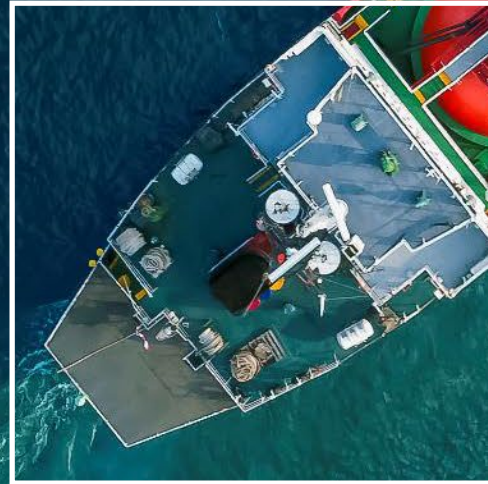
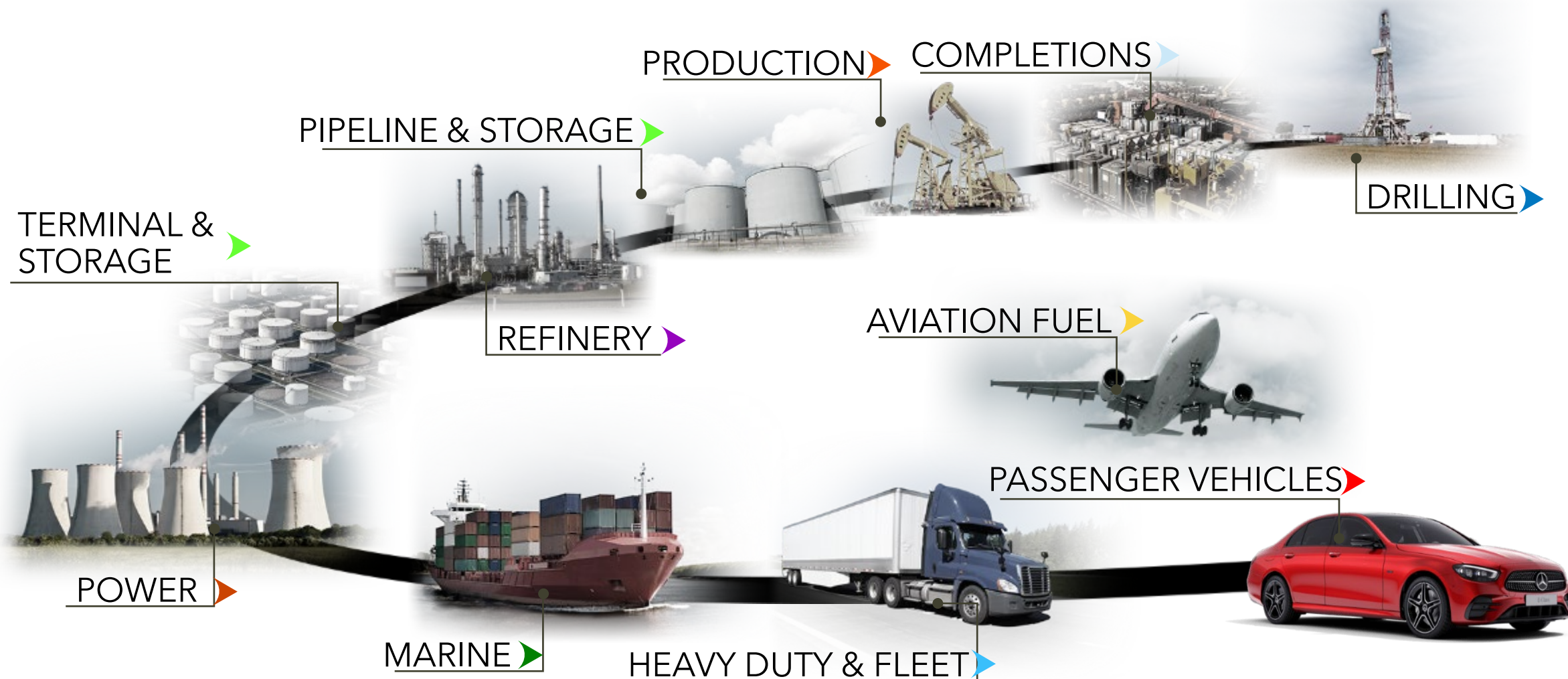


THE ROLE OF ADDITIVES SUSTAINABLE FUTURE



INNOSPEC – THE ROLE OF ADDITIVES



LEADERSHIP

Innospec Fuel Specialties

1/3

Barrels of treated fuel
treated by **Innospec**

Innospec Fuel Specialties
focused on fuel treatment
since 1938



Business Profile

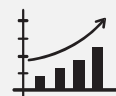


\$1.96 billion sales

2100 Employees in
25 countries



Business Focus



Fuel Specialties
Performance Chemicals
Oilfield Services

GOLD

2022
ecovadis
Sustainability
Rating

CHALLENGES?

