ISSN 2576-2182

The Hovercraft Society
Formed in 1971

News Notes

NO 2-24 MARCH 2024

Trygve Espeland (second left) of ESNA at the signing of agreement with Strategic Marine in March.

INTRODUCTION

This month we have news of several important agreements and contracts. Strategic Marine in Singapore are moving towards building Wind Farm SES, while Griffon Hoverwork have a new construction contract and begin work for the Canadian Coastguard, a core customer.

At the light end of the market Neoteric and British Hovercraft continue to deliver their craft, and Hoverstream have got their prototype into trials.

Griffon Hoverwork have produced a Q&A video for the Oita craft and Explore Oita Japan have also made a video that complements that.

This year THS Technical Secretary attended the AGM of the Hoverclub of Great Britain which is one of the key events of the HCGB calendar, a report with some observations is included in this issue.

There is much more from all around the world in the section from the internet. Also included are references to a technical paper on CFD, and an article about methanol as a fuel. Once green

methanol is available this could be a preferred fuel also for ACV's at least in the utility market.

NEWS ITEMS

STRATEGIC MARINE AGREEMENT WITH ESNA

Strategic Marine (SM) has signed an agreement with ESNA - Espeland and Skomedal Naval Architects (ESNA) in March to develop a Surface Effect Ship Crew Transfer Vessel (CTV) for various applications. This vessel type offers the combination of higher speed, increased operational wave height and reduced fuel oil consumption compared to catamaran CTV's.

This agreement is based on the parties' experience in working together for three SES crew boats for the oil and gas sector. It foresees a greater level of collaboration between ESNA and SM for the promotion of SES technology for various target markets, such as offshore wind, oil and gas and security & defence applications.

SM has a long and established track record building CTVs for offshore wind with 36 vessels delivered since 2012. The SES experts in ESNA have worked for more than 40 years with the design, building, construction, and operation of SES, and have a deep understanding of the offshore wind industry.

An active SES motion damping system provides better seakeeping and higher passenger comfort than possible with conventional monohulls and catamarans. It is also used at the wind turbines to allow turbine transfers in higher wave heights. The low SES resistance offers fuel savings and reduced emissions in combination with the increased speed.

ESNA is supplying the vessel design package and an equipment package for the main SES systems. The SES equipment package simplifies the complexity during construction by fully replacing hydraulic systems with modular electrical systems. The fully automatic and modern SES control system enhances both energy efficiency and operational performance.

SM plan to start building the first offshore windfarm SES CTV during the fourth quarter of 2024. Find out more here.

For the oil and gas market, ESNA is teaming with AIRCAT Vessels to deliver fuel-efficient high-speed crew offshore transport designs, tailored for the oil and gas markets under demanding operational conditions.

GRIFFON HOVERWORK

Two craft order for Polish Border Guard

The Polish Border Guard announced the signing of a contract for the purchase of two Griffon Hoverwork hovercraft for a patrol and intervention role conducted by Kashubian Border Guard Division in Stara Pasłęka, to be delivered in 2024.

Adrian Went, Managing Director at Griffon Hoverwork, explains: "The amphibious abilities, combined with the high manoeuvrability, of our hovercraft are a perfect fit for the Polish Border Guard's mission parameters. We are experts in building border guard fast marine vessels and our aftercare service helps maintain maximum operational readiness.

The hovercraft will be used for patrol, intervention and search and rescue operations in winter conditions on ice (solid and crushed), in

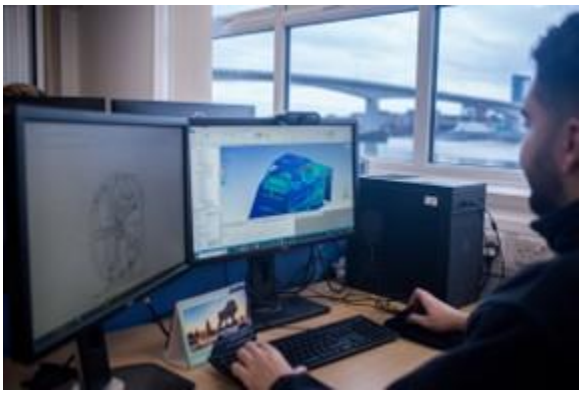
summer - on water, as well as in areas covered with rushes and swampy areas, during the day and at night with limited visibility, on water areas up to 20 nautical miles from the shore.

The Border Guard's maritime branch protects the sea border of the Republic of Poland, including extensive areas of internal marine waters such as bays and lagoons. It is in the Vistula Lagoon where the hovercraft will be most likely to be regularly deployed. This area borders with Kaliningrad.

Map extract courtesy GoogleMaps.

As well as the build and delivery of the hovercraft, the contract includes training for crew members conducted by Griffon Hoverwork's highly regarded training team.

Canadian Coastguard replacement study



The Canadian Coast Guard (CCG) has asked for engineering design consultancy services from Griffon Hoverwork to update their current air cushion vehicle (ACV) design and to conduct feasibility studies into alternative power plant options.

