Biofuels: entering the maritime fuel mainstream

23 November 2020 • 14:00-14:45 GMT

Q&A Summary

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Part of
Marine Fuels
Webinar Week

23-27 November 2020

marine propulsion
& auxiliary machinery

riviera

Surely a low oil price will inhibit demand?

JS | Yes I agree.

Is current data on biofuel sufficient to motivate long-term investments?

JS | No, I don't think so. At least not at the scale needed.

Are all feedstock suppliers allowing tags to be added?

SH | These discussions have to be completed and final trials undertaken as PoC. Discussions with engine manufacturers are ongoing to obtain their approvals as well. Makets with much higher specifications allow this technology, so it is not anticipated to be an issue.

Can your DNA taggants be used to detect spills?

SH | Yes. Trials have been completed on this. Will act as proof of guilt and innocence. It could also identify what part of vessel the leak/discharge came from.

What level of biofuels supply is sustainable, considering the fuel versus food issue, biofuel production potential itself? Aren't biofuels just a nice feat but not a solution to sustainability issues?

JS | Biofuel is not a sustainable way for large-scale decarbonisation. But there are feedstocks available, that makes sense.

How do you cope with cross contamination in the logistics chain? eg physical suppliers often do pump-overs between barges for planning purposes

SH | If there was comingling then the percentage of comingling could be accurately identified before loading, allowing discussions to take place to see if this was acceptable.

Interesting, never seen before. Is it in use? Where?

SH | I assume we are reffering to T&F here. It should have gone live with vessel owners this year, but has been delayed due to Covid. Expected to go live April next year. Cannot declare locations or clients yet due to NDA's.

Will the biofuels always be supplied from bunker barges?

JS | I don't think so. Most products will, but initially DFDS were looking at have unblended MASH oil delivered to the ships in tank containers.

Why are B5 B10 B15 types chosen and on what ground is it decided?Any percentage limit in mixing these biofuels with normal fuel by engine manufacturers or from other environmental authorities?

SH | The T&F will be able to confirm the correct/agreed blend has been delivered.

JS | There are limits, but our experience tells us that you can actually deviate from them, if you have the right arguments. We (MASH/DFDS) initially chased producing a 100% pure biofuel that did not need to be blended.

If we chose to try a biofuel, do we need to take actual NOx measurements on board the vessels in question if using more than 7%, or can a product be certified not to cause higher NOx on similar engine types?

JS | If you are simply looking into testing the fuel, then I believe you can be exempted from a lot of the hassle.

Are all biofuels CO_2 neutral?

JS | I would say yes, but they are not all good from a holistic/society perspective.

What's your view on BioLNG? (SeaLNG/CE Delft has said there is enough and an affordable supply. Maersk has dismissed any methane as an option for them last week)

JS | Technically it could work, but sustainable carbon is in much too short supply to go down that path for shipping. Other sectors need the sustainable carbon much more badly than shipping, and they will be willing to pay more than us.

What do you mean by an attractive price? Can you indicate at least the comparison to fossil fuels?

JS | Running vessels on biofuel is not part of the DFDS climate action plan, so maybe I am not the best to answer this question. However, having the cost of green hydrogen and green ammonia in mind, I do believe the biofuel would be attractive to many shipowners even if it cost double that of the black alternative.

Has DFDS carried out any NOx emissions measurements and any other emissions measurements on these fuels?

JS | No not yet, but within a few months we will (and we will share our findings openly).

If being a vessel owner, operating worldwide, will biofuels be available everywhere?

JS | I imagine so.

If part of a blended fuel package, do you anticipate biofuels will lead to any performance and compatibility issues, for example poor asphaltene stability?

JS | I don't have the technical skills to answer that question. I would however like to state that shipowners fully understand that reducing CO_2 emissions and going climate neutral is complicated and requires new ways of operating our ships.

As tagging is not regulated, are the physical suppliers supporting this technology?

SH | Discussions with suppliers are ongoing. No concerns as yet expressed. We have also discussed this with many regulators, port authorities etc as well and have only received positive feedback.

Talking about spill, are biofuels biodegradable?

JS | I think they are just about as messy as their fossil counterparts.

As a supplier transporting a variety of products (barges are not dedicated), there will always be unpumpables in the tanks meaning the tags will also remain in the tanks and can cross-contaminate fuels loaded after the tagged batch. How do you cope with this?

SH | As said above, Comingling will always occur and be detectable. On top of that, every loading has a unique code and we can see all codes identifying fuel details, date of loading, location etc.
