

AeroMarine Research

TBPNews - Performance Report

TBPNews #125 – December 20, 2008

>>>> **Tunnel Boat Performance News** >>>>>> (over 5000 members!)
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***** TBPNews *****



All of us at AeroMarine Research wish you a safe and happy holiday season! See you in the new year!

1) Dubai International Marine Club severs ties with UIM



The Dubai International Marine Club (DIMC) has vowed it will never host an event under the auspices of the world governing body for motorsports - Union Internationale Motonautique (UIM), says Saeed Hareb, Managing Director of DIMC.

For the last two years, Dubai has been at loggerheads with the world governing body for watersports due to certain alleged lapses on the part of the UIM. The marine club was the first development, formed in 1986 to form a solid organisational base for Offshore powerboat racing. Things between the DIMC boss and the UIM came to a boil in 2006 when Hareb claimed that a representative from the world governing body for watersports had deliberately disregarded rules. Hareb resigned

from his position and floated the breakaway World Professional Powerboat Association (WPPA) in December 2006. Along with the International Offshore Team Association (IOTA), the new body forged a strong alliance to run a highly successful Class One calendar for 2007 with the Dubai-based Victory Team clinching the world title.

The more recent development is the UIM decision to turn down a request from the Abu Dhabi International Marine Sports Club (ADIMSC) to host and promote a calendar for a F2000 Powerboat Championship. The DIMC, that hosts two rounds on the Class One World Powerboat Championship, was the first to join the UIM way back in 1990.

I'm sure there is more to come on this one!

See more at: gulfnews.com

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2) Feature Article "Aerodynamic Lift - where does it come from?"

We have had many questions about how the tunnel boat generates lift. The following summarizes some of the background.



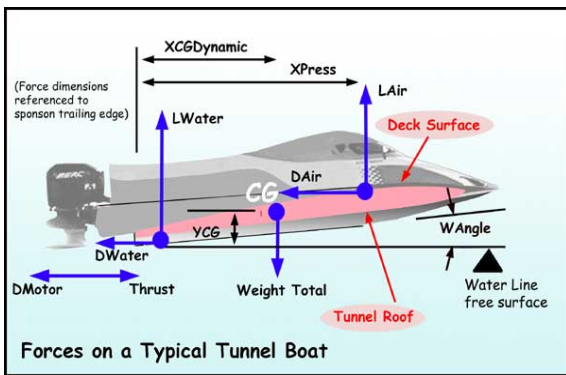
A tunnel boat must count on the sponsons for some of the lift for the hull, just as a vee boat must depend on its narrow running surface (pad) to support its weight. The tunnel hull however has the additional advantage of being able to further reduce the water drag drastically by supplying lift from its aerodynamic surfaces.

A properly designed tunnel hull is considered, at high speeds, as a wing in what is known as 'ground effect', (even though it's water

that it is 'flying' over). The important point to note here is that every pound of lift that can be generated by this "wing" is one less pound of lift that doesn't have to be supplied by the sponsons. So, the trick becomes to squeeze as much lift out of the tunnel and deck surfaces as we can so that we can take some of the load off the sponsons.

The 'air-lift' of the Tunnel Hull is what sets this type of hull off from all the rest. Although the many factors affecting the aerodynamic forces generated make this a complicated matter at times, the effort is clearly worth it. So, let us look at what factors are involved in creating the lift generated by the tunnel and the deck surfaces - the 'aerofoil' or 'wing' that we have talked about. The main ones can be summarized as follows:

- (a) Airspeed
- (b) Angle-of-attack
- (c) Surface Area of Tunnel
- (d) Aspect Ratio of Tunnel
- (e) Height of mean camber line (of the aerofoil) above the water surface
- (f) Aerofoil shape of tunnel cross-section
- (g) Surface condition of exposed areas



The design and performance effects of each of these contributors (ant others) are outlined in detail in the STBD book. For now, as an example of what this aerodynamic lift can do for us, let us compare a tunnel hull and a vee hull design of equal weights. Each of these boats must generate, in their own way, the same total lift to support their weight. The vee hull will produce virtually all the required lift as hydrodynamic lift. The tunnel hull however, can contribute an amount of aerodynamic lift, leaving a smaller part of the total to be made up as hydrodynamic lift by the sponsons (running surfaces).