The Canadian Coast Guard operates a fleet of four ACVs, which primarily support the CCG's search & rescue, icebreaking, and marine navigation services mandate in the central and western regions of Canada. Due to their aluminium build and icebreaking core duty in harsh environments, the ACVs have a relatively short in-service life expectancy and are ready to be replaced.

Mark Downer, Engineering Director at Griffon Hoverwork says "Griffon's experience in ACVs is extensive, with a track record of our products operating in more than 45 countries and a pedigree stretching back seven decades. Over that time, we have continually evolved our hovercraft, both in terms of upgrading existing models and introducing new designs.

We have also been working on alternative energy systems since 2014 when we designed a new electric drive system. Subsequently we've integrated similar systems into several other marine vessel designs and collaborated with leaders in the supply of zero emissions technology to develop 100% battery power and hydrogen powered vessels.

We are delighted to be able to bring this expertise and experience to the next exciting phase of ACV operations for the Canadian Coast Guard."

CCG Vancouver hovercraft Siyay, courtesy VanLife. Click on the image to see the video on Youtube posted September 2018 (6:43)

The contract requirements are split into several phases, the first of which is a feasibility study to determine the most suitable future fuel for the CCG's next generation of ACVs to comply with International Maritime Organization (IMO) requirements for zero emission of greenhouse gases by 2050, and to assess the impact this will have on the craft performance, structure and systems in both the short term and long term The results of this feasibility study will determine the

direction of further design considerations of a complete craft proposal.

The Canadian Coast Guard stated, “Griffon Hoverwork is the only known supplier capable of performing the design work and feasibility studies on the only known compatible ACV design.”

Updates and Q&A on Oita Hovercraft

Griffon Hoverwork have prepared a video answering questions sent in from the public.

Hosted by Mark Downer and Ben Avery it gives some useful insights on the GH12000 craft and their operation in Japan.

Training and trial operations will continue through the summer of 2024 with full service start in the Autumn. The company will use two craft in normal service and keep the third as a backup.

The Griffon Hoverwork video on YouTube can be viewed by clicking on the image below.

In addition, Explore Oita Japan has produced a video marketing the service (in English) that can be viewed on YouTube by clicking on the image below.

This video includes technical explanations from GH Engineering Director, Mark Downer.

Summer Placement Opportunity at GH

Griffon Hoverwork have opportunities for Engineering Design students looking for a summer placement and due to finish their 3rd year of a degree. They have a great opportunity to join the Design Team on a summer placement for enthusiastic and driven individuals with strong communication and teamwork skills.

The students will work alongside skilled professionals and from day one will be working on real-life meaningful consultancy projects. They will learn from others and begin creating their professional network ready for graduation. There will also be opportunities for site visits to see hovercraft being manufactured.

The offer is a 12 Week Placement (flexible dates dependant on study), located at 8 Hazel Road, Woolston, Southampton.

Email design@griffonhoverwork.com to find out more information.

GH are busy at present with studies for Hydrogen powered craft, new craft for CCG, and design for new craft for the Polish Border Guard.

New hovercraft pilots training

Megan and Jake shown above both completed and passed their Griffon Hoverwork Ltd 2000TD Pilots Type Rating course at the end of January.

The 5-day training course, held at the Hovercraft Centre of Excellence, Solent Views, covers the safe handling, systems and emergency procedures for the hovercraft and takes 25 hours of practical instruction and approximately 15 hours of theory. Hovertravel Ltd supported Griffon Hoverwork with their facilities at Ryde hoverport.

ISSN 2576-2182

HOVERTRAVEL NEWS

Hovercraft pilot vacancies

Hovertravel have 8 pilots and are currently (mid-March) advertising for more to build their team of qualified pilots. More details are available here on LinkedIn. They ask that potential candidates ensure they have the correct qualifications before submitting their application.

Skirt material recycling

Photo above shows (from left to right) Chris Davis from Hovertravel and Gerard Harkin from Twyford Recycling.

Twyford Recycling, a specialist tyre recycling operation, has partnered with the cross-Solent hovercraft ferry service, Hovertravel, to process their used skirt material into 20mm rubber chippings.

Ryan Livett, Facilities Manager at Hovertravel, explains:

"The rubber material which makes up the skirts on our hovercraft degrades slightly through use over time and loses some of its natural bounce. For this reason, we have a regular programme of replacement, and we are always looking for a better way to recycle the used rubber. Twyford Recycling is an established company with a recycling facility along the South Coast and they are able to collect and process our rubber waste so that it has a second life."

The rubber skirt on a hovercraft is used to trap the air underneath the craft and for Hovertravel's craft it supports up to 45 tonnes, allowing the hovercraft to cross the Solent at speeds of 35 knots up to 70 times per day. The fingers of the skirt are replaced approximately three times per year to keep the craft operating at their most efficient.

