

ABSTRACT

PERIODIC EXTERNAL DISTURBANCE SUPPRESSION CONTROL DEVICE

A periodic disturbance suppressing control apparatus is designed to estimate and correct an inverse model of a transfer characteristic of a real system successively even in case of large condition change in the real system, and to realize a stable control system.

A periodic disturbance of an object to be suppressed is outputted as a sensed periodic disturbance IS_{dn} , IS_{qn} of a direct current component. A difference between a signal obtained by multiplication of the sensed periodic disturbance IS_{dn} , IS_{qn} with a multiplier using a reciprocal Q_n of a transfer characteristic, and a signal obtained by adding only a detection delay to a periodic disturbance suppressing command I^*_{dn} , I^*_{qn} , to estimate the periodic disturbance dI^*_{dn} , dI^*_{qn} . The periodic disturbance suppressing command is calculated by calculating a deviation between the estimated periodic disturbance dI^*_{dn} , dI^*_{qn} . A learning control section 29 corrects the reciprocal Q_n of the transfer characteristic in accordance with a quantity obtained by dividing a difference of the periodic disturbance suppressing command I^*_{dn} , I^*_{qn} during one sample interval by a difference of the sensed periodic disturbance during the one sample interval.

FIG. 1