s) is assumed to be purely sinusoidal and the system/source impedance is represented by an inductance L s. Figure 3.2(a) Single line diagram of power distribution system Figure 3.2(b)

The influence of hand-arm posture on the biodynamic responses under z h-axis vibration is investigated in terms of driving point mechanical impedance and absorbed power under various combinations of hand grip and push forces, handle sizes and excitation levels.Laboratory measurements of the biodynamic responses were performed on seven ...

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The Cauer I uses the continued fraction expansion of the driving point impedance function Z(s). In this form, the numerator and the denominator are arranged in the descending powers of s, starting from highest to lowest power of s.

Some of these methods are based on the driving force and acceleration at the seat and are reported in the literature as apparent mass, driving point mechanical impedance or absorbed power.

This research proposes a synthesis of the measured values of human male hand-arm impedance characteristics, reported in the literature. The driving point mechanical impedance data of the human hand-arm, grasping a vibrating handle, has been compared to highlight the various similarities and differences among the data. The DPMI response of the hand-arm system has ...

The open distribution system simulator (OpenDSS) is open-source software developed by the Electric Power Research Institute (EPRI) in the United States for analyzing distribution systems.

for power flow analysis (the focus of EE 456) and generator representation for fault analysis (the focus of EE 457). M;¶¶ d tor ntation low sis tor ntation sis 3.0 Self admittance and driving point impedance You should recall that it is easy to develop the Y-bus. From that, one can invert it to obtain the Z-bus.

The transfer function Z(s) is defined to be the generalized driving-point impedance, the input impedance, or more usually the impedance, of the system. Both Z(s) and Y (s) are properties ...

This paper presents a technique to extract the subsynchronous positive sequence driving point impedance in relation to frequency of an operating power system from a staged phase-to-phase fault. An integral part of a subsynchronous resonance analysis is the frequency scan of digital computer models of the network connected to the machines under study to estimate the ...

The influence of feed forces on the driving-point impedance have been investigated by Bernard [26], Griffin et al. [27] and Hesse [21]. These studies show that the magnitude of thrust force yields an insignificant influence on the driving-point impedance, specifically at frequencies above 100 Hz.

system. The system comprises multiple plasma coils for driv-ing the plasma which have nearly identical but dynamically-varying driving-point impedances, a tuning and impedance transformation stage which cancels the reactive impedance components of the matched plasma coils, and a resistance compression network that losslessly transforms the multiple

The driving point mechanical impedance data of the human hand-arm, grasping a vibrating handle, has been compared ... The comparisons of the palm MI and the finger MI clearly indicate that the vibration power consumed in the hand-arm system at frequencies below 100 Hz was mainly transmitted through the palm, especially at the low ...

Considering the circuit shown in Fig. 4.9, the impedance, Z h, as seen by the distorting load (sometimes referred to as the load point or driving point impedance), consists of the inductive impedance of the upstream network in parallel to the capacitive impedance of the power factor correction capacitor and is given by the equation:

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If it is a ratio of source voltage to source current, it is called driving point impedance function denoted as Z (s) while if it is a ratio of source current to source voltage, it is called driving point admittance function denoted as Y (s).

system bus impedance matrix. If the power system experiences harmonic resonance, the system bus admittance matrix becomes singular. This results in errors in the ... equivalent driving-point ...

A steam turbine used to provide electric power. An electric power system is a network of electrical components deployed to supply, transfer, and use electric power. An example of a power system is the electrical grid that provides power to homes and industries within an extended area. The electrical grid can be broadly divided into the generators that supply the power, the ...

The restrictions on pole and zero locations in the Conditions For Driving Point Function with common factors in P(s) and Q(s) cancelled. ... Modern Power System. Principles of Power System; Power System Protection and Switchgear; ... RL Driving Point Impedance; Transfer Function or Network Function; Gate Function in Network Function;

In developing the power flow problem, we choose to work with Ybus. The reason for this is that the power flow problem requires an iterative solution that can be made very efficient when we ...

The driving point mechanical impedance data of the human hand--arm, grasping a vibrating handle, has been compared to highlight the various similarities and differences among the data.

Driving Point Impedance and Signal Flow Graph Basics: A Systematic Approach to Circuit Analysis Abstract The driving point impedance/signal flow graph (DPI/SFG) methodology is ...

The pole-zero plot is shown in the Fig. 7.11. Properties of RC Driving Point Impedance Function: Referring to the pole zero plot of Z RC (s) function considered, the various properties of RC Driving Point Impedance function can be stated as,. The poles and zeros are simple.

The reciprocal of the impedance function is the driving point admittance function, and is denoted by Y(s). For the Transfer Function of Two Port Network without internal sources, the driving point impedance function at port 1-1? is the ratio of the transform voltage at port 1-1? to the transform current at the same port.

Chapter 2Driving Point Impedance and Signal Flow Graph Basics: A Systematic Approach to Circuit AnalysisAbstract The driving point impedance/signal flow graph (DPI/SFG) methodology is based on fundamental analysis techniques--equivalent circuits and superposi-tion, which along with a direct

From (3.51), (3.52) and (3.54) we can surmise that the driving point impedance at each bus is the Thevenin impedance. Let us now find the Thevenin impedance between two buses j and k of a power system.

Driving point impedance power system

A two-port impedance model represents the voltages of a system as a function of currents. The Z-parameter matrix of a two-port model is of order 2 2. The elements are either driving point impedances or transfer impedances. The condition of reciprocity or symmetry existing in a system can be easily identified from the Z-parameters.