HydroComp NavCad® Version Comparison

Top new features added in version year

The following is a summary of significant features added to HydroComp NavCad during the referenced version year. Items indicated with asterisks (***) are considered critical major features.

2024

- Display of planing resistance propulsor thrust and lift body forces (for CFD) ***
- Updated Submarine/SWATH tool for UV body offsets ***
- Interface theme update for contemporary Windows aesthetics ***
- Updated PMAC partial load efficiency prediction model
- Misc improvements for propeller sizing, a new Seakeeping Index, additional scripting objects

2023

- New "EEXI Assessment" utility [Premium] ***
- Updated methods and confidence plots for very high-speed non-planing hulls ***
- Updated SP Cleaver propeller model and oblique propeller components ***
- Scripting functions for "virtual waterjet" builder [Premium]
- New "Propeller Shaft Sizing" utility
- Misc improvements for hull CAD import data extraction and speed management

2022

- New three-phase AC electric Drive module ***
- Extensive update of propeller oblique flow effects ***
- New "Export KTKQ" utility, including effect of oblique inflow ***
- Updated hull CAD import for load condition variants, multi-hulls, and more
- Updated "CRP [Simple]" propeller model
- Updated barge and towboat methods

2021

- New DC electric motor as Drive prime mover ***
- Updated Box Barge prediction module with new added drag methods ***
- Updated Propulsion Confidence plots ***
- Added STAWAVE-1 merchant ship seas drag method
- New updates for surface-piercing propellers
- Improved user process for catamaran hull CAD import

2020

- New interface controls for improved function and visualization ***
- New *SP Cleaver* surface-piercing series and transition performance check ***
- Improved hull CAD import speed, visualization, and extraction of parametric data ***
- New Submarine/SWATH data entry and updated prediction methods ***
- New propeller calculation of effective face camber for contemporary propellers ***
- Updated ADVM hull form resistance method [Premium]
- Improved method selection user feedback, including new planing hull parameters

2019

- New asymmetrical planing hull analysis with optional foil assist ***
- New Orca3D connection for streamlined workflow ***
- Updated ADVM hull form resistance method [Premium] ***
- New CAESES connection for design optimization [Premium]
- Improved hull CAD import

2018

- New hull CAD import for hull object data extraction ***
- Updated enhanced Savitsky planing prediction method ***
- Updated ADVM hull form resistance method [Premium] ***
- Improved *Confidence Plots* for high-speed round-bilge-displacement hulls
- Additional added-drag prediction methods

2017

- New Software-Based security options (omitting the need for a USB dongle) ***
- Support for dual-fuel (MGO, MDO, HFO, LNG) [Premium] ***
- Prediction of CO_2 greenhouse gas [Premium] ***
- Updated Operating Modes analysis for dual-fuel and CO_2 [Premium] ***
- ADVM "longitudinal energy plot" for designer-guided optimization [Premium] ***
- Improved hull-propulsor prediction for submarine and SWATH
- Scale correction for improvements to full-scale MAU propeller performance prediction
- Engine fuel definition by BSFC and/or BSEC; calculation of mass fuel rate

2016

- New prediction for high P/D Gawn AEW and Kaplan Kc 37 propellers ***
- New MAU-type propeller series ***
- Extended Savitsky method for slender hard-chine planing catamarans ***
- Updated submarine and SWATH predictions (especially for high-speed application)
- Improved confidence plots, data and calculation error messaging, catamaran prediction metrics, propeller sizing

2015

- Introduction of NavCad *Premium Edition* (with operating modes analysis, scripting and batch processing, Analytical Distributed Volume Method (ADVM) wave-theory resistance prediction based on immersed volume, and floating network licensing) ***
- New wind resistance methods ***
- New planing catamaran interference model

2014

- New prediction module for box barge resistance ***
- Added "towed" object resistance option ***
- New prediction model for barge train resistance
- New supplemental calculation for prediction of planing heave, pitch, acceleration
- Added support for compound reduction gears and load-dependent efficiency correction
- New prediction of planing hull rise of CG

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