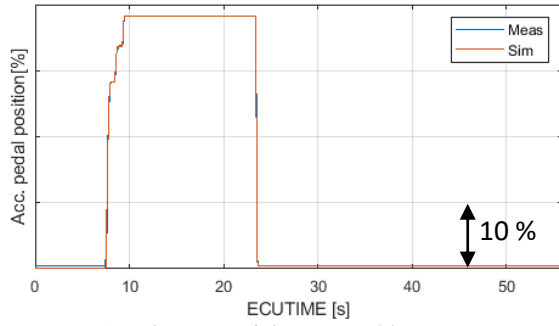
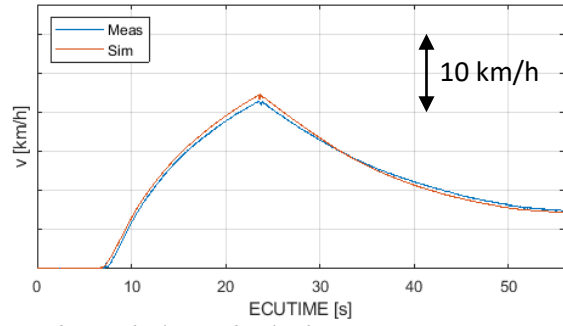


Attachment 1 Top-level validation results

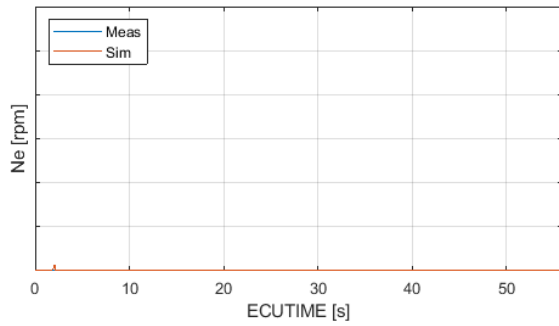
Top-level validation case 1



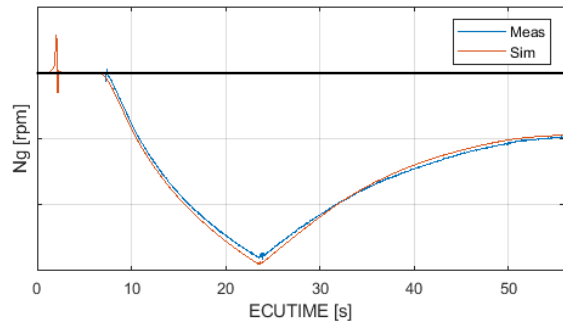
a) Accelerator pedal position [%]



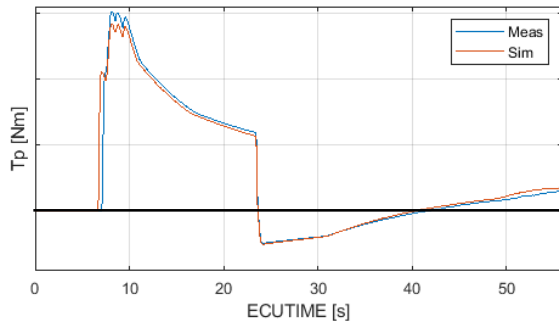
b) Vehicle speed v [km/h]



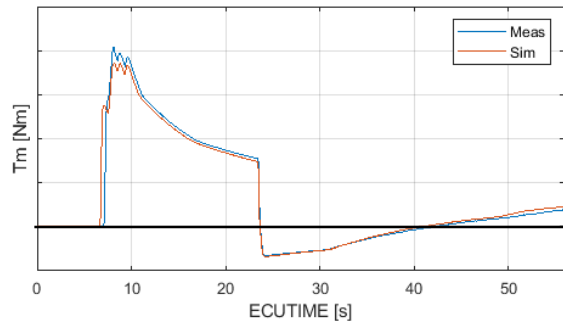
c) Engine speed N_e [rpm]



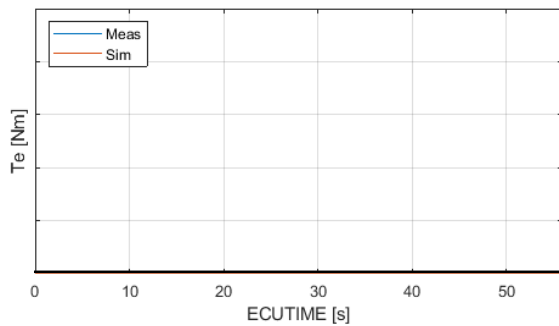
d) MG1 speed N_g [rpm]



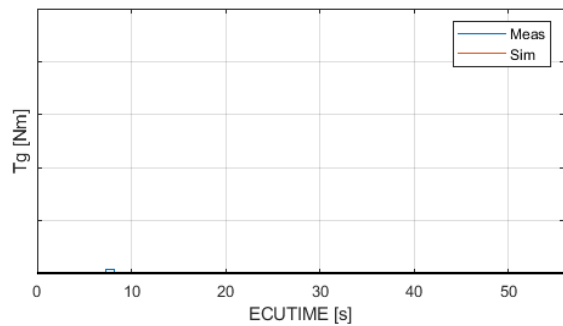
e) Propeller shaft torque T_p [Nm]



f) MG2 torque T_m [Nm]

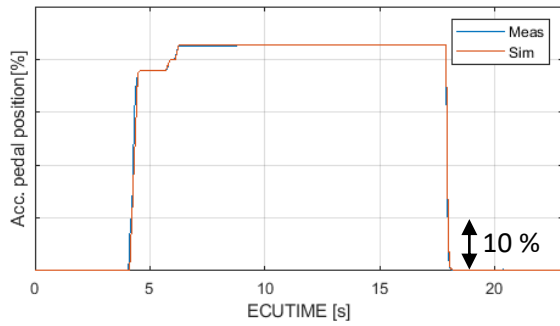


g) Engine torque T_e [Nm]

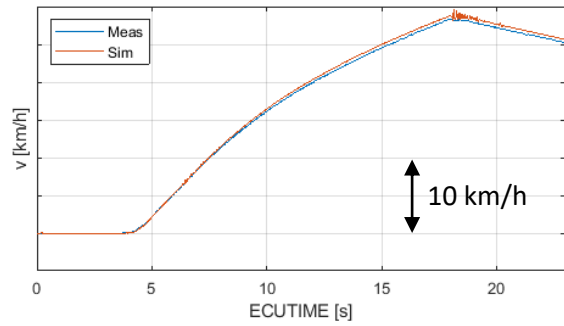


h) MG1 torque T_g [Nm]

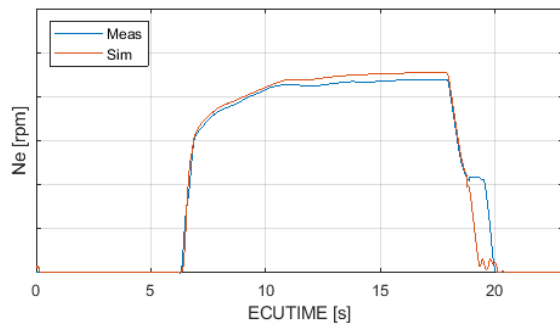
Top-level validation case 2



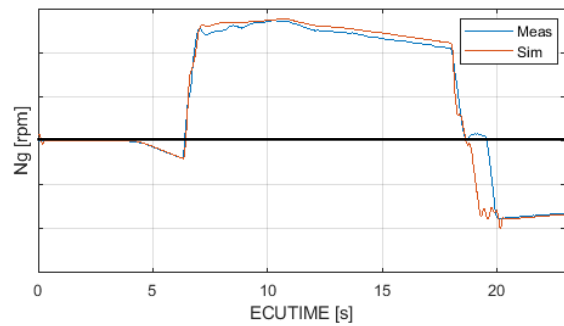
a) Accelerator pedal position [%]



