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Copa Manz Makes Waves in Panama:

Engineering Beyond the Classroom

Hands-on learning and real-world application are essential for preparing the next generation of maritime professionals. Embracing that philosophy, HydroComp's Latin American agent, Manz Group of Panama, organized a student competition they coined Copa Manz. Manz Group provides integrated engineering, propulsion and technical consulting services for the maritime industry in Panama and beyond. They also serve as the dedicated regional representative for both HydroComp, Inc. and TrueProp Software. Aiming to challenge students beyond the classroom, 60 participants from Panama's Universidad Tecnológica de Panamá (UTP) and Universidad Marítima Internacional de Panamá (UMIP) were required to design and construct a 1-meter tugboat and run it through multiple performance trials. This marks the first time a competition was held between these two academic institutions.

"Our goal was to create a learning experience where students could apply their technical knowledge in a real project, foster innovation in the maritime sector, and strengthen collaboration between educational institutions," explains Yorlane Pino of Manz Group.

Manz Group was not only the organizer of this event, but also acted as a guide for the student teams. Yorlane continues, "We stayed by their side from start to finish, offering technical guidance, support, and mentoring whenever they needed it. Their professors were also deeply involved, encouraging and assisting them throughout the development of their projects, which added a meaningful, collaborative spirit to the entire experience."

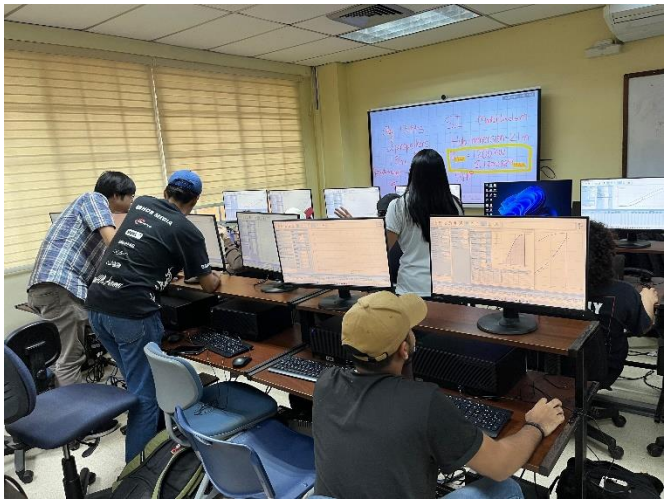
To begin, standard measurements were established and each team received an electronic kit for building a tugboat. Their boat was then put to the test with speed, autonomy, and towing force assessments. These technical evaluations were designed to measure technical knowledge and ability to complete a formal defense project.

Marilyn Bustamante, Dean of the Faculty of Maritime Engineering at UMIP, was a great cheerleader for Copa Manz. "This competition not

only allowed our students to strengthen their knowledge, but also demanded greater commitment, responsibility, and critical thinking skills - essential competencies for their professional and personal development," she states. "Thank you for providing us with this valuable learning opportunity and for fostering environments that promote academic excellence and innovation. We look forward to continuing to collaborate on future challenges that inspire our young leaders!"

The Dean of Faculty of Mechanical Engineering at UTP, Orlando Aguilar, also values the experience, calling it "high-impact." "It integrated knowledge of mechanical design, buoyancy, stability, propulsion, manufacturing, and instrumentation and control, while strengthening essential student competencies. All in all, this helped consolidate students' professional identity," he concludes.

"A key component of the experience was encouraging students to use professional engineering tools, such as HydroComp NavCad for propulsive calculations," shares Yorlane. NavCad is a naval architectural software program which provides powerful systems engineering calculations for the performance of marine vehicles. "This approach allowed the students to work with industry-standard methodologies, elevating the technical depth and realism of their designs."



"Copa Manz was an extremely challenging and rewarding experience," reflects Ariel Ardia, a student at UTP. "It was a highly multidisciplinary competition requiring knowledge in different areas of mechanical and naval engineering, as well as teamwork and the use of various software programs. NavCad was quite useful for designing an efficient propulsion system by allowing us to experiment with its design parameters for better decision-making."

The event proved to be a resounding success, with students demonstrating impressive technical abilities, teamwork, creativity, and enthusiasm. "Watching them design, simulate, build, test, and present their tugboats with such dedication made the competition especially rewarding for everyone involved," Yorlane states proudly. With a positive atmosphere and friendly competition between the two universities, the event showcased not only the students' capabilities, but also the impact of accessible, easy-to-use commercial tools. This event was a powerful reminder of how partnerships like this can elevate maritime education across the region. It's not a matter of *if* there will be a round two, but *when*.

Want your university to be in the next competition? Connect with Yorlane Pino at sales@grpmanz.com and take the first step toward an unforgettable hands-on engineering challenge.

About HydroComp

Since 1984, HydroComp has been a leader in providing hydrodynamic software and services for resistance and propulsion prediction, propeller sizing and design, and forensic performance analysis. Through its unique array of software packages and services, HydroComp now serves over 1400 naval architectural design firms, shipyards, yacht owners, ship operators, propeller designers, universities and militaries around the globe.

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