Gerry Harkin, founder and MD of Twyford Recycling, adds:

"We are used to recycling any type of tyre; from cars, lorries, coaches, tractors but hovercraft skirts were a first for us. To recycle the rubber skirt, we pass it through our pre shredder and secondary rasper and granulator machinery just as we would with tyres. This will produce 20mm wire free rubber chippings. We then bag these up in one tonne bags where they are either sent off for colourising, used for equestrian or garden mulch or are repurposed in manufacturing."

Visit from Portsmouth twin city officials

Hovertravel were delighted to welcome onboard a delegation from Maizuru, Portsmouth's sister city in Japan including the Mayor of Maizuru Mr Kamoda Akitsu & Lord Mayor of Portsmouth Cllr Tom Coles in mid-February.

VERICOR UPDATE

A team from the US Navy recently visited Vericor manufacturing plant in Greer, SC, USA. Their visit gave them firsthand experience of

witnessing one of the gas turbine engines in action, crucial to the LCAC program.

This visit served as an important opportunity to fortify the bond between the Vericor and US Navy teams, gain insights into the evolving needs of the US Navy, showcase Vericor's capabilities, and highlight the latest technical advancements incorporated into Vericor engines, aimed at enhancing performance and reliability.

The collaborative workshop held during the visit facilitated an exploration of potential enhancements and partnerships, with a keen focus on elevating service quality and equipment reliability through the implementation of cutting-edge maintenance processes.

Vericor gas turbine engines power the USN LCAC fleet, the new SSC, the Japanese and the Soth Korean LCAC fleets.

JAPAN LCAC EARTHQUAKE SUPPORT

On 1st January there was a 7.1 magnitude earthquake on the Noto peninsula in North Central Japan. The Japan Defence service mobilised their LCAC craft to provide essential logistic support to the area.

There are several videos that have been made of the operations. We present three of them here.

The first is a helicopter view of the voyage ashore from the LCAC mother ship (3:50)

【能登半島地震】海上自衛隊が重機を陸揚げ　輸送艦「おおすみ」から発進のLCACが上陸　Japan earthquake

The second, below is another coming ashore and offloading (2:33), and the last under (4:01) shows two craft operating together (2101 and 2102). Click on the images to view.

These Japanese LCAC craft appear to have outer segmented spray suppression. There is still a lot of spray when the craft 'surfs' in through the breakers to the beach but it does appear somewhat less than USN LCACs.

【令和６年能登半島地震】２０２４年１月１４日 海上自衛隊輸送艦おおすみ「LCAC」による、国交省TECFORCEの輪島市深見海岸への輸送

【能登半島地震】揚陸艇が輪島の海岸に　重機など陸揚げ

The operations shown here do illustrate the unique ability of such craft to deliver major hardware to simple beaches when quayside facilities are just not available for vessels.

CWIND PIONEER AT WIGHT SHIPYARD

Easter Weekend Engine Alignment for CWind Pioneer at Wight Shipyard quayside.

Using the Rotalign Touch the Wight shipyard team are able to align drive lines to extremely fine tolerances.

Josh MacGregor Refit manager at Wight Shipyard comments: *"We can provide this service both on and off site, get in touch with your requirements no matter how big or small!"*

MHO-Co Wind Farm SES

Above, MHO Fast. Click on image to see video.

Danish offshore support company MHO-Co recently acquired two new crew boats in a series built by UMOE Mandal of Norway.

The newbuilds are notable for utilising a lightweight surface effect ship (SES) catamaran design, which was developed to achieve higher speeds and greater fuel economy compared to a conventional-hulled crew boat. Specifically, the new crew boats are designed to be capable of service speeds of between 38 and 40 knots and a top speed of just under 50 knots, hence the selection of the names MHO Fast and MHO Furious. MHO Furious was launched on 16 October 2023 and underwent trials and commissioning prior to being delivered in the second half of November.

This is the second vessel in the series of two that the Norwegian yard has built for MHO Co. They will work for Ørsted on the Race Bank and Westernmost Rough windfarms in the UK. The first of the new CTVs, MHO Fast, was delivered earlier in 2023.

The vessels make use of surface effect ship (SES) technology and combine high speed, a comfortable ride for windfarm technicians, safe boat landing on wind turbines in up to 2.5m Hs, and low fuel consumption.

They can achieve 32 knots in 1.5 Hs and a maximum speed in calm water of around 50 knots.

UMOE Hydrogen Fuel Cell SES

TECO 2030 and UMOE Mandal delivered the documentation package to the Norwegian Maritime Authority for an approval in principle application of the World's first fuel cell high-speed vessel design at the beginning of February. The vessel is designed to be installed with a multi-megawatt fuel cell system for full propulsion.

Above, artists impression of fuel cell SES CTV.

