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FOBAS Bulletin: High Acid Number fuels from various ports in Brazil

Applicability: Ship owners and operators

Recently FOBAS has tested a number of samples from the ports of Vila do Conde and Belem with high Acid Number (AN) in the region 3~4 mg KOH/g. This is outside of the 2.5 mg KOH/g limit stipulated in ISO 8217:2012 for marine residual fuels. The fuels so far tested have been from the same supplier and have very similar characteristics suggesting they are from the same source.

Generally, acids present in marine residual fuels can be due to naturally occurring naphthenic acids originating from the crude source or from external acidic compounds that have entered the fuel blend at some stage. So far, further investigative analysis performed on some of these high AN fuels reveal the acids present are predominantly naphthenic in nature.

While the presence of external acidic compounds is known to have caused accelerated damage to the fuel injection equipment increased filter clogging, FOBAS experience shows that naphthenic acids have not been associated with fuel related operational problems and would not be considered on their own an operational risk. During the use of these fuels, ships would still be advised to pay particular attention to engine operations and in particular closely monitoring performance and surface condition of the fuel pumps and injectors.

On a more general point, the high AN can be an important indicator of the potential for problems hence further investigative analysis is recommended to determine the nature of acids because it is not the AN but the nature of acids present determine the suitability of fuel for use.

If you require any further information about this Bulletin, please contact us at fobas@lr.org or speak to one of our consultants on +44 (0)330 414 1000 (Southampton UK), +44 (0)1642 440991 Redcar (UK), +65 3163 0888 (Singapore), +30 210 4580 932 (Greece).