As the world's leading fuel specialist, we must consider the best way to support the energy transition without forgetting the needs of today.

Today

Current energy efficiency needs

Existing fuel performance

Existing tonnage

Data & Telemetry

Transition

Adapt to our clients' needs

Adapt to the emerging fuel market

Never lose focus on current energy efficiency needs

Future

Dictated by the transition period.

400+ patents a year



FUEL PERFORMANCE

Identify areas for improvement

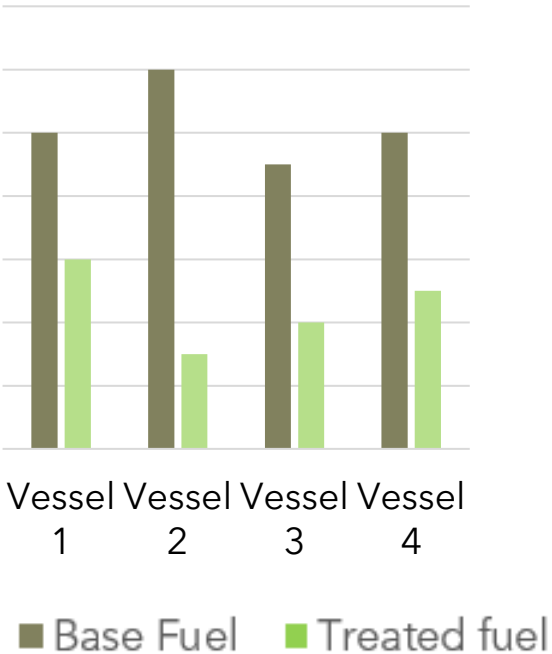
Area	Storage & Handling	Engine performance	Combustion efficiency	Exhaust system
Losses	1-2% Energy lost	3% Energy lost	2.2% Energy lost	1.5% Energy lost
Technology	Stability Improvers	Detergency	Combustion Optimiser	Emissions reducer
function	Lock down ageing, restore fuel to the best usable condition. Reduce maintenance onboard and improve crew safety	Performance losses due to fouling is the simplest and most effective way to improve vessel performance	Despite Constant improvements in engine efficiency, engine design can only do so much to improve energy capture.	Fouling in the exhaust system is often overlooked but will increasingly impact vessel performance.

