

# Q&A with GUIDO PERLA

**FOR THE LAST 25 YEARS, GUIDO PERLA HAS ALWAYS HAD** his finger on the pulse of vessel design trends. Perla, chairman of naval architectural firm Guido Perla & Associates, Inc., has designed tractor tugs, research vessels, cruise ships, ferries and casino boats.

Most recently, the Seattle-based design house has focused its creative efforts on platform supply vessels and anchor handling tug supply vessels for Rigdon Marine, Bourbon Offshore and Trico Marine. GPA designs are being built worldwide, from shipyards in China to Nigeria to Mobile, Ala., to Lockport, La.

**MARINE LOG:** There appears to be more and more OSV's being designed with diesel-electric propulsion. What was the first diesel-electric vessel GPA designed and do you think this trend will continue in the OSV market?

**GUIDO PERLA:** Our first diesel electric, a passenger vessel, was designed in 1992, and we have continued to design many diesel-electric vessels in the last 25 years. GPA is perhaps the most experienced naval architectural firm in the U.S.



Trico Marine is building two 64m platform supply vessels at Bender Shipbuilding & repair Co., Inc., Mobile, Ala., that are based on Guido Perla & Associates' GPA 640 PSV design. The Trico PSV's are identical to those built for Rigdon Marine

in the design of diesel-electric boats. Our first OSV diesel electric was the GPA 640 for Rigdon Marine. Prior to that vessel, we had designed other OSV's that were diesel electric, but they were never built.

Rigdon had the foresight of choosing diesel electric for his designs, and we were very glad that he accepted our recommendations. With our extensive knowledge in the design of diesel-electric boats, we saw very early the advantages of this system in terms of flexibility of the design and economy of operation. The diesel-electric system gives the designer a lot more flexibility in the development of the internal arrangement of the vessel, thus making the design more efficient in the way the internal space is used.

Also, because of the variable load demands in the operation of these vessels, diesel electric gives a lot of flexibility in the power management onboard the vessel, thus providing more efficiency and reduced fuel consumption while managing all these different load and power demand requirements.

We have proven the advantages of these systems, and every design we are doing now is a diesel-electric OSV and AHTS. These new designs are multi-purpose vessels that require a lot of flexibility in the power management and the arrangement of the vessel. We strongly believe that this trend of using diesel-electric propulsion will continue and will become the norm for the OSV designs.

We are currently developing new designs like the GPA 654, GPA 254 and the GPA 691 SC for the future. They are all born from our experience in the market and the application of diesel electric propulsion on the OSV market.

**ML:** What are the differences, if any, between designing for a U.S. and a Chinese shipyard?

**GP:** Man hours. The only area the shipyard can control regarding cost is man hours. GPA spends a considerable amount of time and effort in developing designs for the U.S. shipyards that are easy to build and minimize the amount of man hours. The hull shapes are single curvature surfaces that will not require forming. We also reduced construction hours by extensive use of CNC machines, more construction engineering, 3D modeling, etc.

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Sometimes the structure was designed with thicker plating with the object of reducing stiffening, and, therefore, the welding hours. Everything was done in function of reducing man-hours with some increase on the material cost. The additional material cost was less expensive than the added man hours.

For Chinese shipyards, we needed to approach the designs in a different way, and also instruct them about our approach. In the beginning, they preferred that we reduce the material cost despite that the number of man hours would increase. They felt that the labor was so cheap that it was more profitable to increase hours and reduce material cost. In other words, it was the reverse of what we did in the U.S. Later we were able to convince them that the American approach of reducing hours was better because even though labor was cheap, they could build more vessels in the

same time period. In the end, our designs for the Chinese shipyards are basically the same as those for the U.S.

**ML:** Over the years, you've designed vessels that have been powered by various diesel engines. Do you specify a particular engine or does the owner?

**GP:** Generally it is requested by the owner. Sometimes the selection is done because it fits the project better in relation to power, weight, physical size, financing etc. Now, with the large number of vessels under construction, it is difficult to find engines available to meet the schedule, and the selection is heavily driven by engine availability.

**ML:** There also seems to be more demand for crew boats with DP. What's behind this trend?

**GP:** These crew boats are getting larger. They are as large as the OSVs that I designed in the 70s. In addition to the crew, they are delivering more liquid cargo to the rigs and this demands more

DP capabilities to stay on station. We are just getting more sophisticated and crews are demanding more.

**ML:** Are there any closing comments you'd like to add?

**GP:** The only comment that I would like to add is that the designs developed by American designers like GPA are more price competitive and perform as well as the very expensive European designs. That is the reason we as a single company have so many vessels under construction. The value these vessels bring to the owner compared with the investment is very high. Thus, I believe more American operators should start looking to the American design companies when thinking of obtaining a design instead of looking to other foreign designers. We appreciate the opportunity and trust that our clients, especially Rigdon Marine, have given us to show what we can do. American designs are equal to and even better than many so called European designs. **ML**

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