

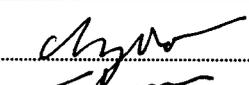
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KEY WORD: 2-MASS SYSTEM / CLOSED-LOOP IDENTIFICATION / PI CONTROLLER / LOAD SIMULATOR
PANUWAT WORAWONGTAD : A CLOSED-LOOP IDENTIFICATION METHOD FOR FLEXIBLE
MECHANICAL SYSTEMS.

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In this thesis, a closed-loop identification method for a 2-mass system has been proposed and studied in comparison with an open loop identification method. Using the proposed method, we can blend identification and control processes together without any modification of the controller. We have investigated and pointed out several conditions for input signal design which are important to achieve a good model of the 2-mass system. Analytical discussion and conclusion made in this thesis are confirmed not only by simulation but also by experiments which are carried out on a real system using a load simulator. From simulation and experimental results, we can conclude that the proposed identification method is feasible and Bode plots of the identified transfer function fit well with those of the real 2-mass system, especially in the vicinity of the resonant frequency.

ภาควิชา.....วิศวกรรมไฟฟ้า.....

ลายมือชื่อนิสิต..... 

สาขาวิชา.....วิศวกรรมไฟฟ้า.....

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