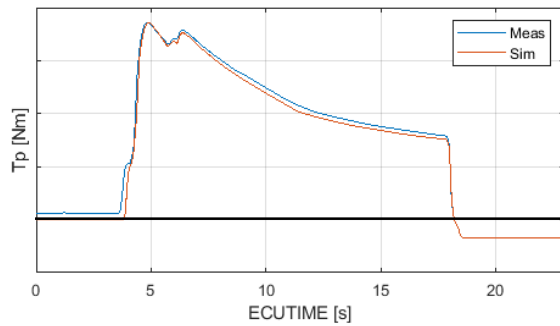
b) Vehicle speed v [km/h]



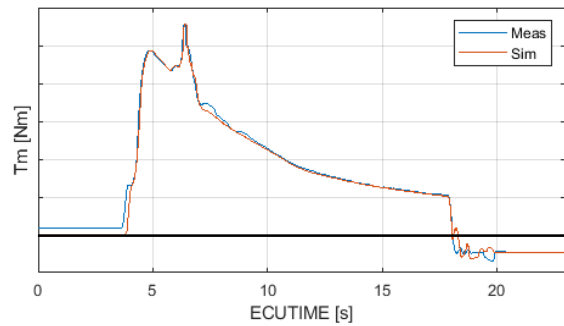
c) Engine speed N_e [rpm]



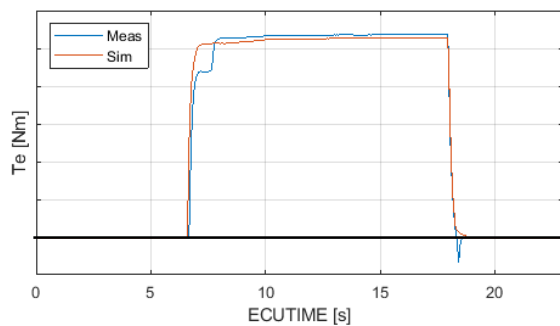
d) MG1 speed N_g [rpm]



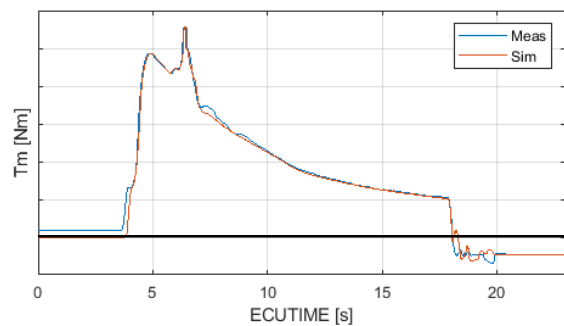
e) Propeller shaft torque T_p [Nm]



f) MG2 torque T_m [Nm]



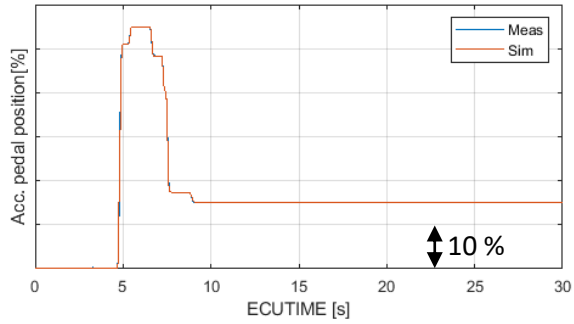
g) Engine torque T_e [Nm]



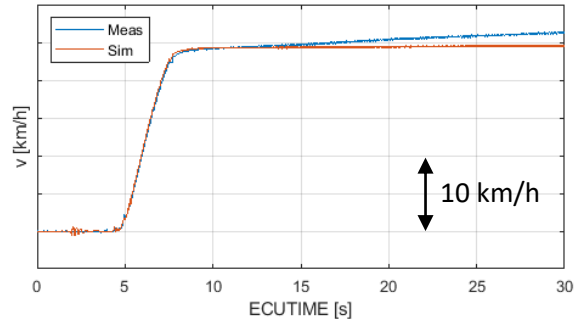
h) MG1 torque T_g [Nm]

Attachment 2 High frequency validation results

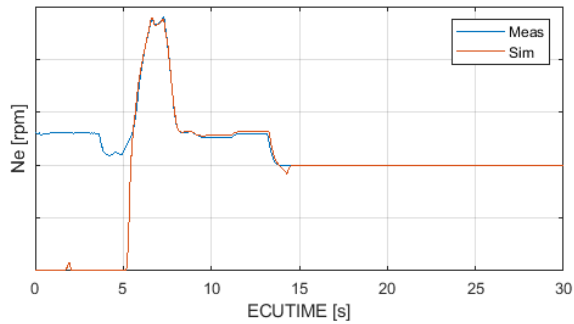
High frequency validation case 1



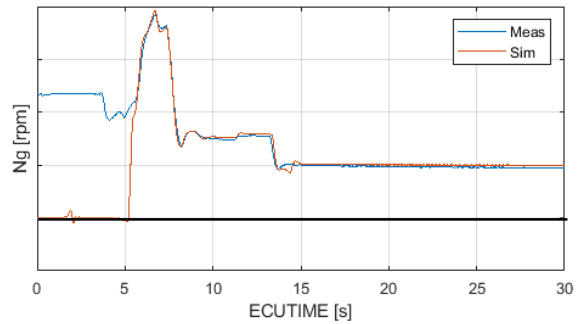
a) Accelerator pedal position [%]



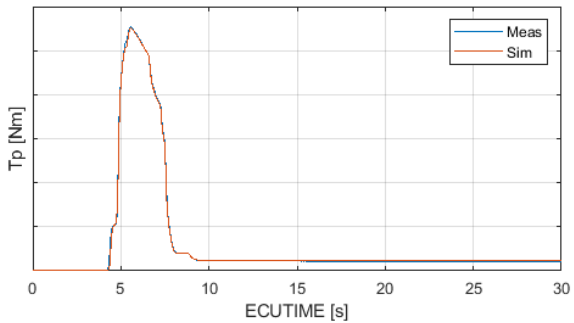
b) Vehicle speed v [km/h]



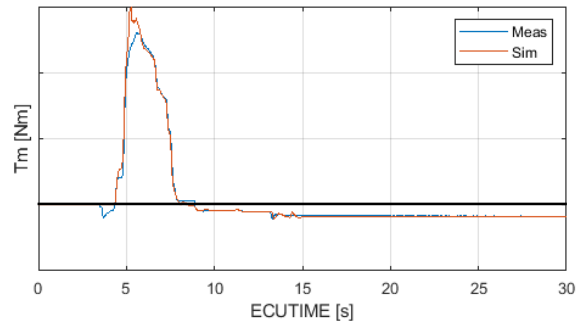
c) Engine speed N_e [rpm]



