



SITC Shipmanagement upgrades existing lubricators with HJ SIP and achieves significant reduction in cylinder oil consumption

Chinese shipowner SITC Shipmanagement (Shanghai) has upgraded their existing Alpha lubricators on M/V "SITC Kawasaki" with HJ SIP. The vessel equipped with a 7S60MC-C engine has removed the standard non-return valves and replaced them with HJ SIP valves.

Savings after upgrade

The average recorded cylinder oil consumption before installation was 250 ltr/24hrs. The data three months after installation of the HJ SIP upgrade was reduced to 135 ltr/24hrs, which is equivalent to a saving of 115 ltr/24hrs. In total SITC Shipmanagement saves estimated 45,150\$ per year.

Consumption	
Before installation: CLOC: 250 ltr/24 hrs.	After installation: CLOC: 135 ltr/24 hrs.
Savings in CLOC: 115 ltr/24 hrs.	
Savings (4,8 ltr. x 6,720 running hrs. x 1.4\$/ltr): 45,150 USD per year	

The feed rate before installation of HJ SIP was 1.29 g/kWh. After installation the feed rate is reduced to 0.76 g/kWh. Due to well lubricated cylinder liner and piston rings SITC has decided to step wise lower the feed rate even further by 0.05 g/kWh. This will be done under port inspections in order to make sure that the liner and piston rings achieve the optimum conditions.

HJ SIP technology

HJ SIP lubrication technology is designed for lubricating the cylinder liner surface in order to reduce corrosion and wear and to help seal the piston rings to prevent loss of compression and combustion pressure.

HJ SIP injects the cylinder oil as a spray (by high pressure), utilizing the scavenging air swirl to spread a uniform oil film on a large area on the cylinder liner surface and to deliver the oil to the upper part of the cylinder liner - where the wear normally is the largest - before the piston rings passes. This leads to optimum utilization of injected cylinder oil.

By upgrading the cylinder lubrication system with HJ SIP valves it is possible to obtain the following:

- *Reduced cylinder oil consumption.*
- *Improved liner and piston ring conditions.*
- *Protection of liners against cold corrosion.*
- *Reduced oil spill (due to blow-by with conventional ring-pack-lubrication).*
- *Improved sealing of piston rings to prevent loss of compression and combustion pressure.*
- *Reduced particle emission.*

HJ SIP approved for Alpha lubricators

Test-results carried out by MDT clearly states that HJ SIP performs better than the standard non-return valves. HJ SIP can be installed on all MDT two-stroke marine diesel engine types both on newbuilding and retrofit.

Collaboration between HJL and SITC Shipmanagement

The Chinese shipmanagement company is the owner of 45 vessels and is managing 73 vessels in total.

It is not the first time SITC has upgraded vessels with HJ technology and we are looking forward to further collaboration with one of China's biggest shipping companies in the future.

