

AN YUN – Eco chemical/oil tanker for CPC Corporation



Shipbuilder:.....CSBC Corporation
 Designer:.....CSBC Corporation
 Vessel's name:.....An Yun
 Owner/Operator:.....CPC Corporation
 Country:.....Taiwan, China
 Flag:.....Republic of China
 Total number of sister ships
 already completed:.....0
 Total number of sister ships
 still on order:.....0
 Contract date:.....July 2022
 Delivery date:.....November 2024

An Yun is a chemical/oil tanker that has been designed and constructed by CSBC and features energy-saving adaptations to enhance its performance.

One of the main energy-saving features of the vessel is at the ship's stern, which employs a self-developed and patented energy-saving T-Fin, which can save approximately 3% in fuel consumption at design draught, and about 2.8% when fully loaded. At a ship speed of 14knots (BF0) at design draught, the vessel has an endurance of approximately 17,000nm.

In addition, the vessel is equipped with a shore power system, allowing for the shutdown of onboard generators while docked to reduce air pollution within the harbour.

An Yun represents a new design that complies with the Common Structural Rules for Double Hull Tankers, with fuel tanks also utilising a double-hull structure for protection, meeting the latest pollution prevention and structural safety standards. HSVA in Germany conducted model testing for the vessel.

The main engine uses an electronically controlled ignition system, which is fuel-efficient and energy-saving. Both the main engine and generators meet the latest NOx

emission control requirements. Additionally, the design employs a low-sulphur fuel system.

Further environmental adaptations have been made through the installation of a ballast water treatment system that effectively controls and treats seawater microorganisms and sediments for pollution prevention. An electric hydraulic cargo oil system helps the ship to meet low noise requirements for port operations. There is also a hydraulic system with independent cargo oil pumps (one pump per tank), and special coatings are applied inside the cargo oil tanks to further optimise the vessels energy efficiency.

Due to these adaptations, the vessel's Energy Efficiency Design Index (EEDI) can reach 30% below the baseline, complying with Phase III requirements, CSBC Corporation says.

With safety in mind, An Yun also carries a pair of 25-person lifeboats, manufactured by Qingdao BeiHai Boatbuilding Co, both powered by diesel engines.

TECHNICAL PARTICULARS

Length, oa.....183.5m
 Length, bp.....175.44m
 Breadth, moulded.....32.2m
 Depth, moulded.....19.8m
 Gross tonnage.....31,024
 Design draught.....11m
 Lightweight.....50,000tonnes (approx.)
 Service speed.....14knots
 Cargo capacity.....53,784.13m³ (liquid volume)

Main engine(s):
 Design.....MAN B&W
 Model.....5S50ME-C10.6
 Manufacturer.....HSD
 Number.....1
 Output of each engine.....6,850kW@117rpm

Propeller(s)
 Material.....Ni-Al-Bronze
 Designer/Manufacturer.....CSBC/ Nakashima
 Propeller Co
 Number.....1
 Diameter.....6.1m
 Fixed/Controllable pitch.....Fixed

Diesel-driven alternators:
 Number.....3
 Engine make/type.....6EY18ALW
 Type of fuel.....HFO
 Alternator make/type.....Yanmar
 Output/speed of each set.....720kW

Boilers:
 Number.....1
 Type.....Vertical oil-fired marine boiler
 Make.....Kangrim Heavy Industries
 Output, each boiler.....1,800kg/hr

Deck Machinery:
 Mooring equipment
 Number.....7
 Make.....Flutek Ltd
 Type.....Electric

Complement
 Number of officers.....13
 Number of crew.....10
 Number of passengers.....0

Classification society.....CR Class Society
 /Lloyd's Register

Notations.....CR : 100+E, Oil / Chemical
 tanker(Type 3 Ship), CMS(CAU)+,
 PCM, PMS, CSR, ESP, PSPC, PMA, IWS,
 LCS, IGS, CCB, VEC, PP, SRE, NR-II

LR : ✱100A1 Double Hull Oil
 and Chemical Tanker, Ship type 3,
 ESP, CSR, LI, *IWS, SHIPRIGHT (ACS (B),
 CM), ✱LMC, UMS, IGS, ECO, BWTS, SPM4