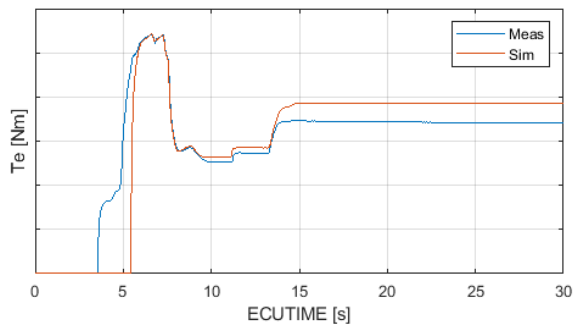
d) MG1 speed N_g [rpm]



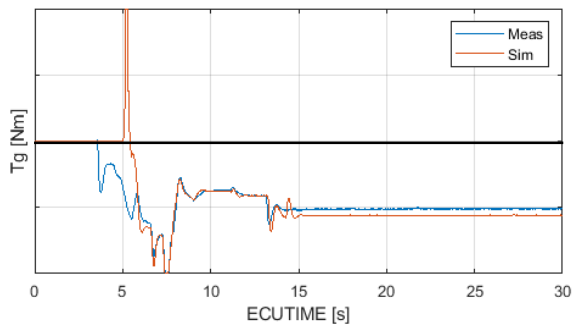
e) Propeller shaft torque T_p [Nm]



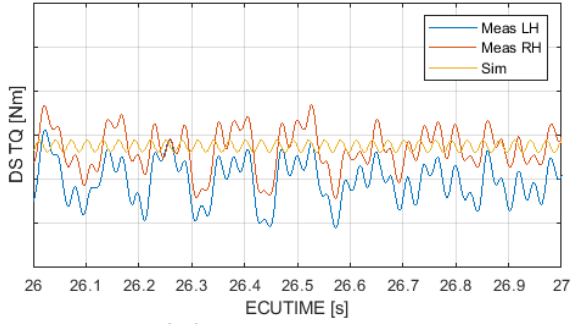
f) MG2 torque T_m [Nm]



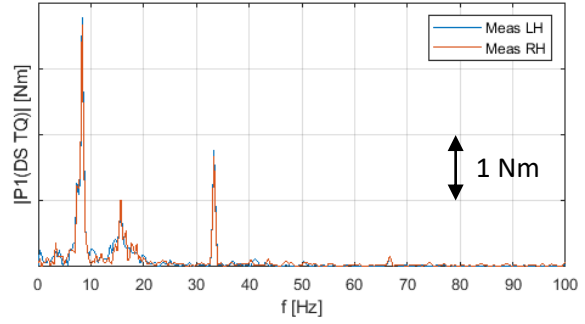
g) Engine torque T_e [Nm]



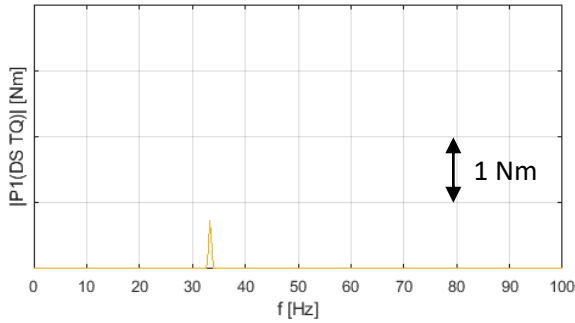
h) MG1 torque T_g [Nm]



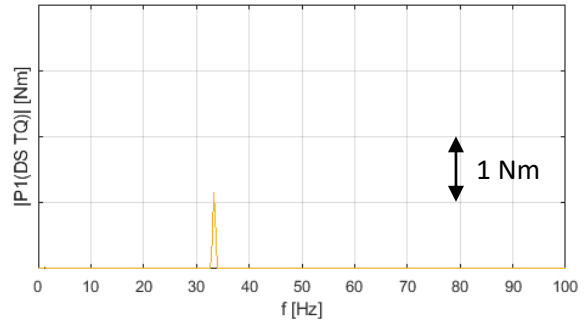
i) Driveshaft torque DS TQ [Nm]



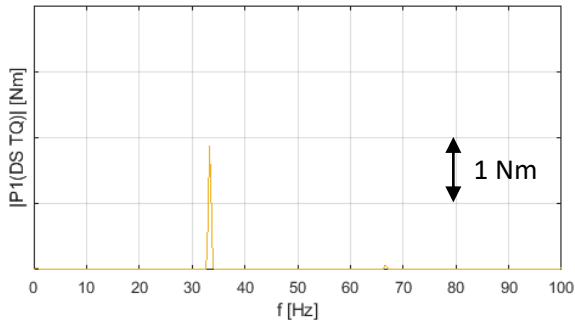
j) Measurement: DS TQ FFT [Nm]



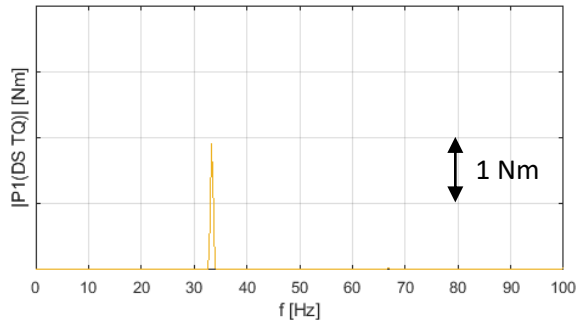
k) Simulation: Initial model DS TQ FFT [Nm]



l) Simulation: TeAC model corr. DS TQ FFT [Nm]

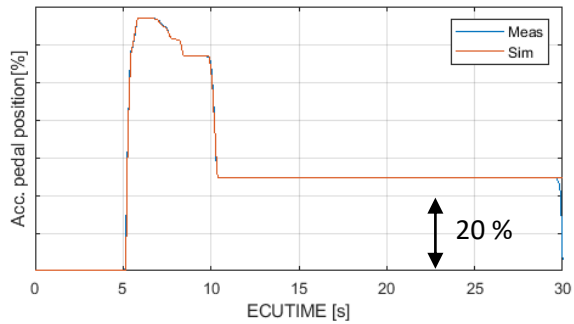


m) Simulation: HV damper corr. DS TQ FFT [Nm]

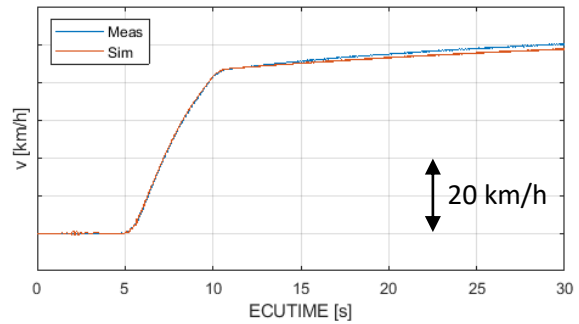


n) Simulation: Driveshafts corr. DS TQ FFT [Nm]

