

Tunnel Boat Performance News #180 - Oct 15, 2016

See all TBPNews archives at: <u>TBPNews</u> [<u>view in browser</u>]

This month ...

- 1. Al Hameli "Back on Track" After Winning F1H2O in Liuzhou
- 2. Ken and David Warby prepare for attempt at World Water Speed Record
- 3. Feature Article Porpoise Analysis
- 4. Video Hydroplane Crash
- 5. <u>New TBDP/VBDP Version 8.6 Software</u>
- 6. Jimboat's Latest Feature Articles

AI Hameli "Back on Track" After Winning F1H2O in Liuzhou



LIUZHOU (China) - Emirates Team driver Ahmed AI Hameli held off both tremendous pressure and the tremendous heat for all 50 laps to win the Grand Prix of Liuzhou at the fifth round of the 2016 UIM F1H2O World Championship in front of thousands of spectators on the Liu River just outside Liuzhou, China.

The 37-year-old driver from Abu Dhabi, got a great jump at the start from pole and held off last years' winner and back-to-back World Champion Philippe Chiappe of the home standing CTIC F1

Shenzhen China Team to take a 6.37 second victory against a field of 18 drivers from 11 different nations on a very hot and steamy afternoon. "I can't believe it's been five long years since I last won a race back in Doha in 2012, but a lot has happened in my life and now it has thankfully come full circle and I now truly feel I am back," stated the elated Al Hameli. "It was a big day for my Emirates Team and my manager Scott Gillman as we came away with not only my victory but my teammate Erik Stark finishing fifth as well. We can't ask for anything better."...

It was a popular victory around the paddock as the one time dominate driver on the tour had to take a one year "chicane in life" when it was discovered he had developed a brain tumor and spent most of the rest of 2012 in North America getting treatment. Ahmed came back at the start of the 2013 season and has had mixed results but now is back on top of the world with his seventh career victory coming in Liuzhou.

For the French driver Chiappe, he didn't defend his race title, but he has taken another step in his goal to winning his third straight championship with 15 important points as runner-up in Liuzhou. "It was very hot today and even though I came within a half second of Ahmed late in the race, I realized the points were more important than pushing too hard and possibly making a mistake and throwing away everything we have gone for so far in 2016," said the driver from Rouen. "Now, I have a 13 point lead in the championship with two races to be run and we can focus on closing things out in early December in Abu Dhabi if possible. We'll go home and start planning our strategy."

Sami Selio of Finland continued his charge towards the front of the drivers' championship picking up 12 more points for his third straight podium and a third place finish after scoring no points in the first two races of the year for the Mad Croc Baba Racing Team. "Yeah, we picked the wrong propeller in qualifying and missed pole by less than two/tenths of a second and had to fight our way to the podium today," stated Selio. "I got a great start and worked around Alex Carella for the 12 points and am 20 points back with 40 points still to be earned. Funny things can happen in the Emirates and I've won two titles there and would love to do it again in December."

Finishing fourth after starting sixth was Victory Team driver Shaun Torrente from Florida, the American starting in sixth and pushing his way past Swede Erik Stark to finish his fifth straight top four performance in a row. "True, we lost points to Chiappe today, but we are still on track to put together something special before the end of the season," said Torrente. We are only 13 points back and that keeps us squarely in the mix."

Team Abu Dhabi got points from one of their drivers with Thani Al Qamzi, a two-time past winner in China finishing sixth after starting eighth off the dock, while his teammate, Alex Carella of Italy ended up having trim problems slowing him down and dropping him out of fourth place down to 15th then retiring and earning no points, dropping him from third to fourth in the championship with 42 points.

Swedish driver Jonas Andersson of Team Sweden put on a clinical display after yesterday's qualifying disaster with mechanical issues which saw him starting 18th and last off the grid. The Swede charged his way up to seventh despite damaging his left pickle fork of his sponson and slowing his progress. The driver from Fruvi continues to sit fifth in the title race with 37 points.

The UIM F1H2O World Championship tour now heads to Abu Dhabi on the 7-10 December for the sixth and penultimate round in the world title chase. With Philippe Chiappe's runnerup spot, 15 more points and a 13 point margin he is now a cautious odds on favourite for his third world title.

Read more at <u>f1h2o.net</u> [back to top]

Ken and David Warby prepare for attempt at World Water Speed Record



Almost 40 years ago, Australia's imagination was captured when Ken Warby piloted a jet-powered boat across Blowering Dam in southern New South Wales to, for the second time, break the world water speed record. It is a feat that has not been matched since.

Decades later, Ken and his son David are preparing a new jet boat they have built, which David hopes to pilot and break his dad's record.

