MODERN FUELS

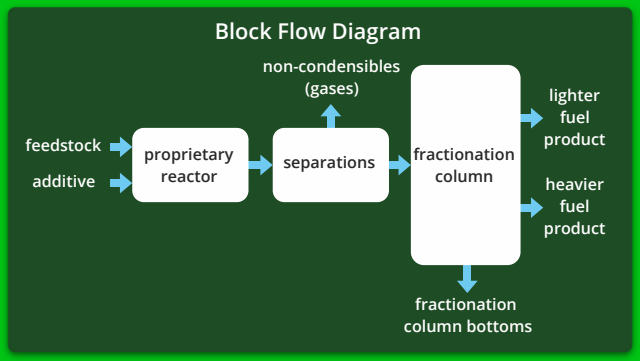
leading a new era

Modern Fuels offers proprietary and highly efficient technologies for producing low sulfur IMO 2020 compliant fuels.

the process

Converts/De-sulfurizes ULO, vacuum tower asphalt extender (VTAE), HSFO (aka No. 6 Oil, IFO 380, Bunker C) and other feedstocks into high quality marine fuels distillates.

> Sulfur reductions from ~50% to ~90%
> Yields from 67% to 87%
> Highly efficient: low capex and low opex



our products

Test Results for MGO-DMA

Test Name	Test Method	Units	Result
Total Acid Number	ASTM D664	mg KOH/g	< 0.1
Ash Content	ASTM D482	% mass	< 0.0001
Hydrogen Sulfide in Vapor Phase	ASTM D5705	ppm (v/v)	< 1
Micro Carbon Residue (10% Bottoms)	ASTM D4530	% m/m	< 0.1
Calculated Cetane Index	ASTM D4737		59.7
API Gravity @ 60°F	ASTM D4052		34.9
Density @ 15°C	ASTM D4052	kg/m^3	849.9
Flash Point	ASTM D93	°C / °F	94.5 / 202
Lubricity - Major Axis	ASTM D6079	µm	330
Lubricity - Minor Axis	ASTM D6079	µm	300
Lubricity - Wear Scar	ASTM D6079	µm	310
Oxidation Stability of Distillate Fuel Oil			
Filterable Insolubles (A)	ASTM D2274	g/m^3	10.3
Adherent Insolubles (B)	ASTM D2274	g/m^3	12.6
Total Insolubles (C=A+B)	ASTM D2274	g/m^3	22.9
Pour Point	ASTM D97	°C	-27
Sulfur	ASTM D4294	ppm	932
Viscosity @ 40°C	ASTM D445	cSt	5.973
Cloud Point	ASTM D2500	°C	-14
Water by Distillation	ASTM D95	% (v/v)	< 0.05
Elemental Analysis by ICP-OES			
Boron (B)	ASTM D5185	mg/kg	< 1
Calcium (C)	ASTM D5185	mg/kg	< 1
Phosphorous (P)	ASTM D5185	mg/kg	< 1
Silicon (Si)	ASTM D5185	mg/kg	8.8
Zinc (Zn)	ASTM D5185	mg/kg	< 1
All Others (Al, Ba, Cr, Cu, Fe, Pb, Mg, Mo, Ni, K, Na, Ag, Sn, Ti, V)	ASTM D5185	mg/kg	< 1

Test Results for Heavier Marine Fuel Distillate

Test Name	Test Method	Units	Result
API Gravity @ 60°F	ASTM D4052		33.9
Ash Content	ASTM D482	% mass	0.002
CCAI	ISO 8217		758
Density @ 15°C	ASTM D4052	kg/m^3	855.2
Elemental Analysis			
Elements (Al, Si, Al + Si, V, Na, Mg, Ca, P, Fe, Pb, Ni, Zn, K)	IP 501	mg/kg	<1
Flash Point	ASTM D93	°C / °F	>100 / >230
Hydrogen Sulfide in Vapor Phase	ASTM D5705	ppm (v/v)	<1*
Micro Carbon Residue	ASTM D4530	% m/m	<0.1
Pour Point	ASTM D97	°C	-12
Sediment, Aged	ASTM D4870 - Proc. B	% m/m	0.01
Sulfur	ASTM D4294	ppm	666
Total Acid Number	ASTM D664	mg KOH/g	<0.1
Viscosity @ 50°C	ASTM D445	cSt	19.12
Water	ASTM D95	% v/v	<0.05

MGO-DMA

A DMA (<6cSt) MGO distillate that is light colored and low sulfur (ECA compliant <0.1% sulfur), extremely low ash with high oxidation stability, low metals, and a relatively low pour point. Product can be sold "neat" as DMA without blending.

Heavier Marine Fuel Distillate

Ideally suited for the newly evolving Low Sulfur Fuel Oil (LSFO) market, this Heavier Marine Fuel distillate has low metals, low ash, low sulfur and, with sulfur below 700 ppm, is an excellent blend stock for combining with HSFO or other higher sulfur fuel oils.

contact

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