PRODUCT SHEET

G&O MARITIME GROUP

HJ SMARTLUBE 4.0

REVOLUTIONIZING LUBRICATION SYSTEM
FOR TWO-STROKE MARINE ENGINES

Pushes the boundaries for the lifetime of cylinder liners and piston ring as well as cylinder oil consumption.

Patented lubrication technology

HJ Smartlube 4.0 integrates the lubricator into the HJ SIP (Swirl Injection Principle) injection valve, thereby eliminating the need for an individual lubricator on each cylinder, meaning the system consists of fewer parts making maintenance and trouble-shooting faster and more customer-friendly.

The design gives an unprecedented level of flexibility that can be fully customized to the unique requirements of each engine (design, operation pattern, fuel in use, etc.).

System design

The HJ Smartlube 4.0 system is greatly simplified compared to other lubrication systems as there is no individual lubricator for each cylinder. Instead, each injection valve is actually a lubricator, able to adjust feed rate, timing etc.

Benefits

- Up to 50% savings in cylinder oil consumption
- Extended lifetime of liners and piston rings
- Engine can run trouble-free on new fuels
- Simple system with fewer parts
- Automatic Cleaning Sequence (patented technology)
- Online-ready for remote support and troubleshooting.

Cope with any future lubrication scenario	Accurately timed and placed cylinder lube oil	Multiple injections per engine revolution

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SMARTLUBE KEY FEATURES

Multi-timing

Multiple cylinder oil injections in a single piston stroke. For example:

1 x injection into the scavenging air swirl above the piston covering the upper liner surface to protect the combustion area

1 x injection into the ring pack (combustion stroke) for enhanced cleaning

1 x injection into the ring pack (compression stroke) for enhanced cleaning (optional)

… all in the same piston stroke!

Flexible injections

Volume adjustment of every injection: Every valve can individually adjust the opening time very precisely, which allows each valve to apply different feed rates. Imagine a 60-bore cylinder with 6 injection valves where it is possible to adjust different volumes at every single valve.

Automatic Cleaning Sequence (ACS)

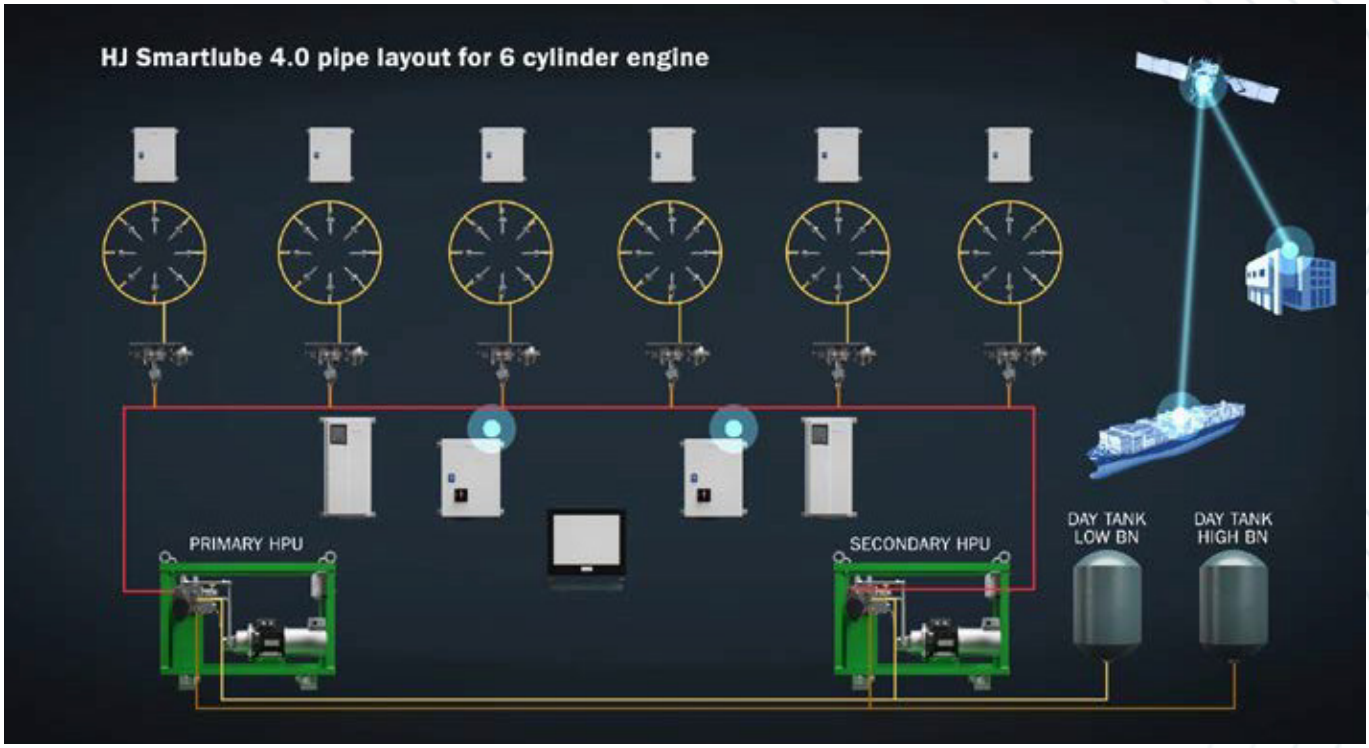
ACS will automatically increase the cylinder oil consumption for a limited period of 30 minutes. This “boost” of extra oil ensures optimal cleaning of liners and rings which will be free from deposits.

Internet-Of-Things Connectivity

The system allows remote operation through an upgradable module of the onboard computer. This allows the technical management and Hans Jensen Lubricators to ensure the correct feed rate is employed.

HOW IT WORKS

- Commonrail based lubrication system
- High Pressure Units supply the CLO through a common rail, to a cylinder manifold for each cylinder
- Cylinder manifold comprises of flowmeter, temperature sensor and an accumulator
- Each HJ E-SIP valve is controlled by a solenoid coil that can open and close the valve
- Each injection valve can adjust feed rate, timing, injection frequency, etc.
- Compatible with most 2-stroke engines



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