

TRACK RECORDS

(Updated: 17 January 2011)

Feasibility Studies

- Feasibility Study for Defence Science Technology Agency (DSTA) on National Day Parade (NDP) 2005 “Floating Stage” located at Marina Bay in Singapore
- Feasibility Study on National Day Parade (NDP) 2008 “Fireworks Floating Platforms” located at Marina Bay in Singapore
- Design Study on “Pontoon Connector A” for Defence Science Technology Agency (DSTA)
- Feasibility Study (PHASE I) for rigid connectors to be applied on “Very Large Floating Fuel Storage Facility (FFSF) for Oil and Petrochemical Products” for JTC Corporation
- Tendered Proposal (PHASE II) on “Very Large Floating Fuel Storage Facility for Oil and Petrochemical Products” for JTC Corporation
- Feasibility Study on “Floating Collision Barrier For Floating Fuel Storage Facility (FFSF)” using Containerized Pontoon Systems (CPS) concept for JTC Corporation
- Feasibility Study on “Floating Marina” located in Ham-Pyung (Korea), using Rigid Pontoon Connectors (RPC) concept for Ocean Space Inc. (Korea)
- Feasibility Study on “Hans River Floating Islands” located in Korea using Rigid Pontoon Connectors (RPC) with Ocean Space Inc.
- Feasibility Study on Personalized Water Suite (PWS) using Containerized Pontoon System and Rigid Pontoon Connectors
- Feasibility Study on 500m long and 6m wide floating breakwater for a Thai yacht club
- Feasibility Study on deployment of Concrete-Steel Composite pontoons as breakwater for Changi Sailing Club (CSC)
- Feasibility Study on “Floating Entertainment Pods” located at Collyer Quay (Marina Bay) in Singapore for HSL Constructors Pte Ltd
- Conceptual Design of “SWSE House Boat” for Lita Ocean Pte Ltd
- Ship Mast Structure Safety Studies including sea load, vibration, shock and fatigue analysis for Republic of Singapore Navy (RSN)
- Tendered Request-for-Information (RFI) on “Singapore River Mobile Floating Stage” for Urban Redevelopment Authority (URA) of Singapore
- Proposal for feasibility study on a “268m long Floating Jetty with 45ton railed crane” for Sambawang Marine Technologies
- Feasibility Study for Floating Solar Farms in Singapore Reservoirs for AEG Power Solutions Inc, Canada
- Feasibility Study for Floating Port Protection Jetty for Changi Naval Base.



- Feasibility Study for Floating Jetty for Planet Hollywood in Mumbai, India
- Feasibility Study for Floating Seafood Restaurant for Jumbo Group
- Feasibility Study for Floating Working Platform for LV Crystal Pavilion @ Marina Bay
- Feasibility Study for Modular Dredging Platform for a UK construction company
- Feasibility Study for Floating Jetty for Changi Airshow

Product Developments

- Completed 1:10 Scaled Prototyping for Roof of Concept of Rigid Pontoon Connectors (RPC)
- Design and product development for NDP-FP Connector, the 1st 6DOF Rigid Pontoon Connector (RPC) in the world
- Successful development and trial of platform product “Containerized Pontoon System (CPS)”
- Successful development and trial of platform product “Concrete-Steel Composite (CSC)” modular pontoons
- **ABS Product Type Approval** for Rigid Pontoon Connector (RPC-S88) obtained in July 2008
- Completed series design for CPS Pontoons for production
- **GL Class Approval** for CPS4088N Pontoon with RPC-S88 Connectors in Jan 2010
- Completed series design of Concrete-Steel Composite pontoons
- Completed design, development and prototyping for Lower Frequency Resonating Silencer (LFRS)
- Completed design, development and prototyping for Lower Frequency Noise Isolation System for Genset for ST Electronics
- Completed prototype design for Hexifloat 4-in-1 Renewable Energy Floating Platform
- Completed prototype design for DRAKOO-III-1kW wave energy convertor
- Completed conceptual design for DRAKOO-III-1500kW wave energy convertor

Engineering Projects

- Completed preliminary design of 500DWT CPS Barge for an overseas client
- Completed CPS conceptual design and hydrodynamic simulations for Defence Science and Technology Agency (DSTA)
- Completed Ship-Pontoon Side Joining conceptualization, design, hydrodynamic simulations and model testing for Republic Singapore Navy (RSN)

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- Design and Supply of 3 sets of Personalized Water Suites (PWS) with connectors 24 x RPC-S88 tested and delivered successfully for Nautique Pte Ltd in Feb 2009
- Completed structural conversion design for a coupled 50T floating tower crane using 6 pontoons and supply 28x RPC-S88 connectors for Singatac Engineering Pte Ltd in July 2009. Design certified by GL
- Design a Detachable Crane Barge joined by 19 CPS pontoons and supply connectors 72x RPC-S88 for HSL Constructors Pte Ltd completed in 15 October 2009. Design certified by GL

Intellectual Property

- A System for Connecting Buoyant Marine Bodies (**Patent No.: 109504, 10/527,901, etc.**) or Fender Connector was developed by Mr. HAN sponsored by Defence Science & Technology Agency (DSTA), Singapore. Hann-Ocean Technology has been granted an exclusive Patent License by DSTA to develop and commercialize the patented technology globally
- Frictional Locking Connector (**Patent App. No. PCT/SG2006/000008**) has been developed by Hann-Ocean Technology to further enhance the performance of the Fender Connector so as to provide complete secured connection between pontoons
- DRAKOO Wave Energy Converter (**Patent App. No. PCT/SG2008/000320**) has been developed by Hann-Ocean Technology to extract ocean wave energy for electrical energy conversion or wave attenuation on floating platform
- Hexifloat Modular Floating Platform for Renewable Energy Devices (**Patent App. No. US 61/344564**) has been developed by Hann-Ocean Technology to integrate Solar, Wind, Wave and Tidal Energy Devices within a single structure, creating significant cost savings by maximizing the electrical output on a per square metre basis

Collaborations

- Collaborated with ST Kinetics Ltd to develop prototype RPC for NDP-FP project
- Collaborated with Mason Industries Pte Ltd to develop and prototype for Lower Frequency Resonating Silencer (LFRS)
- Collaborated with Offshore Construction Services Pte Ltd and Sekai Marine Pte Ltd to develop the CPS prototypes under SPRING Singapore's CDS(TI) grant (Phase I)



- Collaborated with Singatec Engineering Pte Ltd and Sekai Marine Pte Ltd to develop the CSC prototypes under SPRING Singapore's CDS(TI) grant (Phase II)
- Collaborated with Ocean Space Inc. to perform feasibility study for Floating Islands on Hans River, Korea
- Collaborated with Sembcorp Marine Ltd to perform feasibility study for test bedding of DRAKOO wave energy convertor in Singapore

Exhibition Participations

- Exhibited and published papers on DRAKOO and Hexifloat in the International Symposium on Low Carbon and Renewable Energy Technology (ISLCT2010) held on Jeju Island, Korea, in Nov 2010
- Exhibited DRAKOO and Hexifloat in the RenewableUK Annual Conference and Exhibition held in Glasgow, UK, in Nov 2010
- Exhibited RPC, CPS and CSC in the Defence Technology Asia (DTA) 2010 International Conferences & Exhibition held in Singapore in May 2010
- Exhibited RPC, CPS and CSC in Boat Asia 2008 held in Singapore in April 2008

Awards

- Technical Paper "Introduction of Hexifloat – A 4-in-1 Renewable Energy Floating Platform" won the Best Paper Award in the International Symposium on Low Carbon and Renewable Energy Technology (ISLCT2010)