ABC

ABC

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DIESEL

A B

C

PISTON CYLINDER LINER

The pistons are of light aluminium alloy and reinforced at the level of the two first ring grooves by Ni-Resist inserts. The piston is equiped with five thin rings, one fire chrome ring, three compression rings and one oil scraper ring located above the floating piston pin. The cylinder liner is produced from a wear-resistant centrifugal cast iron slightly alloyed with chromium. Based on experience, a judicious choice of piston, rings and cylinder liner achieved a good running characteristic at low rates of wear and a very low luboil consumption.

CAMSHAFT

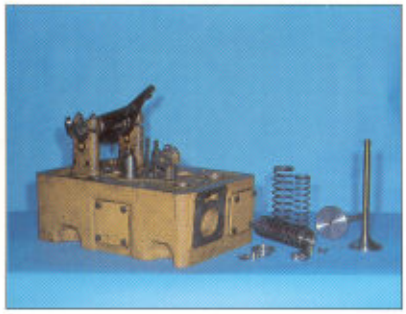
The camshaft is composed of individual and separate cams per function and per cylinder. The induction hardened cams are assembled on a steel alloy shaft.

CONNECTING ROD

The connecting rods are made of forged steel (42CrMo4) and controlled by magna-flux. The large end is horizontally divided, in order to limit the deformation by thightening the bolts.

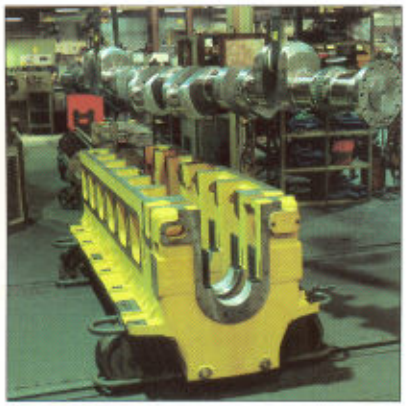
CYLINDERHEAD

Each perlitic cast iron cylinderhead is fastened on the cylinderblock with six tie bolts. The removing does not require the dismantling of the peripheric accessories. The cylinderhead is equiped with valve seats, one inlet and one stellited exhaust valve, an air starting valve, a safety valve and a decompression valve.



CRANKSHAFT CRANKCASE

The alloy steel (42CrMo4) one-piece forged crankshaft is placed in a monoblock perlitic cast iron crankcase. The crankcase has a rigid box structure with an additional bearing on the flywheel side to limit the crankshaft deflection and the bearing wear. The water and oilpumps built on the front of the pump casing are driven by the crankshaft through intermediate pinions.



BEARINGS

The main and connecting rod bearings are produced from thin steel shells covered by a copper-lead layer with a nickel barrier and a overlay plating with corrosion resistant flash.

SECURITY AND CONTROLS

The control and security panel is built according to the rules of the International Classification Bureaus.

FUEL INJECTION

The engine is equipped with individual injection pump per cylinder regulated by a hydraulic governor. The injection pipes are interchangeable, short and resistant to high pressures.