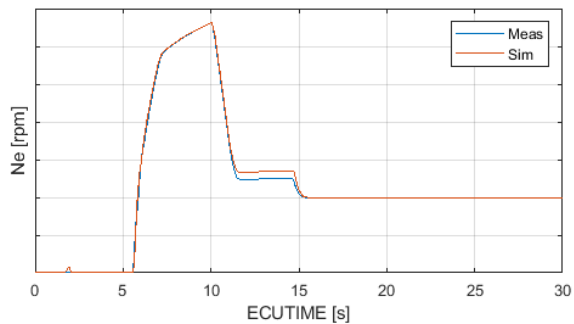
High frequency validation case 2



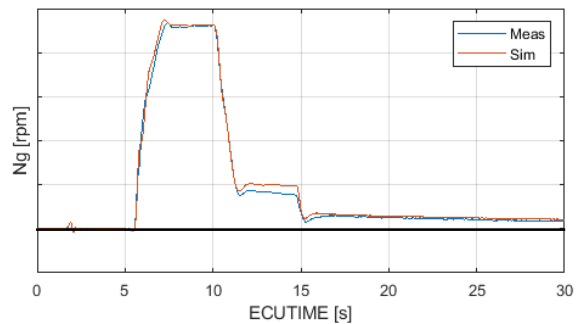
a) Accelerator pedal position [%]



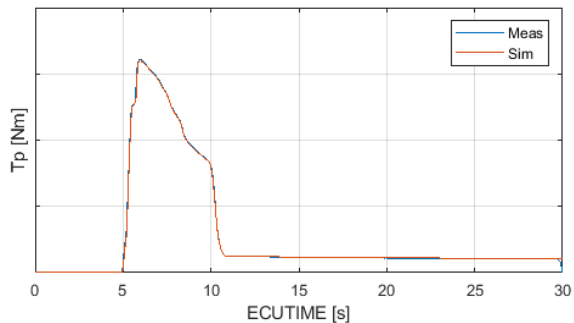
b) Vehicle speed v [km/h]



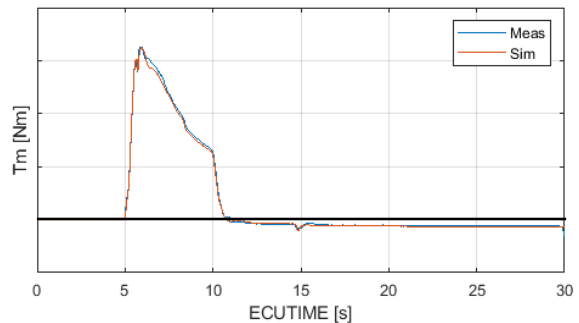
c) Engine speed N_e [rpm]



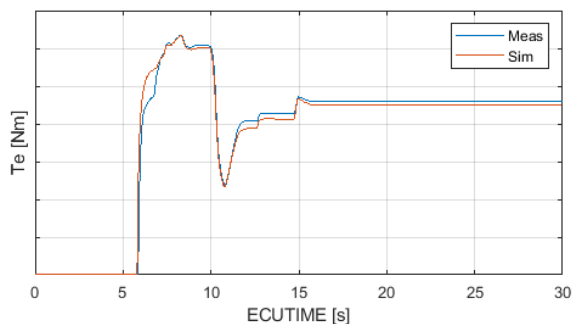
d) MG1 speed N_g [rpm]



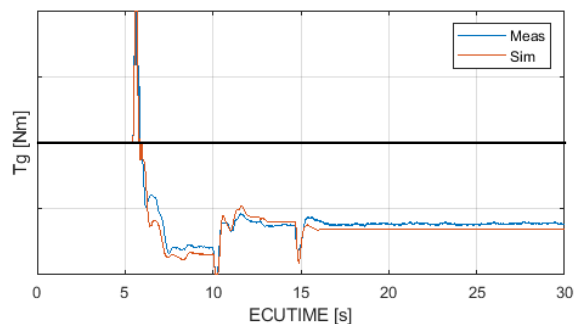
e) Propeller shaft torque T_p [Nm]



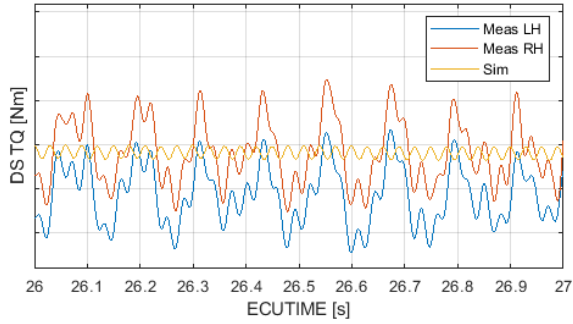
f) MG2 torque T_m [Nm]



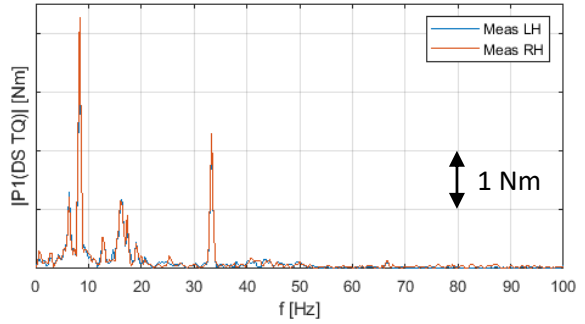
g) Engine torque T_e [Nm]



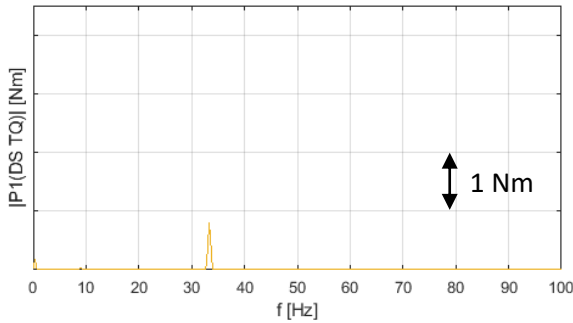
h) MG1 torque T_g [Nm]



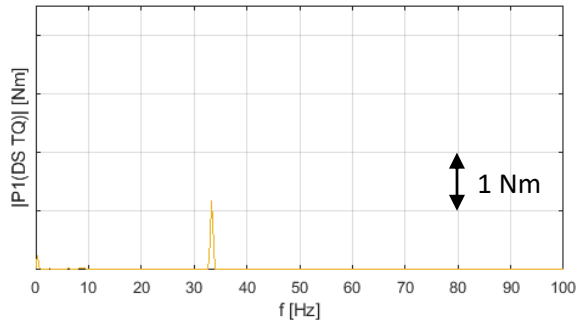
i) Driveshaft torque DS TQ [Nm]



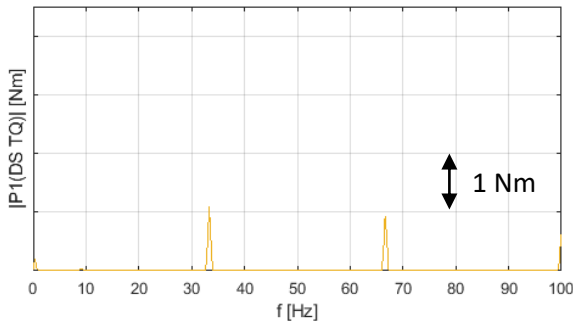
j) Measurement: DS TQ FFT [Nm]