The ship will be constructed based on UMOE Mandal's proven Crew Transfer Vessel (CTV) Surface Effect Ship (SES) technology and with the air-cushion catamaran design it will offer low imprint on surrounding environment, even in challenging and vulnerable ocean conditions. CTVs are often used during the construction, maintenance, and operation of offshore wind farms. This specific vessel will be a passenger vessel suitable for ferry service or large-scale crew transfer to offshore platforms. It will have a service speed of 35 knots, a range of minimum 160 nautical miles and carry 275 passengers. This is in line with the Norwegian Zero Emission high speed coastal ferry requirement for the longer service routes aimed to be in place by the end of this decade.

This vessel design is expected to raise a tremendous amount of interest from the global maritime industry as they seek alternatives to transform away from fossil fuels, towards more sustainable fuels. The vessel design aims at being a first of its kind, a zero-emission high-speed passenger vessel sailing along the coast without emitting anything but warm air and water.

Once the vessel design and hydrogen propulsion plant has received the approval in principle, TECO 2030 and UMOE Mandal together with suppliers will continue the process of reaching Final Approval.

"It is a major accomplishment for us to announce our developed partnership with UMOE Mandal and submit all documentation to the Norwegian Maritime Authority for an Approval In Principle on a ship designed for the future of zero emission maritime transportation. I am excited to continue to build on this design platform as we move forward together with our strong partner UMOE Mandal," says Tore Enger, Group CEO, TECO 2030. *"This achievement demonstrates the industry's readiness to embrace commercial and public tenders for passenger vessels powered by hydrogen, thereby contributing to efforts to reduce and eliminate pollution in the maritime industry",* Enger concludes.

The approval was received at the end of February so the engineering for final approval continues.

TECO 2030 are specialists in maritime electric power system design and contribute this package to the SES.

SILVERSTREAM NEWS

BUBBLING UP FOR LNG CARRIERS

An article has been published in the March 2024 issue of LNG Technology magazine summarising Silverstream's current position and expectations for future installation contracts of their air lubrication system on LNG shipping. The full article can be found here.

Silverstream have a current total order book of 196 vessels, and a fleet of 69 ships in-service globally.

The Silverstream® System is a market-leading clean technology, designed to drive energy efficiency across the maritime sector. 14 of their in-service vessels are LNG carriers (LNGCs), a segment that is growing rapidly, boosting demand for technologies like theirs.

The global LNGC fleet in operation is expected to exceed 1,000 ships by 2026. This includes 300 new LNGCs hitting the water over the next three years. With this growing fleet comes a significant opportunity for vessel efficiency – and more and more LNGC owners are taking up this opportunity every day. Silverstream solution offers LNGC operators the flexibility to improve delivered cargo volumes or reduce harmful emissions, depending on their specific priorities.

As the maritime industry navigates towards a greener future, embracing clean technologies like the Silverstream® System will be important for achieving efficient, and environmentally friendly maritime operations on a global scale.

EMISSIONS REDUCTION DISCUSSED AT IMO

The 81st meeting of the International Maritime Organization's Marine Environment Protection Committee (MEPC) from 18 to 22nd March set out updated guidelines and global measures to speed up the decarbonisation of the maritime industry.

As reported by Bunkerspot, there was consensus to introduce a universal price on greenhouse gas emissions to meet the 2030 deliverable for 20-30% reduction in emissions from ships. There was also a callout to improve and refine the 'Carbon Intensity Indicator' by the MEPC 82 meeting in 2025.

Silverstream are able to save ship owners and operators up to 10% in CO2 emissions and thus provide a key contribution to the maritime decarbonisation journey through their leading Air Lubrication System (ALS).

RUSSIAN SES CORVETTE SAMUM DAMAGED

It was reported last September in on-line journal Defense Express that *Samum* was damaged at the

ISSN 2576-2182

stern by a sea drone. The vessel was towed back to Sebastopol for repairs.

The warship was attacked on September 14th by a Ukrainian SeaBaby naval suicide drone. Unverified reports say the vessel might have been struck near the Sevastopol bay: the drone hit the stern from the right, the ship lost ability to operate safely and was towed to the base.

The Samum missile-carrying corvette of Project 1239 has appeared online in a new photograph as above.

The published photo confirms that two tugboats can be seen towing the damaged ship. It also indicates that on top of losing capability to propel itself, *Samum* could also have lost control over steering. The ship's draft is also greater toward the stern. Generally, trim by the stern is a normal thing for Project 1239 vessels, although this damaged ship seems to sit a bit deeper than usual.

More details at the links above. Thanks go to Defense Express for the information.

BBC Railways Programme

Michael Portillo has been hosting a series of programmes on railway lines in UK for the BBC recently.

What has this to do with hovercraft? Well, the last in the series ends with a visit to Griffon Hoverwork at Portchester – as follows from the BBC guide to the programme:

Michael Portillo reaches England's south coast to continue his exploration of postwar Britain. He begins in Dorset on the Swanage Railway, riding a glorious 1940s steam locomotive on the trail of one of Britain's most popular children's authors, Enid Blyton.

In Poole, Michael discovers an icon of the Swinging Sixties – the lava lamp, invented in the town by an eccentric accountant. At Romsey, Michael heads to the magnificent Broadlands Estate, once home of Louis Mountbatten, first Earl Mountbatten of Burma.