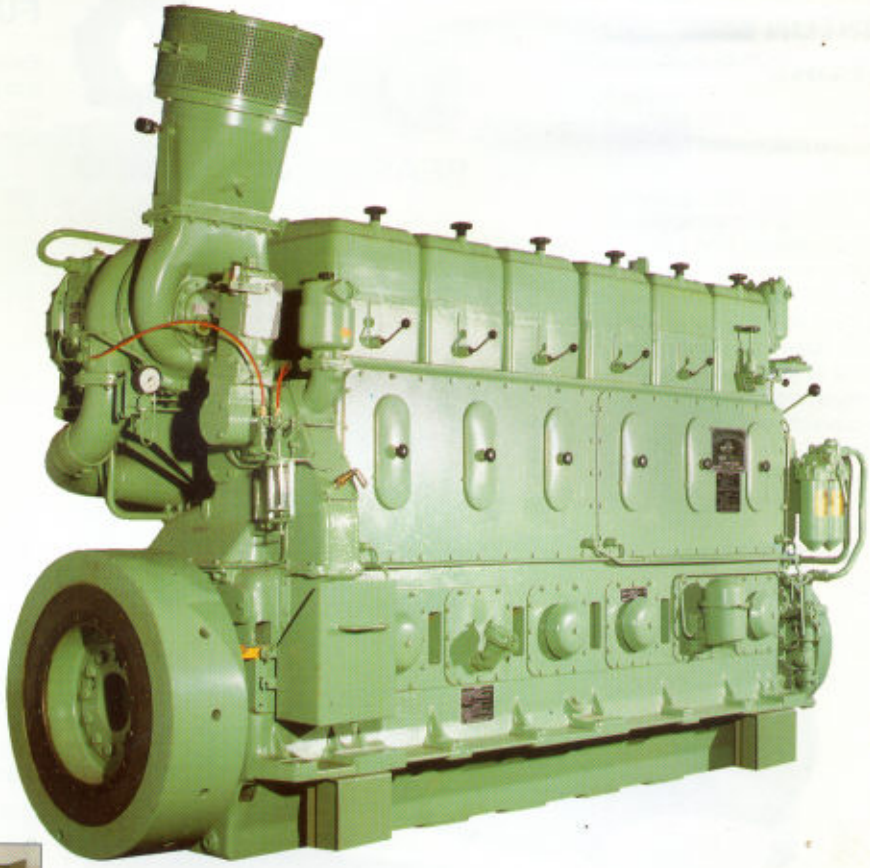
POWER "PLUS"

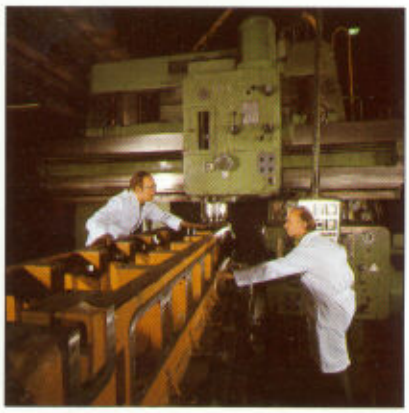
- low fuel consumption
- low oil consumption
- low installation costs
- low operating expenses
- low piston speed
- low combustion pressure
- low noice level
- power take-off on front end
- air starting on cylinderheads
- high swept volume per cylinder
- high operation security
- easy maintenance and repair

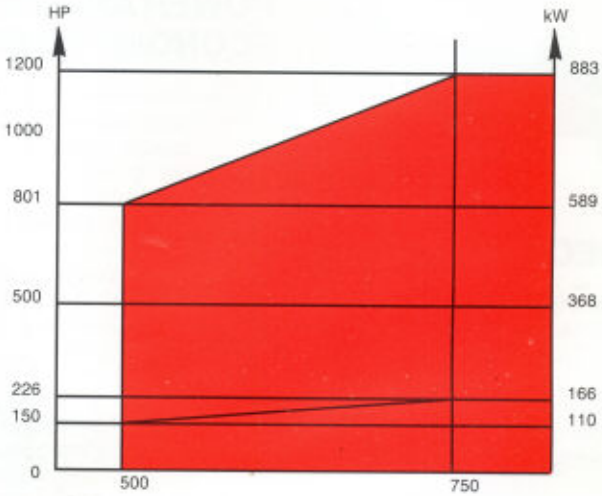
The DX engine - 4 stroke - direction injection - single acting is proposed in three versions :

- natural aspiration (DX)
- turbo-charging (DXS)
- turbo-charging, intercooling (DXC)

TYPE DX







PISTON CYLINDER LINER

The piston is a trunk piston of nodular cast iron. The piston head (Hesselman type) is oil-cooled by shaker effect. The piston is equipped with four thin rings, one fire chrome ring, two compression rings and one oil-scraper ring located above the floating piston pin. The cylinder liner is produced from a wear-resistant centrifugal cast iron slightly alloyed with chromium. Based on experience, a judicious choice of piston, rings and cylinder liner achieved a good running characteristic at low rates of wear and a very low luboil consumption.

