

Estaleiro Atlântico Sul (EAS)

- Brazil's newest shipyard (2010)
- Largest shipyard in South America (1.65 million sq. m)
- Company formed in 2005 with technological support from Samsung who in 2008 became a partner.
- Current order book: \$3.4 billion USD (14 Suezmax tankers, 8 Aframax tankers, P55 semi-submersible platform hull)

The Challenge: Shortage of Labour

- Shortage of Brazilian workers with shipbuilding background.
 - In the 1970s, Brazil was the second largest shipbuilding nation but in the following decades the industry was almost wiped out.
 - Recent offshore oil discoveries have led the Brazilian government to adopt an economic development plan to revive the domestic shipbuilding industry.
 - EAS needed to rapidly hire and train thousands of workers to build the orders they received as a result of the government's procurement plan.
 - One of the most difficult departments to staff was the Engineering Department (engineers, designers, draftsmen).
 - Most employees had little or no experience in the shipbuilding industry.
- Needed CAD/CAM software that could be quickly learned and used by an inexperienced workforce.

Solution: ShipConstructor CAD/CAM Software

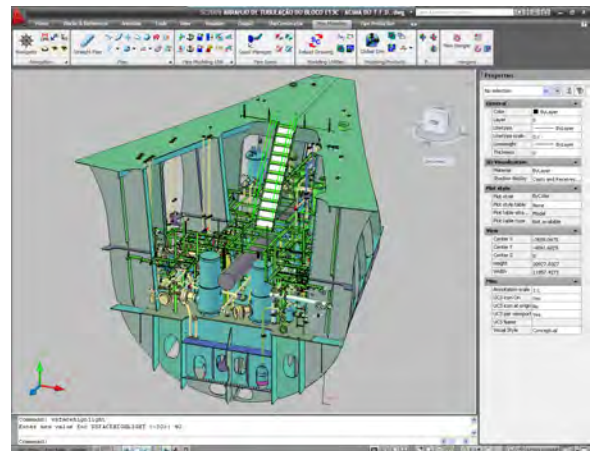
- ShipConstructor is based on an AutoCAD platform linked to a relational database for storing the 3D model of the ship.
 - AutoCAD is widely known, so EAS was able to find workers who could be quickly trained.
- ShipConstructor is optimized for shipbuilding instead of industrial plants or generic 3D shapes.
 - Uses shipbuilding terminology to facilitate communication between production and engineering.
 - Captured optimal production techniques into the 3D model without requiring a high degree of production knowledge in the majority of the engineering staff.
- ShipConstructor's relational database enabled tight integration of engineering and production since it provided semi-automatic creation of detailed production drawings, 3D visualization and code for NC-cutting.

Result: Tanker Launched On-time

- On May 7, 2010, EAS launched the João Cândido Suezmax tanker.
- This is the first vessel built under Transpetro's Fleet Modernization and Expansion Program (Promef).
- It is the one of the largest vessels ever built in Brazil.
- Speaking at the launching ceremony, Brazil's President Lula called the event a "self-affirmation" of an industry that had long been forgotten.



Estaleiro Atlântico Sul, launching their first Suezmax tanker



ShipConstructor has an AutoCAD interface with a ribbon of shipbuilding-specific menus and tools



3D model of 'João Cândido', Suezmax tanker overlaid with actual vessel