Michael's last stop on this leg of the journey is Portchester, on the northern edge of Portsmouth Harbour, where he visits a factory manufacturing a marine craft pioneered in the 1950s – the hovercraft.

The programme lasts 29 minutes. It was first shown18 March 2024 and is available for 11 months on BBC IPlayer, here (for those located in UK).

UK members please do view the programme and mail the Technical Secretary with your thoughts!

Latest from Owen Ellis

Owen has been at Airlift Hovercraft earlier in March where he completed testing of *Revolution* 1 and 2 prior to delivery to clients. These are the first craft built at Airlift to Owen's design for a quiet cruising craft.

Airlift in Antarctica

Airlift have posted a video of their operations in McMurdo Sound, Antarctica, for Heritage

Expeditions of New Zealand. Two *Mustang* craft have been used (predecessor to their current model *Wildfire*). Click on the image below to view the video report. Heritage expeditions have been back to Antarctica in January and February 2024. The next opportunities will be in January and February 2025, from their expedition schedule.

Latest from British Hovercraft Company

BHC delivered a blue *BHC Beast* integrated craft to Durban, South Africa in March. Meanwhile four other pre-owned craft have been dispatched in a container to the USA.

Contact them by phone or email, info is on their site here.

Latest from Neoteric Hovercraft

Chris Fitzgerald continues to be busy building and delivering his Neoteric Hovertrek craft to fire departments, rescue and other organisations.

A grey craft has been delivered for USGS survey, a 4-person open craft with combination seating, reverse thrust, and GPS. This was delivered with a trailer in January. Click here to see the post-production test video.

The second is a 6-person Rescue hovercraft, lime green customs gel coat colour for North Queensbury Rescue Service, located just South-east of Lake George, New York State. This was also completed this January. Click on image below to see the craft, which has a driver cuddy.

Latest from Hoverstream

The prototype Evolution 3 to 4 seat craft is on trials since early March. Jason Kuehn has posted a video of the craft with commentary on his experience with it so far. Take a look by clicking on the image above.

He has spent a great deal of effort to design and build a very strong and stiff hull and duct structure using foam core, so the craft should be fairly hardy. As can be seen from the video the skirt system is neat, and the plough-in characteristics are very smooth and safe.

ISSN 2576-2182

Speed Weekend in Sweden

During the winter season an over ice speed event is held annually. The event includes all sorts of vehicles running over a 1-kilometre course. The Ivanoffs and several other Swedish hovercrafters have attended for a number of years. This year Magnus Ivanoff's son Rickard drove a craft at the event on March 1st, achieving the fastest F50 in the world over the flying kilometre (on ice), averaging 134 km/h, top speed 135,84 km/h. Magnus had a speed 5 years ago of 130,6 km/h in a 120 hp F1.

Above the start, below Rickard doing his speed run. Courtesy Magnus Ivanoff.

Hovercraft Museum News

The Museum is open on both Saturdays and Sundays from 10am to 4pm starting on the weekend April 13/14th. This Saturday (6th April) the museum welcomed the South Hants Velocette Owners Club to the Hovercraft Museum.

A selection of motorcycles (not just Velocette) made for an interesting display and an additional attraction for museum visitors. The museum often welcomes visits from groups, schools and societies, adding to the spectacle on site. Hovertravel have special tours to and from the museum at a selection of weekends during the summer months.

Details and updates can be found on their internet site THM, or on the Facebook page 'Friends of the Hovercraft Museum'.

Clubs and Associations Update

The Hovercraft Club of Great Britain

THEHOVERCRAFTCLUB OF GREAT BRITAIN

2024 AGM

The HCGB held its Annual General Meeting over the weekend of 15/17 March at Woodland Grange, Old Milverton Lane, Leamington Spa CV32 6RN, England. The main events were on Saturday with some technical presentations planned, together with the AGM itself, and a dinner and annual trophy awards. THS Technical Secretary attended together with some other THS members who are also members of HCGB.

Reflections on HCGB Annual Meeting

This was the first AGM I (Techsec, Alan Bliault) have attended for many years. The AGM has long been a highlight of the HCGB calendar and clearly remains so.

It was most enjoyable and was an opportunity to meet friends and colleagues recently only contacted via the internet.

Below a brief personal overview, followed with some updated information of the plans for 2024 and updates to their regulations and technical guidance.

Forum

The weekend Formal events began at 12:30 on Saturday with a 'Forum' session led by a panel of members from Council, Marketing, Competitions Committee, and Scrutineering Committee.

A summary of status in each of these areas was given, and the floor opened for questions.

Key technical points raised related to the Scrutineering (i.e. technical) were the guidance on carburettor safety, electrical safety, and some urging to be proactive on technical self-checks and getting scrutineering verification.

Two leading racing members introduced that they were working on a new approach to driver physical protection on craft and hoped to get guidance/acceptance from scrutineering prior to start of the new racing season.