CAMSHAFT

The camshaft is composed of individual monoblock cams per cylinder forged in one piece and induction hardened. Each camblock is provided with a bearing.

CONNECTING ROD

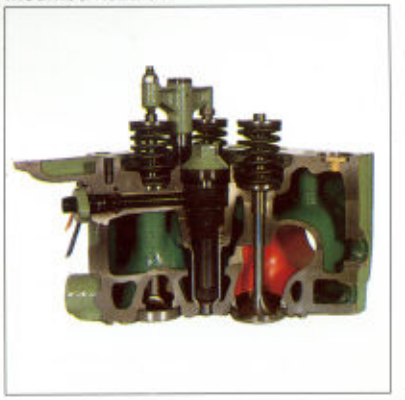
The connecting rod is made of forged steel (42CrMo4) and controlled by magna-flux. The big end boss is horizontally divided to limit the deformation by tightening the bolts. The small end boss has a special geometrical design to ensure an optimized load pressure spreading.

BEARINGS

The main and connecting rod bearings are produced from thin steel shells covered by tin-Alu layer with a nickel barrier and an overlay plating with corrosion resistant flash.

CYLINDERHEAD

The slightly alloyed cast iron cylinderhead is fastened on the cylinderblock with six tie bolts and the removing does not require the dismantling of the peripheric accessories. The cylinderhead is equiped with valve seats, two inlet and two stellited exhaust valves and a safety valve and a decompression valve. An intermediate deck assures a forced water circulation around the valve seats and the centrally mounted nozzle.



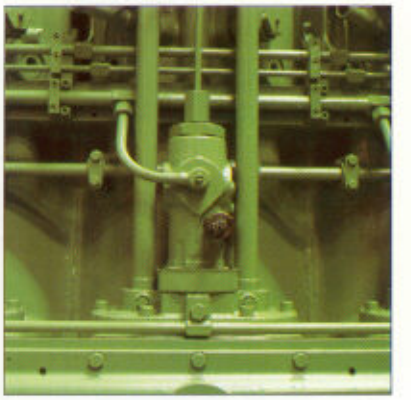
POWER AND ECONOMY

- low fuel consumption
- low oil consumption
- low installation cost
- low operating cost
- low piston speed
- low combustion pressure
- low noice level
- power take-off on front end
- air, electric starting
- high swept volume per cylinder
- high operation security
- heavy fuel operation

The DZ engine - four stroke - direct injection - single acting is proposed in 6-8 cylinders in line, turbo-charged, with intercooling. The engine is designed for burning heavy fuel oil providing some adaptations.

FUEL INJECTION

Each cylinder has its own individual injection pump, regulated by a hydraulic governor. The injection pipes are interchangeable, short and resistant to high pressures.



