Reclaimer Barge With Excavators

OCEAN5

オーシャン5号

Eco-friendly equipment

■Anti-global warming measures

-Green roof

●Green roof technology, already adopted in urban area is employed in this vessel. This is a novel greening approach toward a ship that used to be made of metal only.

●As the green roof has a heat insulating effect and diminishes the penetration of solar radiation heat, the power consumption of air conditioning system can be reduced.

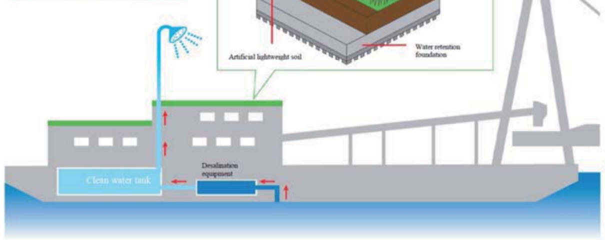
●Heat and salt tolerant turf grass is planted.

-LED lights

●LED lights cut down on power consumption by 83%.

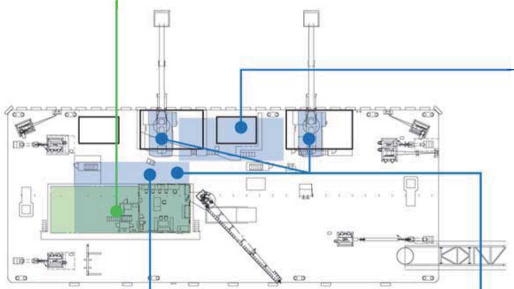
-Double glazing with UV protection

●In addition to the heat insulation effect, double glazing with UV protection also diminishes the impact of ultraviolet rays on the skin.



-Use of sea water resources

●Seawater desalination unit with built-in special reverse osmosis membrane produces freshwater from seawater. The freshwater is stored in a tank for domestic use and sprinkling on the green roof.



■Preventive measures against marine pollution

-Double-hulled fuel tank

●A double-hulled fuel tank is adopted to prevent oil spills due to collision or grounding.

-Oil-water separator

●Oil-water separator that conforms to the International Maritime Organization (IMO) standards is provided to prevent pollution by bilge water in the engine room.

-Sewage treatment plant

●Sewage treatment plant that conforms to the International Maritime Organization (IMO) standards is provided to prevent pollution by domestic drainage onboard.

■Noise prevention measures

-Soundproof generator inside the hull

●Soundproof diesel generator is adopted and installed inside the hull to minimize the noise and ensure a sound environment in the surroundings of the construction area.

■Preventive measures against air pollution

-Reduction of nitrogen oxides (NOx) and sulfur oxides (SOx)

●Generators and diesel engines to drive excavators are certified as products conforming to emission control of IMO.

●MGO, not MDO, is used as fuel with less emission of NOx and SOx.

KANMON OCEANIC ENGINEERING WORKS

Kanmon Kowan Construction Co., Ltd.

Head Office : 3-54 Hosoe-shinmachi, Shimonoseki 750-0017, Japan TEL : +81-83-234-3411 FAX : +81-83-223-8462
http://www.kanmon-const.co.jp kanmon@kanmon-const.co.jp

■Keihin Branch Office :
3-10 Honmoku-juniten, Naka-ku, Yokohama 231-0803, Japan
TEL: +81-45-623-9061 FAX: +81-45-623-9062 keihin@kanmon-const.co.jp

■Fukuoka Branch Office :
1-7-14-702 Hakataeki-minami, Hakata-ku, Fukuoka 812-0016, Japan
TEL: +81-92-474-4481 FAX: +81-92-474-1310 fukuoka@kanmon-const.co.jp

■Hanshin Sales Office :
4-2-21-605 Tomoda-cho, Nada-ku, Kobe 657-0035, Japan
TEL: +81-78-862-5855 FAX: +81-78-862-5856 hanshin@kanmon-const.co.jp

■Techno Base (Chofu Dockyard) :
4-1 Chofu Minatomachi, Shimonoseki 752-0953, Japan
TEL: +81-83-246-3000 FAX: +81-83-245-5730 chofu@kanmon-const.co.jp

KANMON OCEANIC ENGINEERING WORKS

OCEAN5

オーシャン5号

2,000m^3

Reclaimer barge with excavators, dealing with wide range of materials

■High material handling capacity with the 60m spreader

■Smoothed load with the use of two excavators

■Equipped with tremie pipe installation system

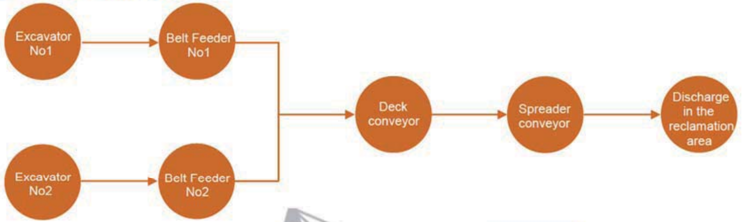
■Various types of environment-friendly equipment

