

Master 2014

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Investigation on Wireless Sensors Applications for Aerospace Hydraulic Systems.

ABSTRACT - Masterthesis

This master thesis investigates wireless sensor applications for the aerospace hydraulic system with regards to their feasibility. These sensor applications are furthermore subdivided into three system functions: the power supply, the sensing and conditioning and the data transmission.

Referring to the first system function, a total of twelve power supply concepts, that exploit the not avoidable losses or even benefit from available circumstances, have been considered. For the sensing and conditioning, which constitutes the first consumer of power and simultaneously the second system function, one sensor has been chosen as the reference. Concerning the data transmission, which is the third system function as well as the second consumer of the generated power, six different possibilities have been contrasted in this master thesis.

In the course of investigating the practicability of each concept related to the different system functions, three cases of combinations have been determined in this master thesis which allows a further estimation with regards to the feasibility of wireless sensor applications for the aerospace hydraulic system.