

the GcA output, in other case, bump effect will happen.

6 Conclusions

A method for H_∞ controller design and switching between controllers without bump effect has been proposed, and it has been applied to a simulated marine propulsion system, with diesel engine used as propeller prime-mover.

Each design consists of a feedback H-controller (FB-HC) and a bump-less transfer H-controller (BLT-HC). The method is implemented in an auto-tuning procedure by means ControlAvH [21,22]. Satisfactory results are obtained using hardware in the loop simulations (HILS) with EPESC [9,10]. The employment of our method gives good performance and robustness properties, and bump-less transfer when switching between controllers are carried out. In next works, experimental marine systems will employ to test our design methodology in collaboration with a marine construction company.

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