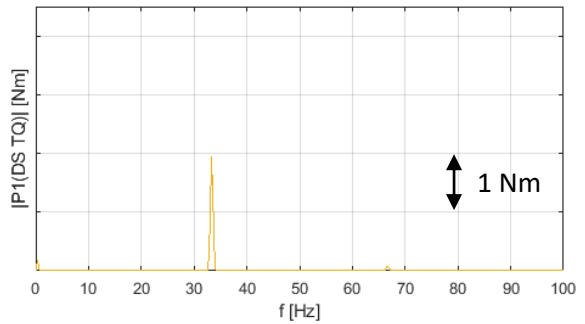
k) Simulation: Initial model DS TQ FFT [Nm]



l) Simulation: TeAC model corr. DS TQ FFT [Nm]

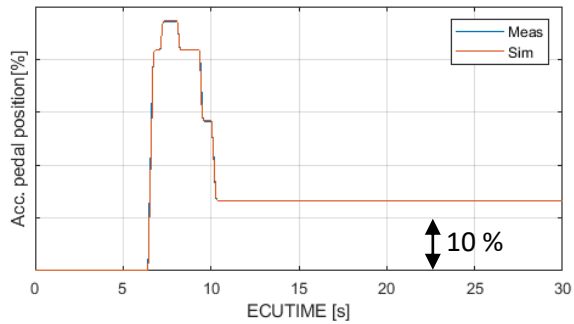


m) Simulation: HV damper corr. DS TQ FFT [Nm]

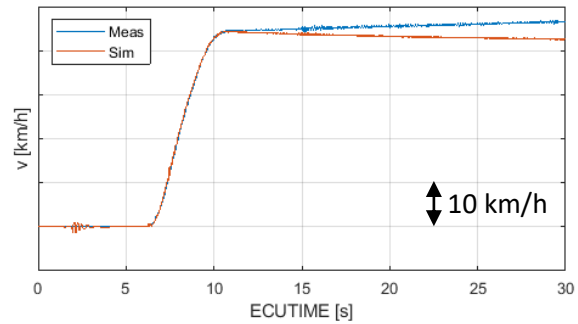


n) Simulation: Driveshafts corr. DS TQ FFT [Nm]

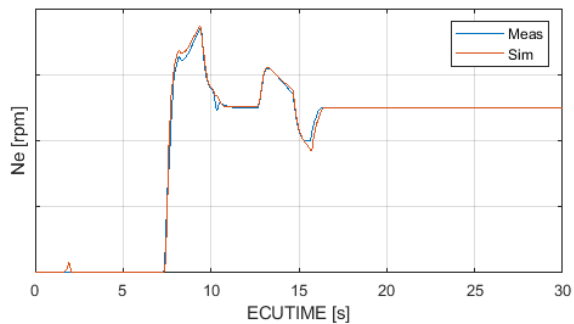
High frequency validation case 7



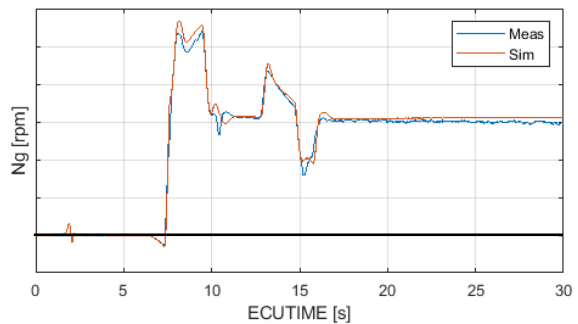
a) Accelerator pedal position [%]



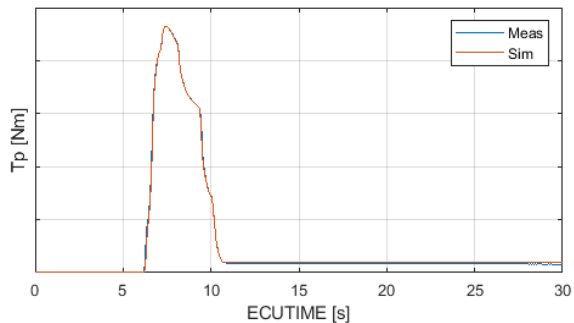
b) Vehicle speed v [km/h]



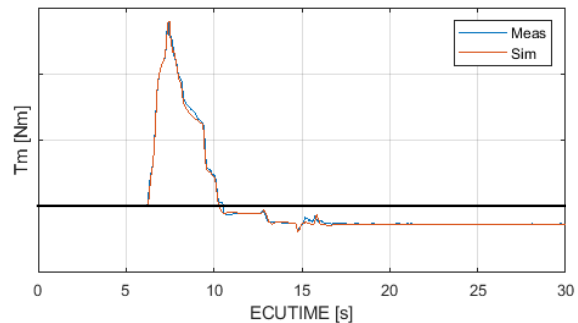
c) Engine speed N_e [rpm]



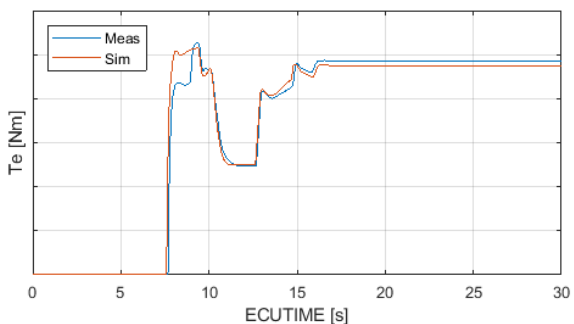
d) MG1 speed N_g [rpm]



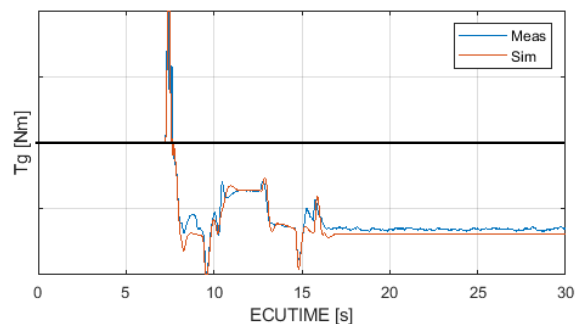
e) Propeller shaft torque T_p [Nm]



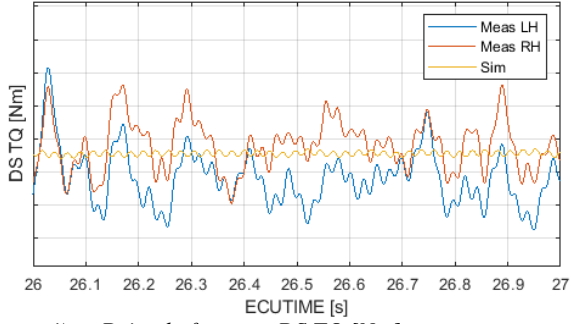
f) MG2 torque T_m [Nm]



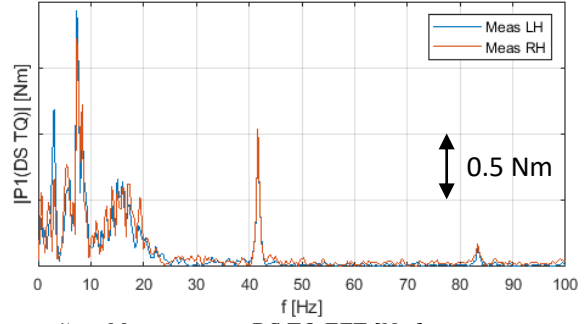
g) Engine torque T_e [Nm]



