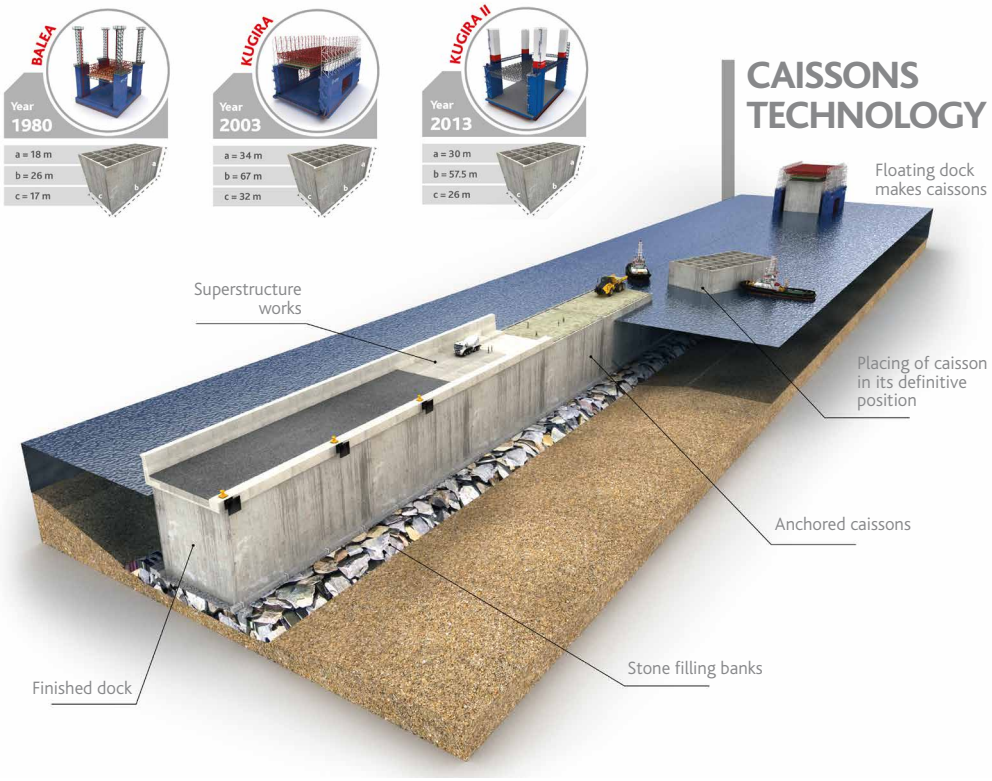
Maritime Works

ACCIONA has enormous experience in the building of maritime works and possesses the very latest technology needed to execute them. An example of this is the Kugira floating dock, one of the biggest in the world of its kind, capable of producing caissons - 70 m long, 36 m wide and 35 m high - in just 10 days.



Flagship projects

Algeciras Port (Spain): Container terminal. Outer jetty: 16,010 m^3.

Rota Naval Base (Cadiz, Spain): Caissons and rockfill. Concrete: 61,166 m^3. Steel: 4,982 MT.

LNG Caisson (Spain): Total capacity: 250,000 m^3 of gas.

Açu Port (São João da Barra, Brazil): 2 mixed jetties. Caissons and rockfill. Length: 4.895 km.

Some references

- **Terminal TX2, Açu Port (São João da Barra, Brazil):** 2 mixed jetties. Caissons and rockfill. Length: 4.895 km.
- **Rota Naval Base (Cadiz, Spain):** Lengthening of Quays 1 (306 m) and 2 (849 m). Concrete caissons built by the Kugira.
- **Extension of the waste materials dock in Cartagena Port (Murcia, Spain):** Concrete blocks (30-50): 16,767 m^3. Steel in caissons: 14,763 MT. Concrete in caissons: 180,974 m^3.
- **Ferrol Outer Port (A Coruña, Spain):**

  Phase 1 (2001): Excavation: 11,542,203 m^3 by mechanical means. Excavation in rock: 8,210,822 m^3, using explosives. Outer breakwater: 1,871,771 m^3. Concrete: 560,298 m^3. Steel: 7,486,228 kg in passive reinforcement.

  Phase 2 (2008): Outer breakwater: 81,091 m^3. Concrete: 76,383 m^3. Steel: 5,444,428 kg in passive reinforcement.
- **Algeciras Port Container Terminal (Cadiz, Spain):** Outer breakwater: 16,010 m^3. Concrete: 3,837 m^3. Steel: in reinforcement: 110,000 kg. Piles: 712 linear meters.
- **Casablanca Port Container Terminal (Morocco):** Outer breakwater: 2,100 m^3. Concrete caissons. Ro-Ro ramp. Dredging: 1,500,000 m^3. Hydraulic filling: 3,270,000 m^3.
- **Veracruz Port dry dock and isolation quay (Mexico):** Length: 205 m. Width: 30 m. Depth: 7 m. Construction on land recovered from the sea.
- **Beirut Port (Lebanon):** Outer breakwater: 350 m long; 186,420 m^3 of rockfill; 9,700 m^3 of reinforced concrete. Quay: 250 m long; 580 blocks; 3,165 m^3 of reinforced concrete. Breakwater: 820 m long; 350,000 m^3 of rockfill.
- **Avilés Port, Raíces Quay extension (Asturias, Spain):** Length 130 m. Depth: 12 m. Ships up to 35,000 DWT.
- **Tarragona Port, outer breakwater extension (Spain):** Length: 830 m. Concrete caissons built by the Kugira: length: 67 m; width: 24 m; height: 32 m.
- **Las Palmas de Gran Canaria Port (Spain):** Caisson dock formed by two alignments of 329 m and 423 m. Surface area: 150,000 m^2. Concrete paving: 49,000 m^3. Railtrack laid: 1,326 m.
- **Remodeling of the Méndez Nuñez sector of A Coruña Port (Spain):** Embarkation quay formed by two alignments of 250 m and 110 m. Depth: 6 m. Caisson quay for ships: length: 482 m; depth: 11 m.
- **International Coal Terminal, Algeciras Port (Spain):** Length: 360 m. Two pontoons: up to 270,000 DWT and 10,000 DWT. Conveyor belt system: unloading: 4,500 t/hr; loading: 1,500 t/hr.
- **Cadiz Port dry dock (Spain):** Concrete caissons in U-form. Length: 525 m. Width: 100 m. Depth: 10.5 m.
- **Adriatic LNG Terminal (Algeciras, Cadiz, Spain):** Total capacity: 250,000 m^3 of gas. Length: 180 m. Width: 88 m. Height: 47 m. Concrete volume: 90,000 m^3.