



Ship Type: All Trade Area: Singapore

Bulletin 229 - 01/02 - Contaminated Bunkers - Singapore

Further to the numerous reports that abound in the press at the moment, it appears that at least one of our Members has a ship suffering directly from the effects of below-standard bunkers received recently in Singapore.

The vessel was on a loaded passage from the Far East to European ports. She called in to Singapore to stem bunkers. Within approximately 20 hours of resuming the passage, the chief engineer noted that the fuel rack and governor controls needed adjusting to maintain the required speed. After investigating the reason for this, it was found that number 8 cylinder was not firing. All indications were that the problem arose from the fuel that had been supplied in Singapore. To prevent further damage to the main engine and mitigate any losses, owners instructed the vessel to return to Singapore and off-load the remaining bunkers.

It was determined by an independent chemist that the samples given to the vessel by the bunker barge were not representative of the bunkers actually supplied to the vessel - the bunkers supplied came from a different stock from that which the barge alleged was in fact supplied. Test results also confirmed that the bunkers were contaminated with approximately 10% lube oil, which caused the problem with the main engine.

Our Members' vessel had no experience of major problems relating to contaminated bunkers, was well maintained and had had a trouble-free passage from China to Singapore. The bunkers received went directly into empty tanks. Severe damage to the main engine was averted due to the vigilance and quick actions of the crew.

This matter has been reported to the Maritime and Port Authority of Singapore and the Singapore Shipping Association.

It is apparent that standard fuel sampling kits found on board many vessels may be unable to detect the presence of harmful components and more in-depth tests should be employed. Testing for substances outside the remit of ISO 8217 specifications should be carried out. It must be remembered that there is a general requirement under ISO 8217 that fuel supplied must not contain components harmful to the vessel's engine.

All vessels are advised to ensure that the Singapore Bunkering Procedure SSCP 60 is strictly followed. SSCP 60 requires that samples be taken from the receiving vessel's manifold - *Custody Transfer Sampling* - not as has been the practice from samples drawn from the bunker barge. Another Singapore Bunkering Procedure - SSCP 77 - came into effect 1st January 2002 and governs the licensing of bunker suppliers. SSCP 77 also requires that bunker surveyors shall be in possession of a *Bunker Surveyor Licence* issued by the MPA.

We have also recently been advised that DNV Petroleum Services have received five consecutive IFO380 samples from an un-named small Singapore supplier, which significantly exceed the density specification. The five samples were virtually identical in quality with a density of 997kg/m³, viscosity of 300mm²/s @ 50°C and Al+Si of 67mg/kg, suggesting that all were from the same tank. Although the scope of the problem appears at present to be limited, caution is advised

Although the Al+Si figures for the five samples met the ISO 8217:1996 spec (80mg/kg), the figures ranged from 64-70mg/kg. Since the density of these samples is too high for conventional centrifuges, cleaning capacity may be reduced, leading to insufficiently purified fuel.

As these high-density samples also contained substantial amounts of catalytic fines, in order to ensure efficient purification it is recommended that conventional centrifuges should be operated in series as a purifier and a clarifier if possible. The combined flow should be sufficient to meet consumption requirements. Intervals between purifier flushes should be reduced to remove excessive amounts of

water. However, there is no guarantee that the operational efficiency of the centrifuges will be sufficient to adequately remove all the abrasive particles.

DNV Petroleum Services are recommending analysis of samples taken before and after the centrifuges – this may be important in helping Members avoid serious damage to shipboard machinery - and in any case before new fuel is consumed after bunkering.

At the present time we would advise that the Club is aware that 42 individual bunker surveyors in Singapore are being investigated by the Singapore Corrupt Practices Investigation Bureau. We understand that already 5 have admitted malpractice and have been fined and that one of the local district judges has been quoted as describing these offences as “just the tip of the iceberg”.

We recommend that if Members have taken bunkers in the Singapore area recently, they ensure that the fuel quality is known before use.

Further information may be found through the following websites:

DNV Petroleum Services: <http://www.dnvps.com/dnv/index.htm>

Maritime and Port Authority of Singapore (SSCP 60 & 77): <http://www.mpa.gov.sg/>

International Bunker Industry Association: <http://www.seanet.co.uk/classifi/marassoc/ibia/ibia.htm>

Source of information: Puspa Rajamoney, Thomas Miller (SE Asia)