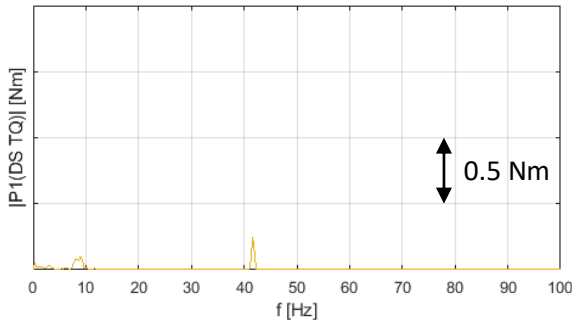
h) MG1 torque T_g [Nm]



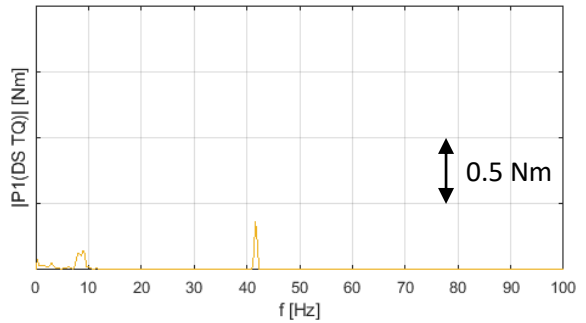
i) Driveshaft torque DS TQ [Nm]



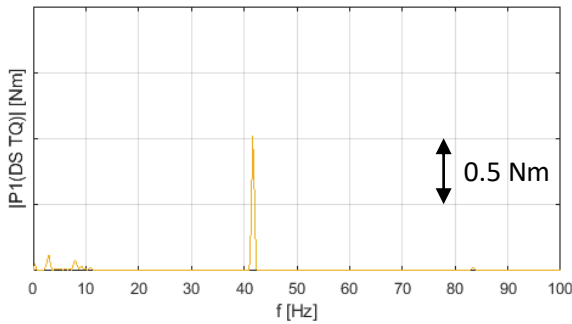
j) Measurement: DS TQ FFT [Nm]



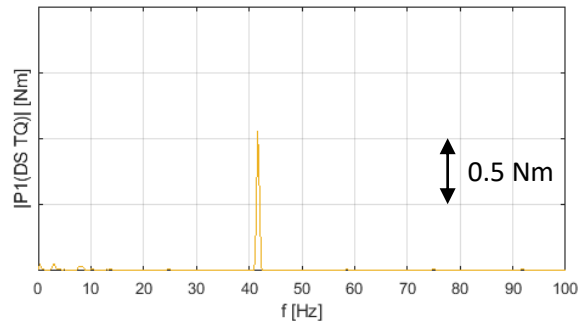
k) Simulation: Initial model DS TQ FFT [Nm]



l) Simulation: TeAC model corr. DS TQ FFT [Nm]

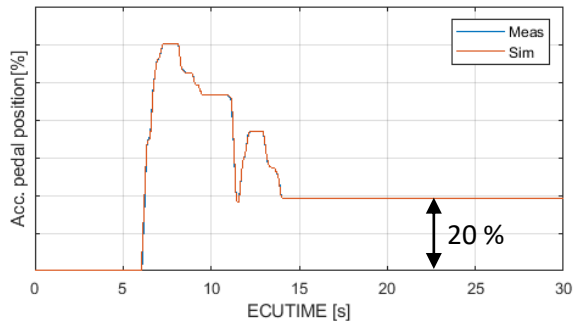


m) Simulation: HV damper corr. DS TQ FFT [Nm]

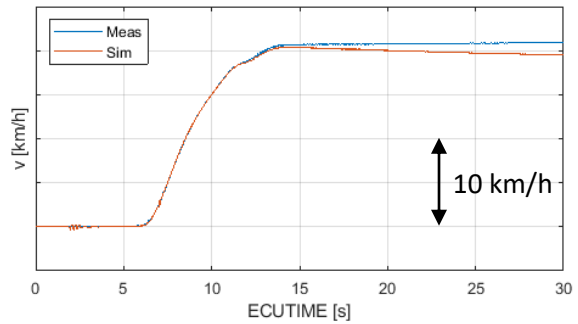


n) Simulation: Driveshafts corr. DS TQ FFT [Nm]

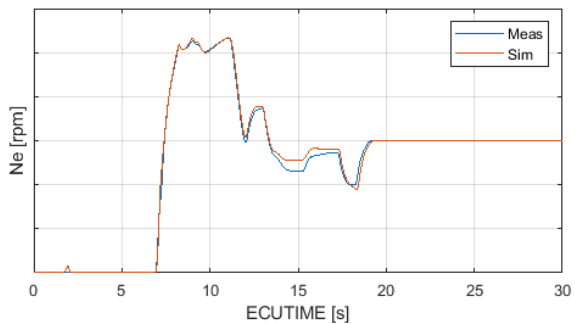
High frequency validation case 10



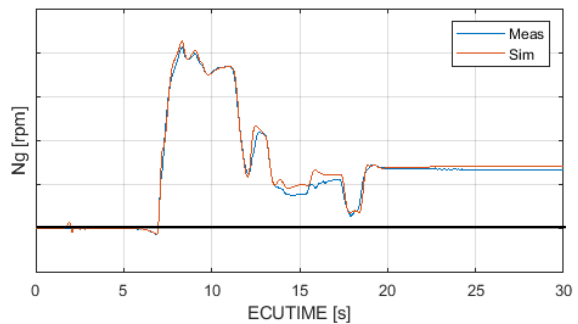
a) Accelerator pedal position [%]



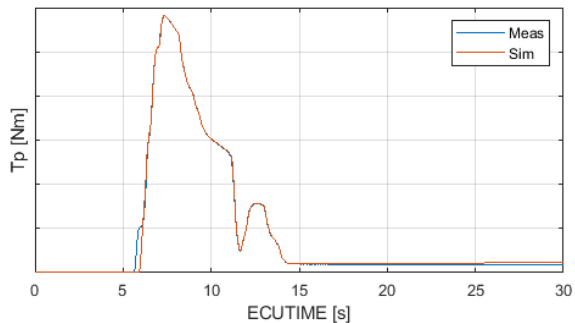
b) Vehicle speed v [km/h]



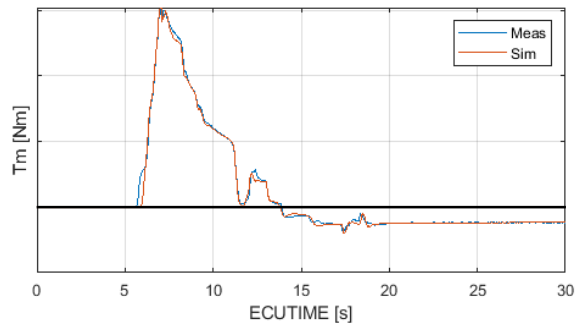
c) Engine speed N_e [rpm]



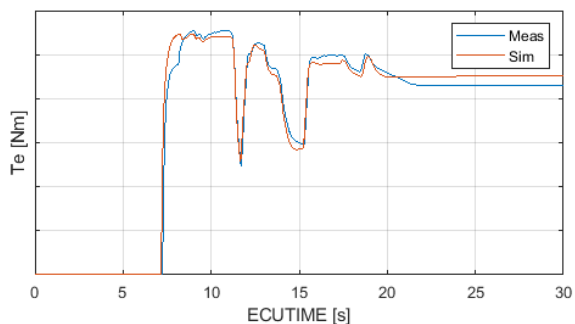
d) MG1 speed N_g [rpm]