By reducing the wetted area of the water planing surfaces, a significant reduction in drag is realized - and maximum velocity is a function of only the drag and available power.

Water drag in any type of hull is what most heavily affects the ultimate speed, and so we can see that the tunnel hull with its aerodynamic lift and reduced water wetted surface will have an advantage, when properly designed.

See more Performance Articles at: <http://www.aeromarineresearch.com/articles.html>

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3) Jay Price /Team Qatar win F1 World Title



Jay Price from New Orleans, Louisiana and the Qatar Team is the U.I.M. F1 World Champion - the third driver from America to win the top rung in powerboat racing capturing the title with a win at the 16th Grand Prix of Abu Dhabi.

While Jay had a perfect start from the pole and lead every one of the 50 laps and now has 105 points on the season, his chief rivals in defending World Champion Sami Selio of the Woodstock Red Devil Racing Team and Jonas Andersson of F1 Team Sweden who were both chasing Jay for the title had slow starts with Sami immediately falling back to fourth and Jonas trying to stay in the top three. In the end Selio was fifth and Andersson retired late and was classified 10th.

The tough and challenging 2.175 kilometer circuit was again a boat eater as only 12 of the 22 drivers finished the event. Italian Guido Cappellini of the Tamoil Team was the first to drop out after getting involved in a first corner collision which damaged his right front sponsoon for the four time winner of this race.

For more see: bymnews.com

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4) 2009 Powerboat P1 Provisional Race Calendar Announced



Malta and Powerboat P1 have forged a successful commercial relationship over the last five years. A provisional calendar has been unveiled for the 2009 Powerboat P1 World Championship season, with a host of new venues joining some returning old favourites. New race hosts Bahrain, Turkey, Sweden and Ireland will line up alongside well-established venues Malta, Portugal, Spain and Italy in what is planned to be an expanded seven-round schedule.

The season is set to start with a trip to Bahrain in the Middle East in late March, with a six-week break before the teams travel to Malta – which will celebrate its sixth anniversary on the Powerboat P1 calendar this year – for the second round of 2009.

New addition Turkey takes a mid-June summer slot as it adds to the expanding mix of countries that Powerboat P1 has visited in recent years, before the championship returns to Portugal in early July.

Another exciting new host nation – Sweden – takes the Powerboat P1 series into Scandinavia for the first time, while Spain (which hosted a highly successful first-ever event in 2008) or new venue Ireland will host the penultimate round of the season.

Italy – the country which launched the 2008 Powerboat P1 campaign – takes a new slot in the calendar as the season-finale.

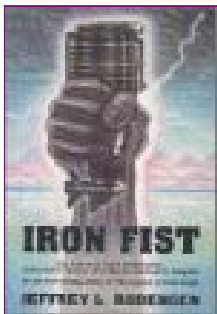
Greece and France have been allocated slots as reserve venues.

AND...my inside sources tell me that P1 is working on arrangements for US races sometime within the next couple of years. [Jimboat]

Check out more at powerboatp1.com

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5) NEW Powerboat History & Design Books On-line



The most complete supply of over 50 books specialized performance powerboat history, design and racing.

Check out the new powerboat book additions: [Powerboat Design & History books](#)

Discounted prices for the following powerboating books

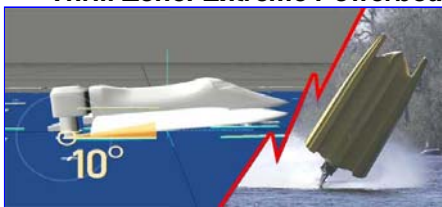
Also...get past archives of ["TBPNews"](#)

And...check out [free articles](#) by author Jimboat.

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6) Powerboat Racing on TV

*** **"Thrill Zone: Extreme Powerboats"** - National Geographic powerboat show.



Author **Jim Russell** (Jimboat) is powerboat design technical consultant on a new National Geographic special for "Thrill Zone" series...

Details at: (channel.nationalgeographic.com)

check out next show date at AR's website! aeromarineresearch.com/NatGeo_thrill-zone.html