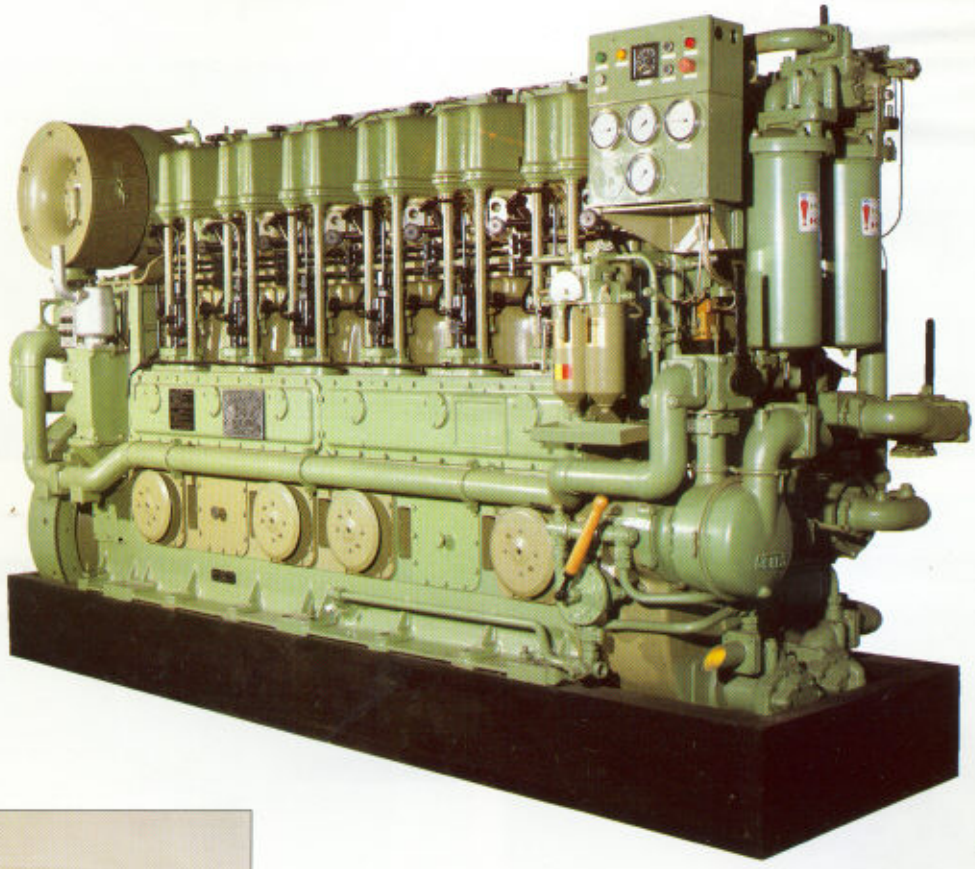
SECURITY AND CONTROLS

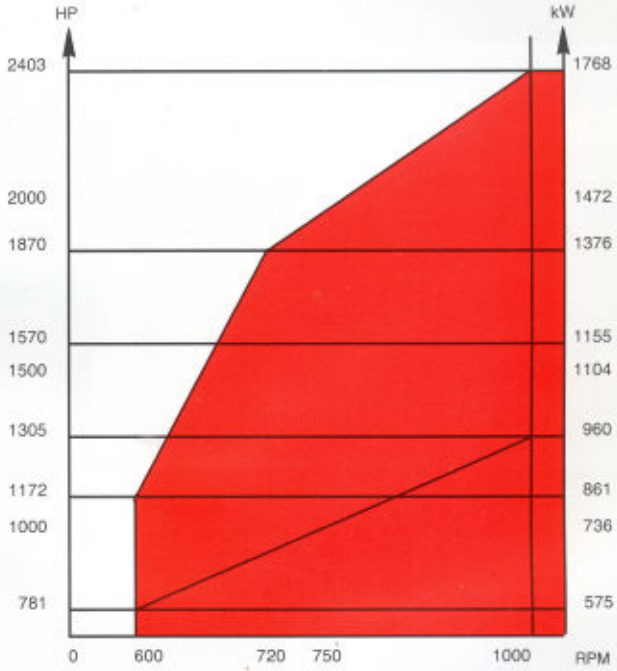
The control and security panel is built according to the rules of the International Classification Bureaus.

CRANKSHAFT - CRANKCASE

The crankshaft is forged in one piece of 42CrMo4 steel with induction hardened running surfaces and equiped with balance weights. The crankshaft is placed in a box type crankcase of nodular cast iron with a additional bearing on the flywheel side to limit the crankshaft deflexion and bearing wear. The water-oil-fuel and bildge pumps are driven by the crankshaft through intermediate steel pinions built in the pump casing.

TYPE DZ




HP
kW
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2000
1870
1570
1500
1305
1172
1000
781
1768
1472
1376
1155
1104
960
861
736
575
0
600
720
750
1000
RPM

APPLICATIONS

1. Our engineers'team, assisted by a CAD-CAM computer, is at the disposition of our customers. They can assure the engineering and the conception of complete propulsion systems, diesel power station, pumping station and re-engining problems. The local supervision, assistance and formation is provided by our after-sales service division.

