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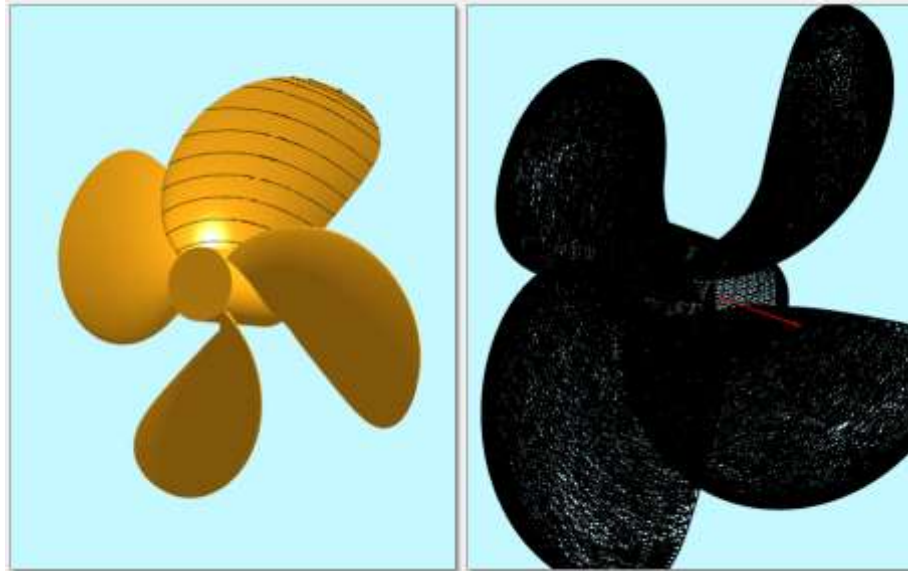
HydroComp PropElements® 2023 Released

New features for wake-adapted propeller design and analysis

PropElements was developed not only for propeller specialists and manufacturers, but for naval architects and vehicle designers as well. It provides a key optimizing design stage between specification of principal parameters for Vessel-Propeller-Drive system matching and full 3D design for manufacture. The initial release of HydroComp PropElements 2023 offers new features across applications and workflows.

New 3D views and exports

New *3D render* and *3D mesh* views provide additional visualizations for presentation and confirmation of geometry. The 3D render can be saved as an IGES geometry file and an image file (currently BMP). Export of the mesh as a 3D STL triangular faceted panel file can offer a direct path of the geometry to most CFD/FEA tools and 3D printing without intermediate CAD manipulation.



Improved calculation for low-J high-thrust applications

Propeller codes universally have had difficulty accurately predicting thrust and power performance (KT-KQ) for open propellers at low-J high-thrust conditions. Even CFD codes struggle with this, particularly with high-pitch propellers. Reliably delivering accurate predictions across the entire advance coefficient speed regime has always been a priority for us. New updates further enhance PropElements accuracy with updated models for stall/separation and the influence of jet compression on performance. The KT-KQ utility now also identifies where stall/separation is indicated (as shown below by red figures in the KT column).

J	Rn07R	KT	KQ	EFF	CT	
0.050	1230000	0.5454	0.07719	0.0562	555.5753	98
0.100	1230000	0.5135	0.07315	0.1117	130.7724	11
0.150	1230000	0.4796	0.06871	0.1666	54.2771	32
0.200	1230000	0.4493	0.06491	0.2203	28.6024	12
0.250	1230000	0.4218	0.06160	0.2724	17.1851	63
0.300	1230000	0.3971	0.05877	0.3227	11.2363	34
0.350	1230000	0.3740	0.05619	0.3707	7.7739	20

About HydroComp PropElements

For additional information, click to: www.hydrocompinc.com/solutions/propElements

About HydroComp

Since 1984, HydroComp has been a leader in providing hydrodynamic software and services for resistance and propulsion prediction, propeller sizing and design, and forensic performance analysis. Through its unique array of software packages and services, HydroComp now serves over 1400 naval architectural design firms, shipyards, yacht owners, ship operators, propeller designers, universities and militaries around the globe.

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