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Paper by Kracht/Nicolaysen/Stitterich
here: **Contribution by Schmiechen**
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In a contribution to the present ISO activities concerning the standardisation of the evaluation of ship speed trails I have once again pointed out the possibilities of drastic rationalisations of ship speed trials and their evaluation based on long years of experience with my rational theory of ship hull propeller interaction.

From the data usually determined in a series of double runs the parameters of the power as function of the ship speed through the water and the shaft rate of revolution as well as the parameters of the current velocity as function of time may determined in one single least square fitting procedure.

In fact the speed at the runs on opposing courses, still necessary for the reliable identification of the parameters, needs not be constant if instantenuos values are taken. The fitting procedure will then not only provide the parameters in question but the confidence intervals as well.

After the power characteristic of the ship has been determined it is possible without further computation to show whether the contract conditions based on model tests can be met or not. If necessary, further analysis has to be based on model data. This applies in particular to the resistance as reliable thrust measurements are notoriously difficult and are usually not performed.

For any ship speed through the water and any shaft rate of revolution the resistance in the frame moving with the current velocity may then be determined and consequently differences of resistance as compared to the resistance at contract conditions.

The differences thus determined may be checked concerning their plausibility. So far nobody has explained why the differences, which can be determined with little effort rather precisely, are estimated with great effort and no explicit check of plausility is being made.

As a matter of fact the inverse procedure is usually followed: The estimated resistance values are used to determine the current velocity and everything else. In view of my experience I find this practice not only personally, but especially from the viewpoint of the ship owner not very convincing and I am surprised that is is still accepted.

That this practice is now going to be perfected and standardised under the auspicies of ISO is infact alarming and has rightly caused negative reactions.