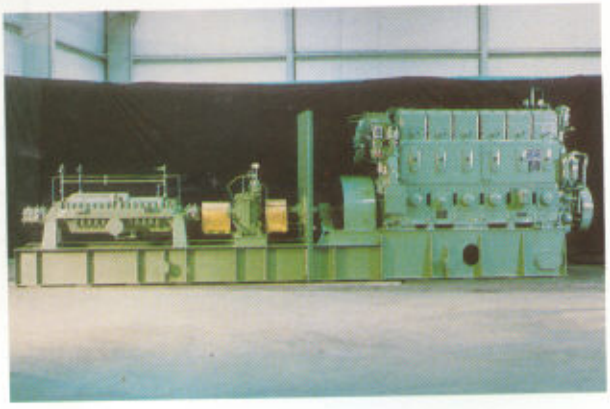
2. TOTAL ENERGY :
The energy management division may study the most convenient and economical solution for your particular energy problem based on heat recovering of the diesel generator.

ENGINEERING DIVISION

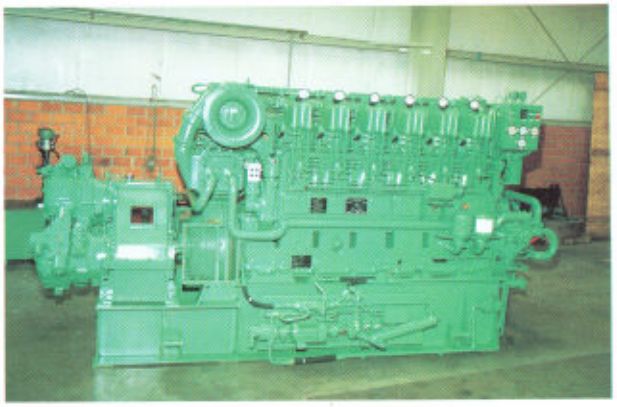
MARINE

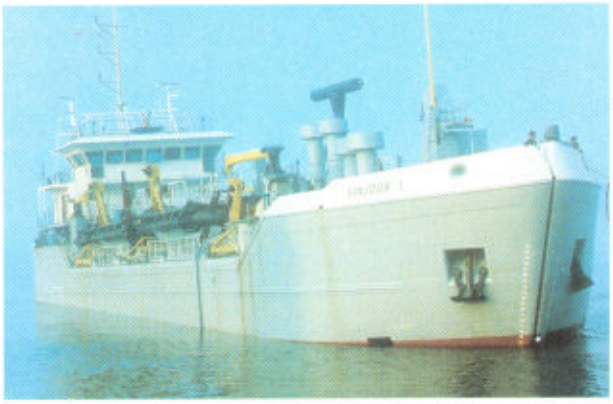
TRACTION

INDUSTRY



REFERENCES





DIESEL AIB C

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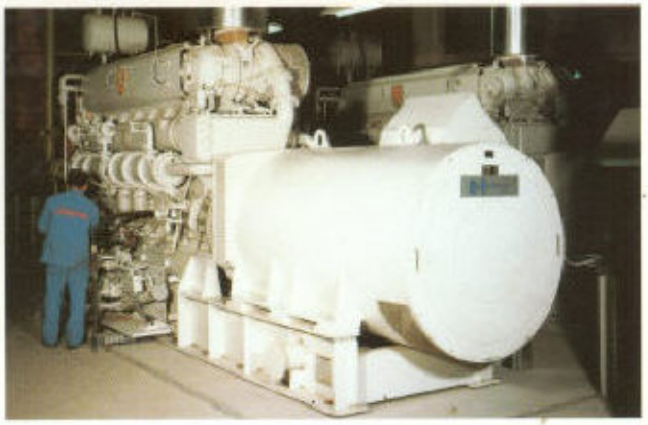
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