

Boundary layer and roughness characteristics of a commercially available nanostructured antifouling coating

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This study presents an experimental investigation conducted at the Emerson Cavitation Tunnel (ECT) of Newcastle University to investigate the boundary layer and surface roughness characteristics of a newly developed, commercially available nanostructured antifouling coatings along with a key reference coatings. In order to examine the boundary layer characteristics of the coatings, a large flat plane model with interchangeable test sections was used. A two-dimensional DANTEC Laser Doppler Velocimetry (LDV) system was used to collect the boundary layer data of each coating.

The measurements provided critical parameters including local skin friction coefficients and roughness functions. The surface roughness of the tested coatings was analysed using a non-contact measurement device.

The tests and subsequent analysis allows to compare the hydrodynamic performance of these antifouling.

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