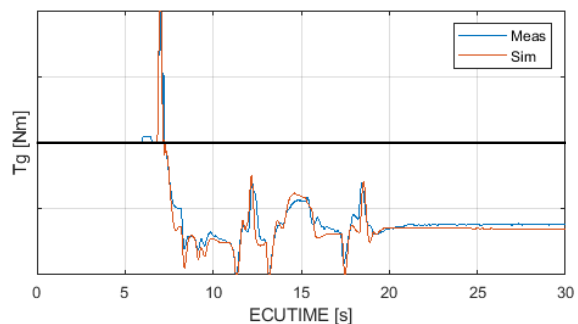
e) Propeller shaft torque T_p [Nm]



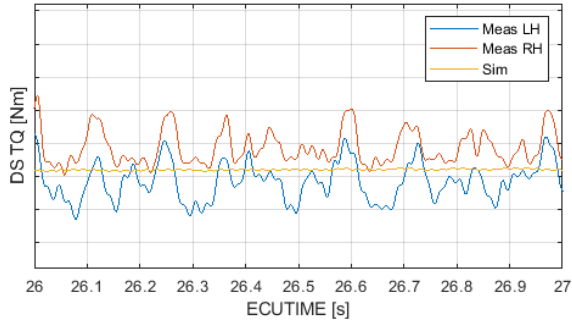
f) MG2 torque T_m [Nm]



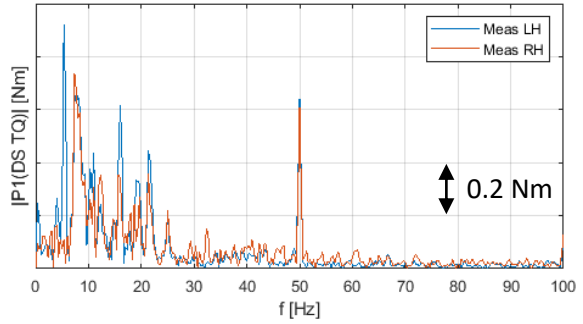
g) Engine torque T_e [Nm]



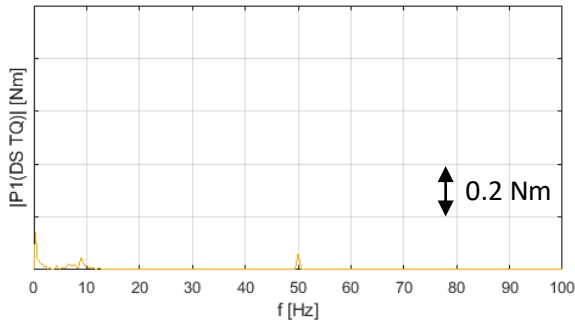
h) MG1 torque T_g [Nm]



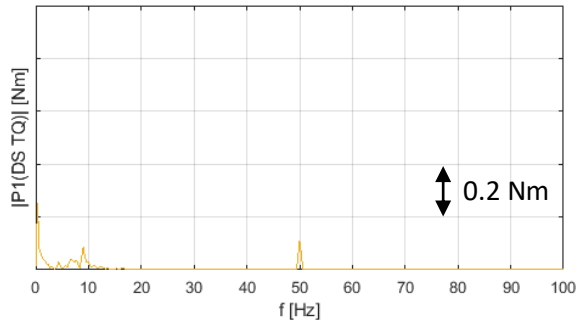
i) Driveshaft torque DS TQ [Nm]



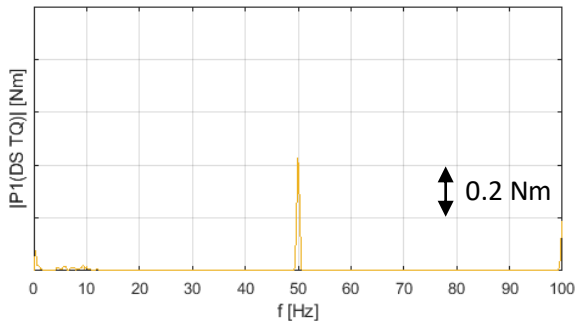
j) Measurement: DS TQ FFT [Nm]



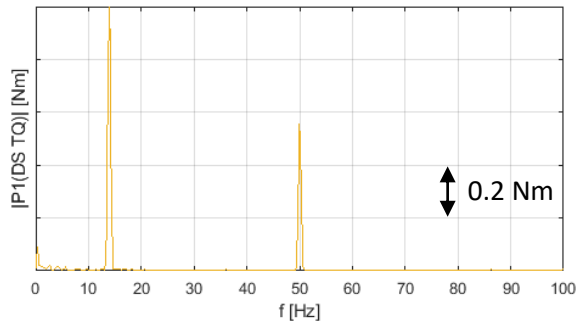
k) Simulation: Initial model DS TQ FFT [Nm]



l) Simulation: TeAC logic corr. DS TQ FFT [Nm]

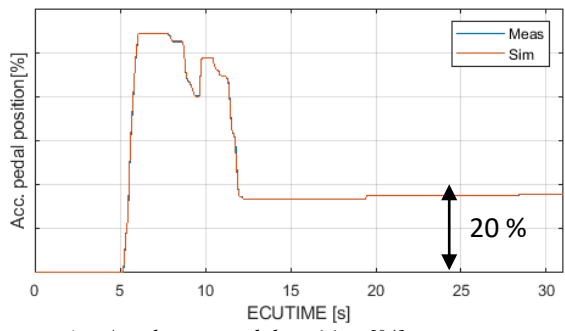


m) Simulation: HV damper corr. DS TQ FFT [Nm]

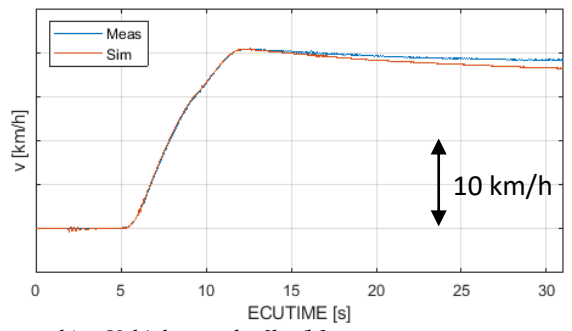


n) Simulation: Driveshafts corr. DS TQ FFT [Nm]

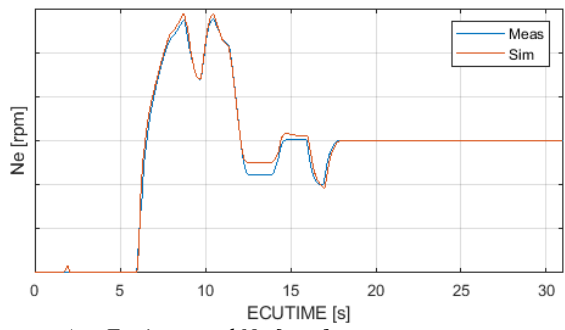
High frequency validation case 12



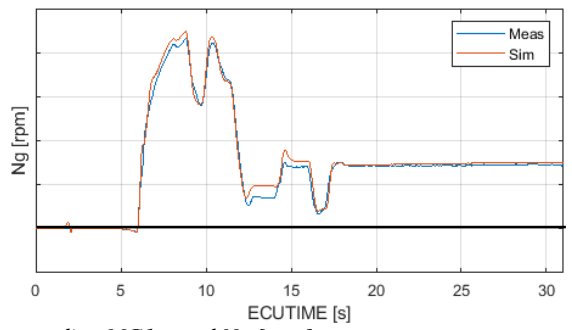
a) Accelerator pedal position [%]