Wildest dreams can come true - It was October

1978 and grey, fluffy clouds hung in the sky over the murky waters of Blowering Dam. An excited carnival atmosphere pulsated from the muddy banks of the waterway as the crowd waited in nervous anticipation. Ken had already broken the world water speed record, but he was aiming to better his performance.



At a speed of more than 500 km/hour, a sleek white boat with pointy nose, aeroplane-like tail, snug cockpit, and roaring jet engine raced into view at dizzying speed. The attention of the nation was captured as Ken daringly chased his dream of breaking the world water speed record. People cheered. Others held their breath. Before long, word came through that Ken had successfully chased down his dream.

He remained the world record holder, with an even bigger margin. Some 38 years later, the memories

of that wondrous day are still crystal clear in Ken's mind - a highlights reel from an achievement few could dream of attempting, let alone attain.

On that October day, Ken's son David was playing at a park near their home in Concord, Sydney.

Ken had not wanted his son at Blowering Dam, in case something horrific happened during the record attempt. David had spent months watching his father work tirelessly in the family's backyard building the Spirit of Australia jet boat. He was inspired by his dad, and was particularly in awe of his focus and determination. "I knew before my father broke the world water speed record that I wanted to do what he'd done," David said.

A lot has changed since that day in 1978. Ken and David have grown older and life has taken them on meandering paths. But some things have not changed - David's desire to break his father's record is still strong. The Warby men are now putting the finishing touches on a power boat they have spent the past three years building in a cavernous, cold metal shed in Newcastle.

"The water speed record has got an 85 per cent death rate," Ken said. "For a long time I tried to talk [David] out of it. I said 'Go play with jet cars or do something else, but don't get into the water speed record'.

"I can understand what he wanted to do - I've been there, done that. So we had a long talk about it, and then decided 'OK, maybe it's time'."

To attempt the record, the boat has to be in precise condition, and the weather has to be perfect.

Ken has designed the new boat to meet modern safety regulations, but in many ways, it is not dissimilar to the vessel he chased glory in. The new boat looks similar, and at its back is a large jet engine that used to be in an Italian G.91 fighter plane. "It's got 50 per cent more power than we had in the original boat," Ken said. "With a boat, you don't just drive a boat - it becomes part of you."

Despite the minefield of dangers, David is not letting the prospective perils play on his mind. "If you just jump in the jet boat and go 'I'm going to break a world water speed record' and off you go, and people have in the past, that's how you kill yourself," he said. "I think the safest thing you can do is do your homework on it — learn what the problems are, and learn how to overcome those problems.

"We've got some good people who were in the original team when dad broke the record that'll have a good test program and schedule put in place. "We'll go faster when I'm ready and when the boat's ready. We won't leave anything to chance. If we stick to that, there's no reason we can't take a world record.

"I'm not that fazed by the issues. I know what I've built and I'm confident I'll be able to drive it and get the job done."

The Warby team are in the home stretch in their preparations for the record attempt. They have not yet set a date, but for Ken, the prospect of having his son break his own record is alluring. "I've done my deal. I've proved what I set out to prove, done everything I've needed to do in the way of world water speed records ... now's the time to sit back," Ken said. "There's no doubt I want David to break the record. The record should never live

forever. As a matter of fact, I hoped early on that people would've broken my record, but nobody did. "I'll be there to support him in every way that I possibly can and if he gets it, and when he gets, or [however] it turns out, I'll be a proud father, hell yeah."

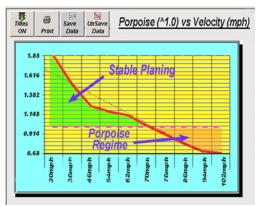
For David, it is now a matter of taking the final steps towards his goal. "Dad and myself couldn't care less who knows if we broke a world record, to be honest; it's the fact that we know that we've invented the better wheel, so to speak, we've refined the wheel," he said. "It'll definitely be the highlight of my life [if I get the record], and I'll be proud to keep on a tradition that my father started. "I'll be looking forward to getting back on the bank and telling [dad] now he's the second-fastest man on water."

See more at: abc.net.au

[back to top]

Porpoise Analysis

Porpoising can affect any performance hull design, but when will it happen? Under what conditions? How do we fix it?

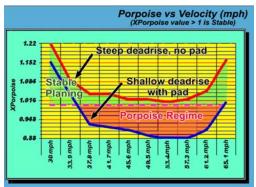


We have developed a new analysis tool in the TBDP©/VBDP© software! '*XPorpoise*' is an engineering tool developed by AR® that helps predict your hull's inherent instabilities leading to porpoising. The technique is based on a uniquely modified Stavitsky & Day/Haag method of hydrodynamic prediction of the critical porpoise trim angle (CPA) for various hull/setup configurations, velocities and Lift characteristics.

Porpoising onset occurs when the lift is generated at a sufficiently high trim angle or sufficiently low deadrise so as to cause a dynamically unstable loading on the lifting surfaces.