Finally, representatives of the Midlands Branch asked for clarification concerning the proposal for HCGB to run the WHF World Championship event in 2026. Advice was given from the panel that soundings were currently ongoing regarding venue and timing, and that the branch would be consulted as soon as possible.

The Forum session was succeeded by a Technical Session where two presentations were made:

- Developing Racing Hovercraft with 4-stroke engines, by Peter Symes-Thompson
- Current Hovercraft and Surface Effect Ship Technology, by Alan Bliault

Peter gave an overview of his experience adapting lightweight motorcycle engines to racing hovercraft use. He showed graphics illustrating the different torque characteristics and fuel consumption of a 4-stroke compared with the 2-stroke units commonly used. The 4-stroke engines are heavier, but considerably more fuel efficient, with the torque characteristic allowing him to get off a starting grid more quickly than many others.

He also had examples of hardware, and failed components that have been part of his operating experience.

I was invited to give a general presentation[1], and so gave an overview of status as I saw it ranging from the SSC programme in the USN, to current racing craft.

Both presentations were well received and took proceedings right up to start of the formal AGM at 15:00.

Company AGM

The AGM followed normal practise with approval of previous meeting minutes, Chairman's Report, The Accounts and Audit, Council and other committee elections, Branch Resolutions, and AOB.

Activities had returned close to normal in 2023. As reported earlier there has been considerable discussion and adjustment to race arrangements so that races include sufficient craft to give challenge to participants and excitement to the audience. Essentially the number of classes has proliferated and now consolidation at least of races should improve the attractiveness of racing.

The accounts showed the main financial commitment and assets relate to the race series, which is understandable. The council would like to see racing membership increasing from its present level and are studying ways to encourage this. With the present entry and site fees there is a balance with the overall operating costs.

Committee Meetings

Both the Branch Liaison and the Competitions Committee met following the AGM to discuss issues common across the Branches and the race meetings. It was noted that the meeting at Gang Warily in Hampshire was not on the list this year. This is because the World Championship event will use the dates used normally. It was not possible to find an alternative date.

[1] The presentation will be made available via a link on THS YouTube Channel as well as HCGB.

ISSN 2576-2182

Presentation Dinner and Trophy Awards

An annual celebration dinner was held starting at 19:00. Guests sat at nine round tables and enjoyed an enjoyable a buffet style meal. Following the meal, there was presentation of trophies for each of the racing classes to the season winner, second and third in each class. This was the recognition for a great deal of effort by the racers through 2023! There was much celebration by the members and congratulation from the Chairman of these achievements.

To my great surprise, I was also given the honour of receiving the Christopher Cockerell Cup. Tony Drake, President of HCGB and WHF has explained that Sir Christopher donated this cup to the HCGB for them to award on his behalf as and when appropriate to the person, persons or organization who have in their opinion made a substantial contribution to the world of hovercraft. This was not to be limited to Club members.

The cup was originally given to Sir Christopher in 1910 to commemorate his christening. It is hallmarked solid silver and hence the Hoverclubs most valuable and prestigious trophy.

I am honoured to receive it and hold it for a while in substantial part for the contribution that THS has made over the years. Returning it in due course will require me to attend another HCGB AGM I expect!

Following the presentation of Trophies the AGM organising committee had arranged after dinner party games that involved all the dinner tables. Some of the challenges were amazing to watch – using materials provided, or available from the dinner participants – and very much enjoyed by all! A suitably competitive finish to the organised events of the day.

Talks with members

I was lucky enough to talk with several ‘senior’ members – who while beyond the reasonable age for racing a hovercraft still have an active interest, including in some cases children that have taken up the sport.

I managed to spend some time with Bill Baker before proceedings started on Saturday. Bill is now assembling materials for a summary of the early history of HCGB from late 1960’s.

It is not as simple a process as it might seem, as the information is rather scattered now. He is making good progress though, both with data and photos.

Graham Nutt is now actively working on an all-electric craft aimed at recreation rather than racing. He showcased the centrifugal lift fan he has managed to procure which is similar to that used by both Keith Oakley and Owen Ellis in the conference room.

Jim Lyne, Graham Nutt, Keith Oakley and John Gifford gathered around an exhibit of hovercraft parts by Graham at the back of the conference room.

Next step is getting the ‘right’ battery pack, and motors. Experience again from Keith Oakley will probably help that. Graham mentioned that he was also working on a suitable set of ‘regulations’ for such craft. This would indeed be very valuable to HCGB as recreational use will be an important step towards a racing class.

Keith Oakley's work on his all-electric craft is maturing. His ideal goal would be participation in an event such as the Rhone Raid. This would require suitable battery charging facilities, which presently is a project in itself!

I do hope that with the widening of collaborative efforts on electric craft that we can 'move through the transition'.

Going back to racing, it was commented to me that for racing cars Formula E has developed along a different track to Formula 1 etc and has achieved technical success as well as a following. Let's hope that will also be possible for Hovercraft – perhaps this is the new attraction mechanism for membership once it gets going.