DATA DRIVEN PERFORMANCE



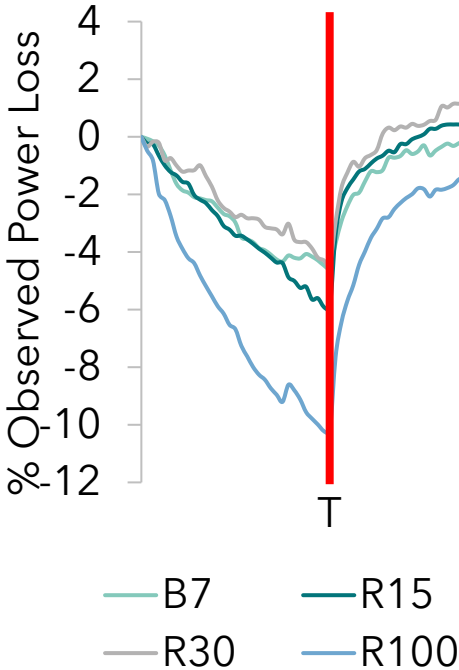
Stability Improvers

Annual sludge volume



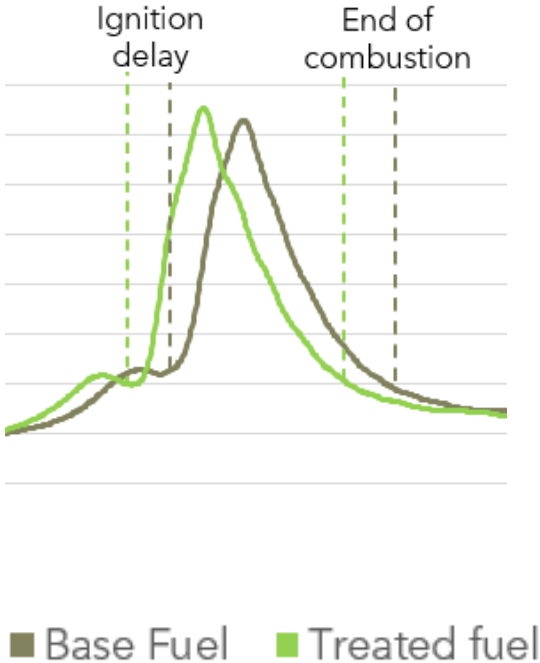
30-70% fuel retention

Detergency



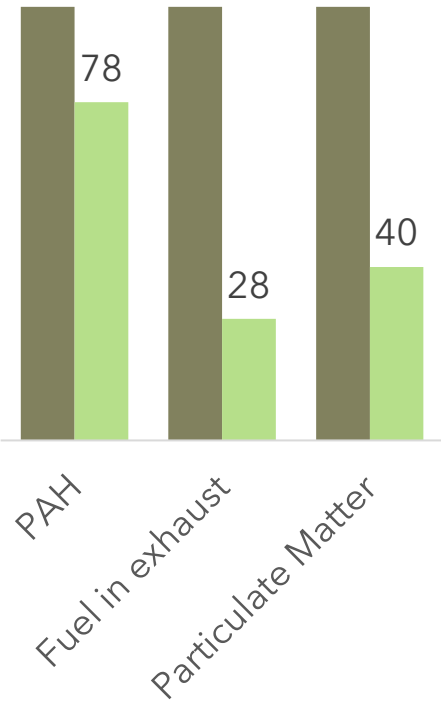
Complete power recovery

Combustion Optimiser



Extract more energy during combustion

Emissions reducer



Active reduction in emissions

WHAT DOES IS MEAN FOR SHIPPING?

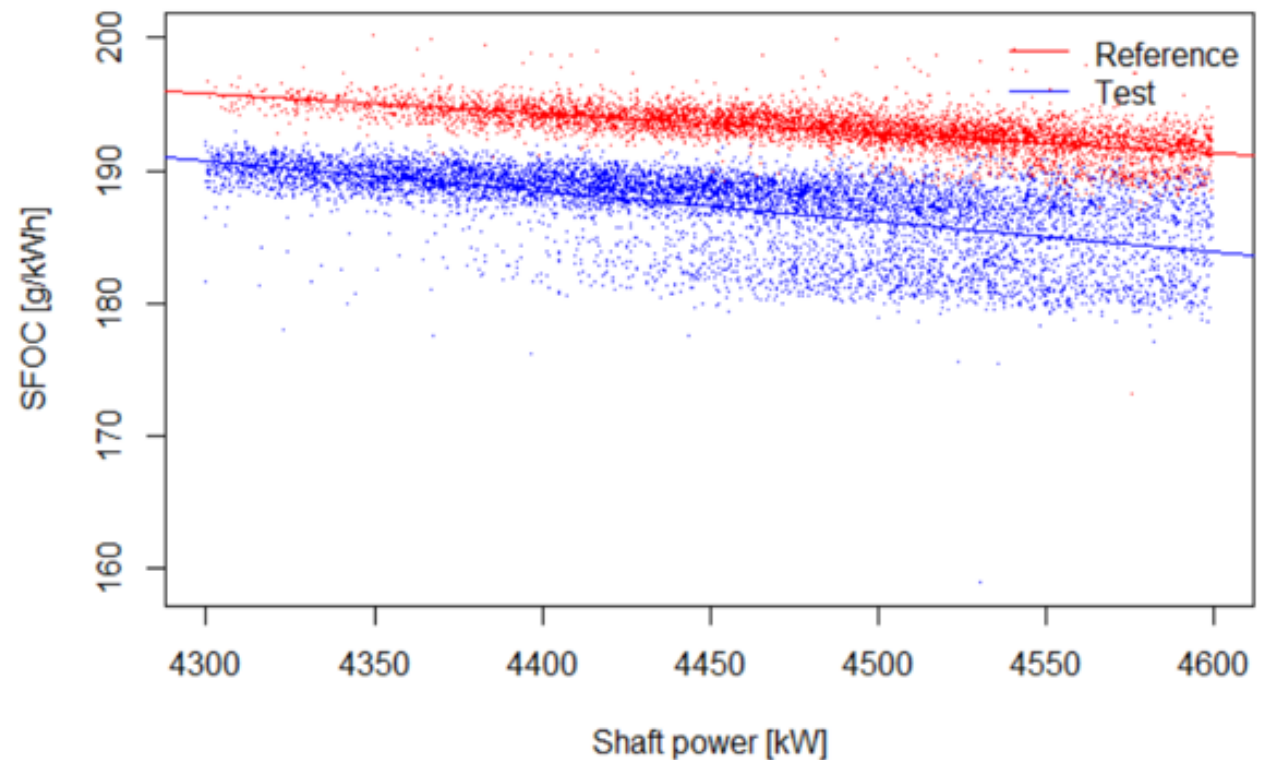
The latest generation of fuel performance additives in combination with the latest telemetry makes it easier than ever to meet all the needs of the shipping industry.

What can we do today?

- SEEMP III approved
- Third party endorsements
- Reduce EU ETS Impact
- CII Improved from D to B
- Greener operation
- Problem free operation



ME SFOC vs shaft power (clipped shaft power)



CONCLUSION

Fuel chemistry has an important role to play in the current and future fuel market.

- There is no silver bullet to emissions reduction
 - No single technology gets us all the way
 - Additives have a crucial role to play.
- Easy to apply
 - Reduce complexity, not increase it
 - True innovation doesn't increase costs.
- Time is fleeting
 - Responsible supplier
 - Third party verified
 - Tried and tested



CAN WE DO IT?

