



Water Treatment Plant, One Formwork Supplier

Cebu City, Philippines

FORMWORK SUPPLIER FOR STRICT CONSTRUCTION TIMELINE

Billions of people worldwide lack access to clean water, with many locations facing challenges in providing safe drinking water. In Cebu City, Philippines, contractor <u>JE Hydro &</u> <u>Bio-Energy Corp</u>. is not only the contractor of this project but also the developer that is helping to provide stable potable water daily in at least nine Cebu City mountain villages. EFCO was the formwork supplier solution that allowed the contractor to pour concrete for the Lusaran Bulk Water Supply Project safely and quickly while keeping the construction project on a strict timeline.

GROWING ECONOMY REQUIRES WATER TREATMENT PLANT

Despite the growing economy, the Philippines faces significant challenges in terms of water and sanitation access. JE Hydro, a fully Filipino-owned company, has completed the construction of this water treatment plant, which will augment the potable water supply of the Metropolitan Cebu Water District (MCWD).

NEW CONSTRUCTION OF WATER TREATMENT PLANT

The new construction of the water treatment plant has one of the lowest power usage rates within the WTP battery limit, maintains a \blacktriangleright



EFCO's HAND-E-FORM[®] system has proven to be the most efficient and flexible formwork system we have used during the civil construction phase of our project. The response and assistance provided by EFCO in planning and implementation are the key benefits that have helped us remain costeffective and on schedule.

Steffi Hapitan Comptroller



zero-effluent discharge operation, and utilizes the most efficient filtration system (JE-Underdrain + Activated Filter Media) available. It provides an additional twenty (20) million liters per day of drinking water. This 1.1B peso project is estimated to serve 40,000 households or 200,000 individuals in the MCWD Reservoir at Barangay Busay in Cebu.

150-DAY HANDSET FORMWORK SOLUTION

JE Hydro partnered with EFCO because they needed a handset formwork solution to meet the aggressive construction schedule of 150 days to complete the structure from groundbreaking to commissioning.

CAST-IN-PLACE HANDSET FORMWORK

Consultation and professional support helped the JE Hydro team choose the best-suited cast-in-place formwork for this project. EFCO's handset formwork system, <u>HAND-E-FORM</u>[®], was the formwork used to form all the tank structures.

MONOLITHICALLY POURED CONCRETE

The construction of the Sedimentation Tank utilized $3,000 \text{ m}^2$ of the EFCO HAND-E-FORM system. The concrete was poured monolithically into the formwork at 3 m tall. The operation required a constant cast-in-place schedule comprised of 40 concrete trucks.

FORMWORK PARTNER FOR SAND FILTER TANKS

To eliminate unplanned costs and delays, JE Hydro partmered with EFCO through every step of the project. The Rapid Sand Filter Tank required less formwork and was constructed using lifts and slabs. JE Hydro used the formwork efficiently and to its fullest capacity.

The JE Hydro Water Treatment Facility in

Barangay Lusaran, Cebu City, is one of the most versatile water treatment plants to

be constructed in the Philippines.

Chairman & CEO of JE Hydro



The JE Hydro Water Treatment Facility employs a proven process technology capable of dealing with river water at extreme turbidity, beyond the capacity of most existing facilities in the Philinnings



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HAND-E-FORM

Joffrey Hapitan

JE HYDRO & BIO-ENERGY TEAM

Joffrey Hapitan	Chairman & CEO
Steffi Hapitan	Comptroller
Karl Gajudo	Project Engineer

EFCO FORMWORK SPECIALISTS-PHILIPPINES

Reneil Jopia	Territory Manager
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Jeanna Fernandez	Engineer

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