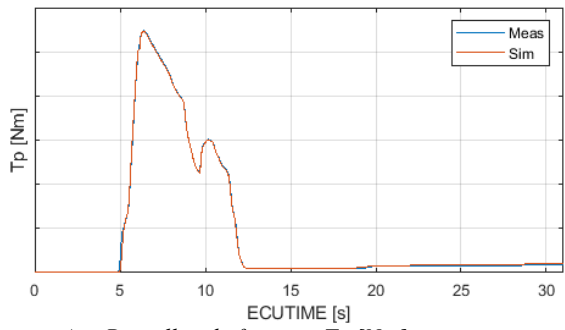
b) Vehicle speed v [km/h]



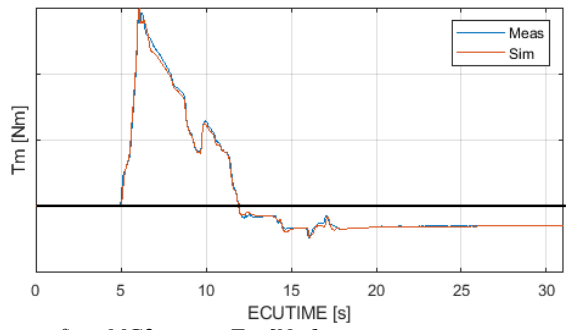
c) Engine speed N_e [rpm]



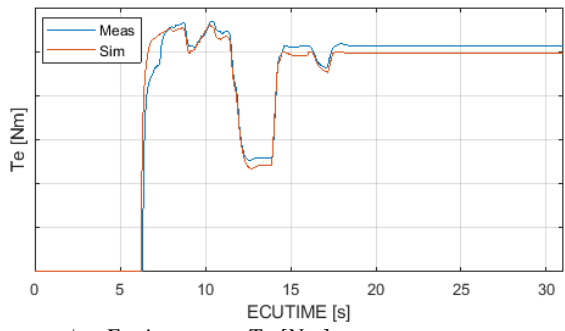
d) MG1 speed N_g [rpm]



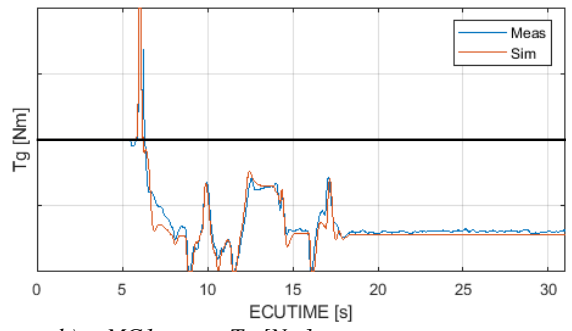
e) Propeller shaft torque T_p [Nm]



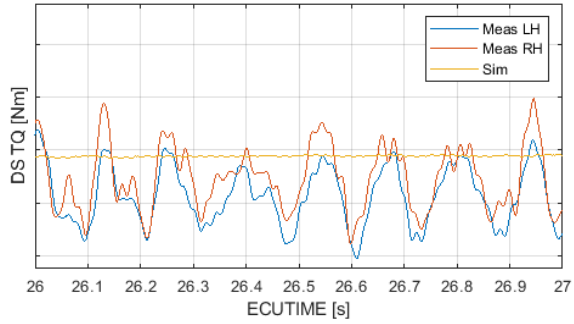
f) MG2 torque T_m [Nm]



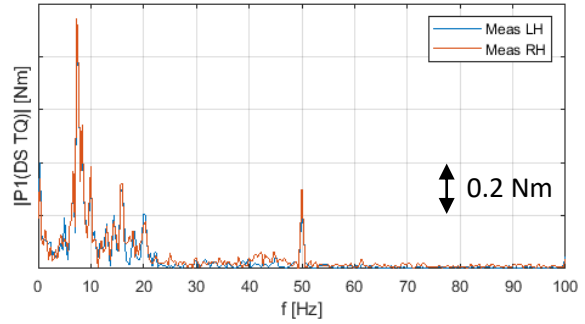
g) Engine torque T_e [Nm]



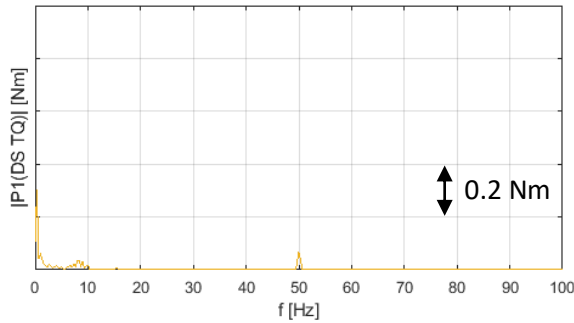
h) MG1 torque T_g [Nm]



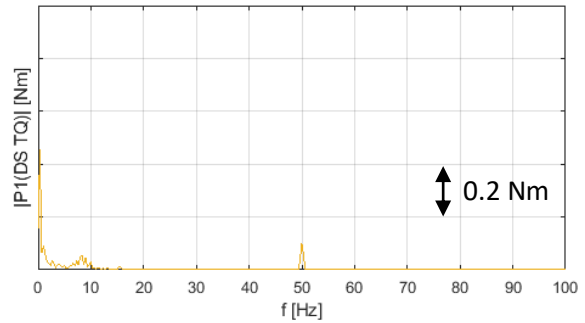
i) Driveshaft torque DS TQ [Nm]



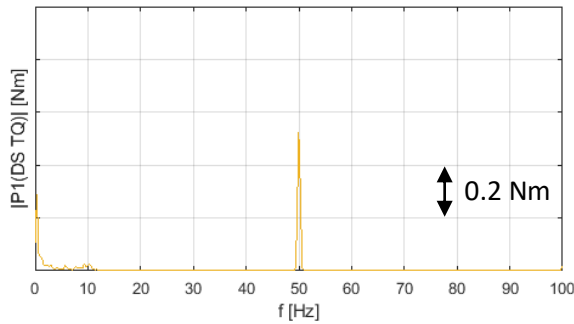
j) Measurement: DS TQ FFT [Nm]



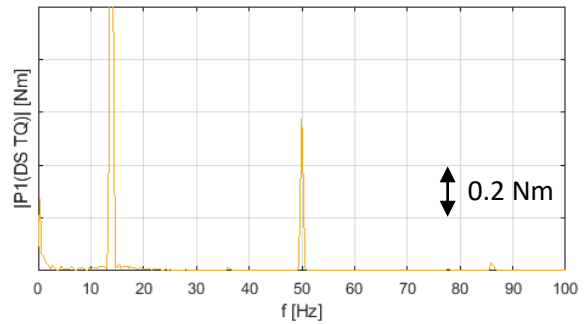
k) Simulation: Initial model DS TQ FFT [Nm]



l) Simulation: TeAC model corr. DS TQ FFT [Nm]



m) Simulation: HV damper corr. DS TQ FFT [Nm]



n) Simulation: Driveshafts corr. DS TQ FFT [Nm]