By analysis of a hull's design and performance characteristics and comparison to the CPA for each velocity in performance range, TBDP©/VBDP© can predict when the hull is susceptible to porpoising and when it is performing in a stable regime.....

The XPorpoise is presented in standard TBDP© and VBDP© output and in graphic analysis format. It's simple to interpret when the hull is in the "Porpoise regime" or in the "Stable regime"....AND simple to change setup or design features with TBDP©/VBDP© Ver 8 to make the hull less susceptible to porpoising. (While several design or setup or operating parameters influence the hull's susceptibility to porpoising, a hull with MORE deadrise or LESS trim angle is less likely to experience onset of porpoising.)



TBDP©/VBDP© analyzes the porpoising stability of your hull design/setup throughout the entire operating velocity range. TBDP©/VBDP© then presents the analysis for your design for operation in "stable planing regime" or "Porpoise instability regime". When your hull is in the "stable planing range", the hull is less likely to experience porpoising. When your hull is in the "Porpoise instability regime", it is susceptible to porpoising.

The ability for TBDP©/VBDP© to present graphic view of XPorpoise analysis throughout the full operating velocity range, for TWO design

alternatives simultaneously, makes comparative evaluation quite easy. (Note view in Figure

2 that shows "shallow deadrise with pad" vee hull, compared to "steep deadrise, no pad" vee hull designs - and their relative susceptibility to porpoising in "Stable Planing" regime (less susceptible to porpoising) or "Porpoise Regime" (more susceptible to porpoising).

Read more at aeromarineresearch.com

[Note: Do you have any of your own questions on performance hull design? Send your question or story to <u>mailto:jimboat@aeromarineresearch.com?subject=TBPNews</u>]

[back to top]



Video - Hydroplane crash compilation

[click for video]

[back to top]

NEW TBDP/VBDP Ver 8.6 software release!



See the newest Version 8.6 <u>"Tunnel Boat Design</u> <u>Program</u> and <u>"Vee Boat Design Program" software</u>.

"The best TBDP/VBDP release ever!" - Dozens of new features, enhanced results. Performance optimization, speed prediction, dynamic stability analysis, porpoising analysis, acceleration, elapsed time, and allot more!

See your hull's performance results throughout the full operating velocity range. Easy <u>Auto 1-2-3 Performance Wizard</u>. *[see <u>demonstration video</u> here]*. Now Vee hull and Tunnel hull design in same software package.

Version 8.6 has NEW screen layouts, NEW input variables, more performance analysis, output data/graphics, more reporting. Also includes the NEW 2016 Motor Wizard update with over 2250 OEM outboard and inboard engine choices. NEW input variables and NEW 5-screen input format. Performance results with 500+ performance data points and 50+ trending graphs showing full velocity range. Animated 3D Chart display for all Lift/Drag component contributions through Velocity range. And lot's more!!

See ALL the TBDP/VBDP features, screen samples and 'how-it-works'!

See some of the <u>new update features here</u>, and all the high performance <u>TBDP/VBDP</u> <u>features here</u>.

See more at AeroMarine Research

[back to top]

See 13th Edition "Secrets of Tunnel Boat Design" book (ISBN# 1-894933-30-3)

See 4th Edition <u>"Secrets of Propeller Design"</u> book (ISBN# ISBN# 0-9780586-0-7)

Review: TBDP V8 at Scream & Fly magazine. ["Tunnel Boat/Vee Boat Design Software is the

very best and most comprehensive performance evaluation tool available. It has been evaluated by Scream And Fly, and has proven to be extremely accurate and easy to use. Version 8.4 is the most robust yet" - <u>Scream and Fly mag, March 2015</u>]

Get the new <u>TBDP/VBDP software</u>!

Buy Now

[back to top]

Jimboat's Latest FREE Articles



How Climate Change affects Performance 'Anatomy of a Blow-Over!' 'Optimize your boat's running trim 'Spray Rails & Lifting Strakes'



"Earning Your Wings' 'Propeller Slip' 'Big Foot Investigation' 'Salt Water OR Fresh Water' 'Vee pad design' 'Gearcase & Propeller "Blowout'



<u>'Tunnel Boat Design'</u> <u>'Successful Propeller</u> <u>Testing'</u> <u>'Ten Low-Cost Go-Fast</u> <u>Tips'</u> <u>'How Weight & Weight</u> <u>Distribution are Important</u> <u>to Performance</u> <u>'Chine Walking</u>'



Jimboat interviews F1H20 star Shaun Torrente "How Trim Angle & engine height affect performance" "Outboard Jack Plates' 'Is Bigger Always Better?'

...and check out lot's more of Jimboat's FREE articles here...

[back to top]

See you next time!