2024 Race Meetings

The race meeting weekends are currently planned as follows:

27th April, Weiszweisser, Germany, EHF Meeting

4th/6th May, Allerton Park, Yorkshire

25th/27th May, Magnolls Farm, Blackburn, with EHF

22nd June, Whittlebury, Blackburn

6th July, Rother Valley, Sheffield

29th Aug/1st Sept, WHC 2024, Saalburg, Germany

21st September, Magnolls Farm, Blackburn

5th October, Whittlebury, Northampton

Licences and Event Fees

Racing licence fees are now set at GBP45.50, 30.50, 25.50 for Full, Novice, and Junior respectively for the year.

Race Entry fees are GBP159 and 238.50 for 2-day and 3-day meetings for adults, and GBP 63, 93 for Juniors. The adult fees include a free member site fee for camping, that cost GBP14.50 per day for members and 20.50 for non-members.

It should be noted that HCGB organise the insurance for such meetings, First Aid and medical emergency support as well as the site hiring, circuit markings, barriers, timing system and public address. This is all rolled into the meeting fees.

Regulations updates

The two main HCGB regulations documents have been updated at beginning 2024, as follows:

HC115-2024-1 - Inland Racing Competition Regulations

HC152-2024-1 - Construction Regulations For Racing Hovercraft

In HC115 the HCGB has adopted the new WHF Formula Classifications. The following changes have also been adopted:

- A table has been included to clarify any penalties for failing to abide by the rules.
- The F1 thrust limit for novices / new drivers has been increased to 200kg
- The points for races and race meetings will now be the same as those for EHF meetings
- F1/F2 and F3/35/50 will be merged for the season
- HC148: The protest time limit has been increased to 30mins

The WHF site is open, and the main racing craft regulations can therefore be found here, directly. Recent updates concerning carburettor safety and electrical safety are in sections 8 and 9.

For guidance the HCGB Scrutineering committee has also issued technical bulletins so far as follows:

HC SB01 - Multiwing Fan Hub

HC SB02 – Safety Lanyard Failure

HC SB04 - Lift Fan Guarding

HC SB05 - Thrust and Weight Testing

HC SB06 - Wiring Guidance

The key documents published by HCGB can be found here (once logged on to the HCGB site).

The construction regulations for racing craft by HCGB make largely reference to the document issued by WHF (so that racing craft are regulated globally to a standard). On the WHF site there are also guidelines for safe use of Multiwing and other fans with replaceable blades – see WHF guidelines 010 and 015.

Hovercraft Cruising Club

2024 Scottish Hover-in

The 18th year of the famous Scottish Hover-in at the premier hovercrafting location in the UK (Loch Fyne) from May 25, 2024 - June 07, 2024.

All are welcome for any part or all of the event dates so long as pre-registered. To register, please go to the HCC site here.

The event is mainly based at the Argyll Caravan Park near Inveraray which takes touring campers and caravans (no tents) and has static caravans for hire). Plenty of alternative accommodation is available in the local area (probably wise to book something if you are attending on the Bank Holiday weekend as it can be busy).

Launching/parking is available at the caravan park. If you have any problems finding anything, please contact John Robertson and he will try to help. For newbies, HCC normally use VHF channel 72 for inter-craft comms.

Hovercraft skirt welding

A video by John Robertson for welding sections of the 'Amphibious Marine' type skirt, here.

Society News

THS Meetings

The following THS meetings are currently planned, see table below Details of further meetings will be publicised in the events blog once finalised, and in the next NewsNote. At present all meetings are held on Zoom.

2024	Subject
April 18th 19:30 UKt	Committee Meeting
May 16th 19:30 UKt	Committee Meeting
May 23rd 19:30 UKt	Presentation Meeting
June 20th 19:30 UKt	Committee Meeting

If members have any issue or technical subject they would like to discuss with Committee, please let us know with an email to Techsec who will coordinate with committee to arrange a special meeting or add to the meetings above. Attendance would be by Zoom. If request is from outside Europe, we can set up a meeting at times to suit you!

Technical Papers

Browsing some technical literature, I found the paper below, that can be downloaded from Science Direct.

'Validation of a commercial fluid-structure interaction solver with applications to air cushion vehicle flexible seals'

Robert E. Cole, Wayne L. Neu, at Kevin T. Crofton Department of Aerospace and Ocean Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA, USA

Version of Record 23 August 2019, 24pp.

The authors have used STAR-CCM+ CFD modelling for the flow under an SES planing bow seal including the effect of the cushion airflow. After verification of the solver tools employed, a CFD model simulating the physical seal model tested by Doctors et al in 2012 and 2014 is analysed and the results compared.

This is a substantial research project and provides encouragement that CFD can be used to model cushion seals, at least with simple geometry at the moment.

From the Internet

We hope the material below is useful and enjoyable. Click on images to go to the recordings.