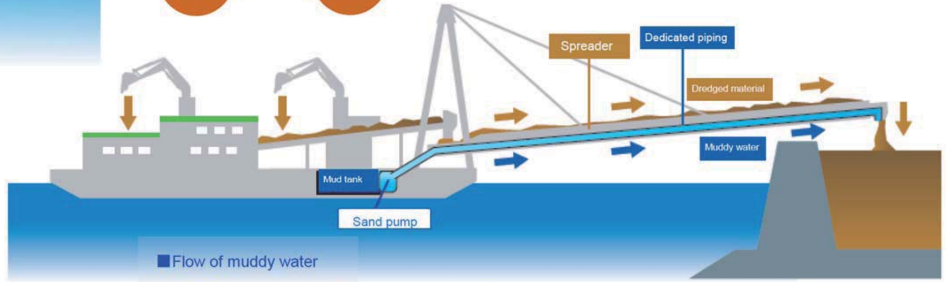
・Green roof ・LED lights ・Double glazing with UV protection ・Seawater desalination plant
・Soundproof generator ・Double-hulled fuel tank ・Oil-water separator ・Sewage treatment plant
・Diesel engine which conforms to emission regulations etc...

Unloading dredged materials without polluting the sea

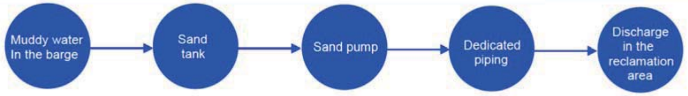
Ocean 5 has equipment that can unload soft dredged materials containing much water, clay and silt into the reclamation area without polluting the sea.

■Flow of dredged material





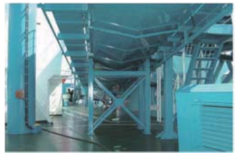
■Flow of muddy water



■Muddy water processing system

As the dredged materials with high water content tends to be scattered or causing water leak from the conveyor during unloading work, surface layer of the muddy water in the barge is pumped and disposed into the sand tank in advance to prevent marine pollution. Muddy water can be stored, pumped and discharged in the reclamation area via dedicated piping along with muddy water from other parts of the vessel.

■Muddy water leakage preventing structure



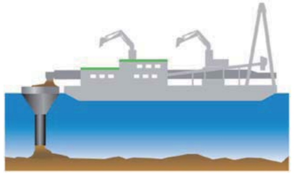
Leaked muddy water from the conveyor is collected in the tray and stored in the sand tank onboard.

Extensive workability

■Able to work with barges of 2,000m^3 in capacity

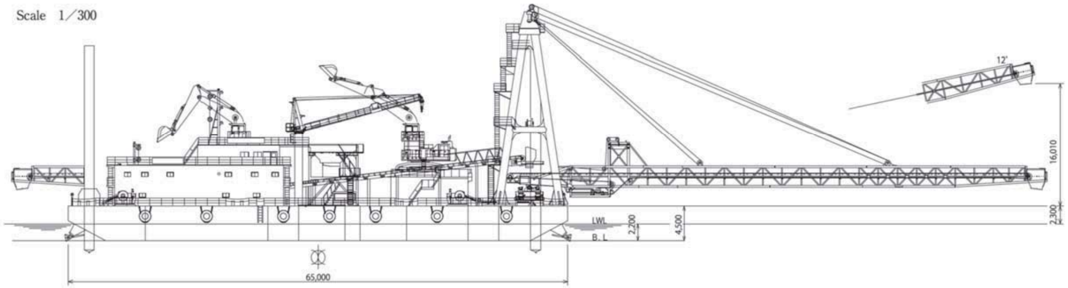
Ocean 5 can work with barges with a capacity of 2,000m^3 using excavators with a 14.5-meter-long arm.

■Direct discharge through tremie pipe



By setting up a barge equipped with a tremie pipe at the stern of Ocean 5, direct discharge is possible, by which pollution of the surrounding area can be prevented.

Technology aiming at coexistence with the Earth



BUILDER	
MEC ENGINEERING SERVICE CO., LTD	
HULL DIMENSIONS	L=65.00m, B=26.00m D=4.50m, d=2.20m
DECK MACHINERY	
WINDLASS	25/12.5T6/12M/MIN x 2
MOORING WINCH	10T x 13M/MIN x 2
SPUD	1.3M x 1.3M x 27M x 2
SPUD WINCH	50/25T x 3/6M/MIN x 2
ANCHOR	8T x 4 (AC14)
ANCHOR CHAIN	42mm x 350m x 4
GENERATOR	
MAIN GENERATOR	AC450V x 610KVA x 2
PRIME MOVER	561KW (763PS) x 1,800rpm x 2
AUX. GENERATOR	AC450V x 220KVA x 2
PRIME MOVER	204KW (277PS) x 1,800rpm x 2
TYPE	HITACHI EX1200 x 2
CAPACITY OF BUCKET	6.3m^3
PRIME MOVER	567kw (771ps) x 1,650rpm
OUTREACH	14.5m
TYPE	BELT CONVEYOR
CARRYING CAPACITY	2,000m^3 /h
BELT FEEDER	2,000mm x 0~25m/min x 2
DECK CONVEYOR	1,600mm x 200m/min x 47m x 1
SPREADER CONVEYOR	1,600mm x 200m/min x 67m x 1
OUTREACH	60.0m
LIFTING ANGLE	0~12 deg.
DESALINATION SYSTEM	1.5m^3/D x 2
OIL WATER SEPARATOR	0.5m^3/H
SEWAGE TREATMENT PLANT	15 persons/D
WATER STERILIZER	500L/H

Excavator's work envelope