Alternative use of dredged material: Outer Port Project - San Antonio, Chile

March 2022
OVERVIEW
GEOGRAPHICAL LOCATION
WHO ARE WE?

PUERTO SAN ANTONIO

It is a State company, administrator of the port of San Antonio, created by Law No. 19,542, on the modernization of the state port sector, on January 31, 1998.

Annually our terminals serve about 52% of the country's foreign trade.

San Antonio is the 1st port in Chile and the 8th in Latin America, in container cargo (*).

(*) ECLAC, Latin America and the Caribbean: the port terminal industry and activity indicators for 2019 2019.
WHO OPERATES IN PUERTO SAN ANTONIO?
Total capacity of: 6,000,000 of annual TEUs

Design ship: Class E container ships
Length: 397.7 M
Beam: 56.4 M
Draught: 15.5 M
Capacity: 14,700 TEUS

Docking fronts of 1,730 mts

Dock
For central Chile, it will guarantee the port future by providing jobs and reactivating the local economy (commerce, roads, transport, housing, tourism).

For the country, ensure domestic trade in the long term, meeting the demand for new infrastructure in time and increasing the country’s international trade competitive.

Relevance

OUTER PORT

Total investment:

Approx. investment of the project US$ 3.700 millones

Jobs

2,200 direct jobs in construction phase

Attention span of ships

8 container ships

Jobs

2,000 direct jobs in operation phase
Preliminary Engineering 2014
Preliminary Engineering 2014
- Feasibility Engineering
- Basic Engineering
- Details Engineering of Breakwater and Dredging
- Scale Model
- Environmental Baseline
- Environmental Impact Study

Field Studies
- Laser topography scale 1:500: **20,500 hectares**
- Studies of Tides, Waves, Currents, Winds
- Bathymetry: **1,400 hectares**
- Land Geotechnics: **17 drillholes; 6 test pits, assays**
- Geophysical profiles: **17 km in total**
- Maritime Geotechnics: **26 drillholes (795 m total)**
Breakwater

4,000 meters

Average Depth: 20 meters
Maximum Depth: 40 meters
Breakwater

Total length: 4,000 m.

Starting section: 1,260 m with depth at the foot of the breakwater varies from 0 m to 16 m.

Elbow: with a length of approximately 330 m.

Main Section: 2,245 m in length and whose depth varies between 20 m and 45 m.
Typical Sections

START

ELBOW

MAIN SECTION

HEAD
Rock Slopes

Terminal TS1
2,300 m

Terminal TS2
2,500 m

Final Dock
600 m
Foundation Dredging

Surface soil dredging
2,060,000 m³

Construction dredging
3,430,000 m³

TOTAL FOUNDATION DREDGING
5,490,000 m³
1. Dredging of the dock: 6.123.849 m³

2. Dredging maneuvering area: 3.097.771 m³

3. Dredging of the inland navigation channel: 67.274 m³

4. Dredging of the external navigation channel (Punta Panul): 644.644 m³

**TOTAL GENERAL DREDGING**

9.933.538 m³
Construction Process
Final Comments

• It is possible to give alternative uses to dredging.
• In the case of port projects, dredging can be used to filling reclamation areas.
• Techniques can be considered to structurally improve reclamation built from dredging.
THANK YOU FOR YOUR ATTENTION

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