

Marine engine parts



[cylinder head/cover](#)

Cylinder head/cover

1 . Purpose

- 1) Seal the top of cylinder liner, formed airtight operating space with piston and cylinder liner.
- 2) Fix cylinder liner tightly to the proper position of the machine, and make piston operate properly.
- 3) To install various accessories of diesel engine, such as oil burner nozzle, intake and exhaust valve unit, cylinder starting valve, indicator valve, safety valve, valve arm, etc.
- 4) Lay out admission and exhaust passage, coolant gallery, etc. also lay out swirl-chamber and pre-combustion chamber in cylinder cover of compact and high-speed machine. So there are so many bores and passages in cylinder cover to form its complicated structure.

2. Requirements of cylinder liner

It should have high strength, good heat resistant and excellent moulding technique.

Structure of cylinder cover should be enough harden; shape of fire exposed surface should be in accordance with drawing requirements, with enough smooth and complete circular transmission. Compression face and various channels should conform to pressure requirements, size and shape of seating must meet precision requirements. Particularly, every seat bore and cone valve keep a good condition of sealing. Most of cylinder cover with less than 400mm of cylinder diameter adopts gray cast iron like HT400, while adopts spheroidal graphite cast iron such as QT60-2 for those more than 400m. Many large-scale and low speed diesel engines use cast steel cover or cast iron – cast steel combinatory cover.