

Hitachi Nico Transmission has developed 20MW of Large size Hydraulic Clutch

Product descriptions

Hydraulic clutch was mainly used for reverse reduction gear of middle speed engine due to its operability. However, there have not been large size hydraulic clutches which are appropriate for 2 stroke engine.

Hitachi Nico Transmission has newly developed a large size hydraulic clutch of 8.5MW to 20MW, which applicable to Handymax, Capesize bulk carrier as well as twin shafts LNG carrier.

Herewith it enables Hybrid propulsion vessel to switch between a main diesel engine propulsion and a generator/motor propulsion without dead ship or stopping of main engine(EX.1).

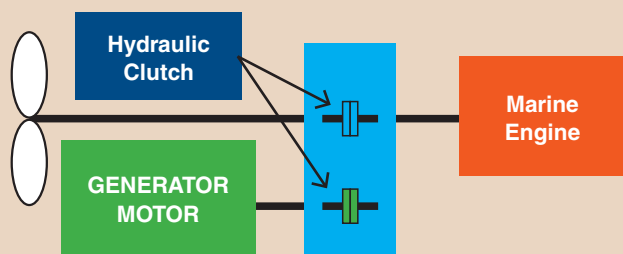
Besides it makes possible to connect/dis-connect main engine and propeller between single engine propulsion and twin engines propulsion of twin engines-twin shafts(EX,2),twin engines-single shaft(EX.3), without dead ship.

This development enlarges the possibility for large vessel to consider a variety of selection of propulsion systems. Hydraulic clutch enables a main engine to start with no load.

And propeller thrust bearing will not be necessary of engine, as it is already built-in the hydraulic clutch.

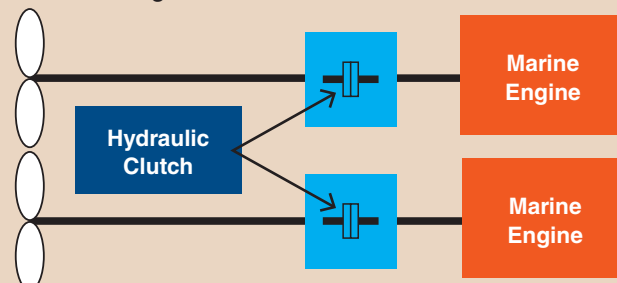


EX.1:Hybrid propulsion



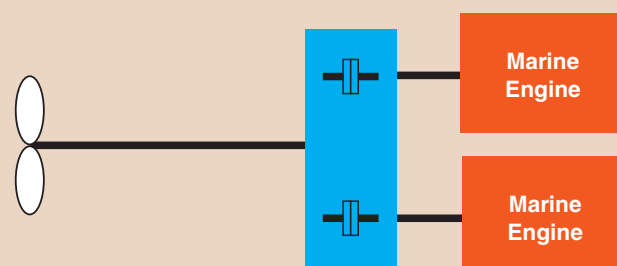
Power boost by electric motor.
 Electric motor propulsion.
 (NOx Tier-3,Zero emission inside bay, Main engine emergency)
 PTO Power generation during Main engine propulsion.

EX.2:Twin engine - Twin shaft



Possible one Main engine propulsion.
 (To avoid low load use)

EX.3:Twin engine - Single shaft



Large size propeller with twin small
 Main engines.