LCAC updates

Click on the below image to view LCAC craft assigned to Assault Craft Unit 5, transport gear and Marines to the USS Essex to Pohakuloa training area on board Marine Corps Base Hawaii during Rim of the Pacific (RIMPAC) 2022.

Twenty-six nations, 38 ships, four submarines, more than 170 aircraft and 25,000 personnel were participating in RIMPAC from June 29 to Aug. 4 in and around the Hawaiian Islands and Southern California. The world's largest international maritime exercise, RIMPAC provides a unique training opportunity while fostering and sustaining cooperative relationships among participants critical to ensuring the safety of sea lanes and security on the world's oceans.

RIMPAC 2022 was the 28th exercise in the series that began in 1971. U.S. Marine Corps video was provided by Cpl Jerry Edlin.

For a high-resolution download of this video, visit the Defense Visual Information Distribution Service (DVIDS) at this link: DVIDS hub

At this site there is a whole list of LCAC videos also from 2024 – do check them out.

N Korea SES

Image of the Nongo class SES firing missiles, from Reddit

North Korea have built first a ‘stealth’ prototype and then several ‘non stealth’ fast missile SES craft with dimensions around 35 x 12m and displacing around 200 tonnes and having a maximum speed of 48 knots. Current operational numbers are unclear, possibly up to 6 craft. The missiles carried are Russian kh-35.

A detailed article about the vessels can be found in Defense Media Review from 2020, here.

UMOE Voyager 32 sales video (2:31)

This is from six years ago but has some good footage of the smaller 27m CTV’s including access to a wind turbine.

Trelleborg Article on Neoteric Skirts

This article is from 2020 but has much useful information from Trelleborg. Do take a look by clicking on the image above.

MAN Diesels article about GH12000

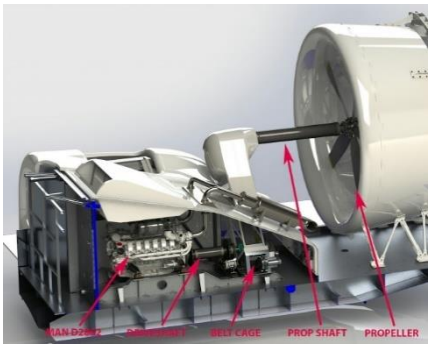


Image courtesy Griffon Hoverwork, 2016.

This is from March 5, 2017, MAN Engines, a Business Unit of MAN Truck & Bus. While now 7 years old the information in this article is very helpful to understand the power system design of the Griffon Hoverwork 12000. To read the full article click on the image above.

How to fly a modern hovercraft!!

A video from 'Lamb Chop Rides' made as the author takes the Hovertravel craft to Ryde and was given an extensive interview with Steve Attrill including a complete tour of the cockpit and all the controls and instrumentation, and the approach to trimming the craft using both water ballast and fuel at the start of each service.

It is about the best introduction and explanation of flying the GH12000 that you can get. Absolutely amazing! With thanks to the author and to Steve Attrill at Hovertravel. Click on the image to view (18:49). The video was posted in January 2023.

First Methanol ready container ship

Her name is ANE MÆRSK. AP Moller Mærsk's first large methanol-enabled vessel was named at the beginning of February at a ceremony in the shipyard of HD Hyundai Heavy Industries in Ulsan, South Korea.

The vessel is named after Ane Mærsk McKinney Uggla, the Chair of the A.P. Moller Foundation and A.P. Moller Holding. Ane's eldest granddaughter Astrid served as godmother and christened the vessel by breaking a champagne bottle over the bow. The ceremony was hosted by AP Moller Mærsk Chairman Robert Maersk Uggla. The vessel has space for 16,592 20ft containers. It is 350m long and 53.3m wide.

Both main and auxiliary engines, supplied by MAN are designed to run on green methanol when available.

Commenting of this launch Rasmus Holm Bidstyp of MAN Energy Solutions has written:

"*Also, a true lighthouse for the use of green methanol as marine fuel. It's very unlikely that methanol would have gained the current momentum without the order of this and her 11 sister vessels with the MAN B&W 8G95ME-C10.5-LGIM. The order book of this 95-bore engine is currently at 76 with more to come - a true testament to the importance of this world's first very large container ship powered by methanol in the aspect of the maritime energy transition - happening already today!"*

----------V----------

The ceremony to decommission GH 8000 hovercraft ACV 184 and ACV 185 in Jakhau, Kutch on Friday 29/12/2023. Courtesy Indian Coast Guard, via Ken Pemberton

ISSN 2576-2182

Hovertravel has agreed to allow THS members to book flights between Southsea and Ryde at a 20% discounted rate when booked online.

To obtain the discount members must use the current **THS promotion code**, which is available either from THS Treasurer, or from the Newsletter Editor.

At time of boarding, they should show their **membership card**. The offer is available for up to two people travelling at the same time. Once booked the tickets are not refundable or transferrable.

HOVER TRAVEL
fast • friendly • frequent

DISCLAIMER