GREEN FUEL CATALYST

Onboard “Mini Refinery”

For Reduction of Fuel Consumption and Emissions

www.greenfuelcatalyst.com

Made in USA

Info@greenfuelcatalyst.com

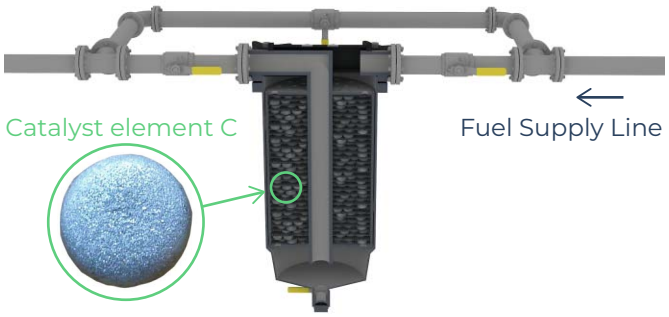
Fitch® FUEL CATALYST

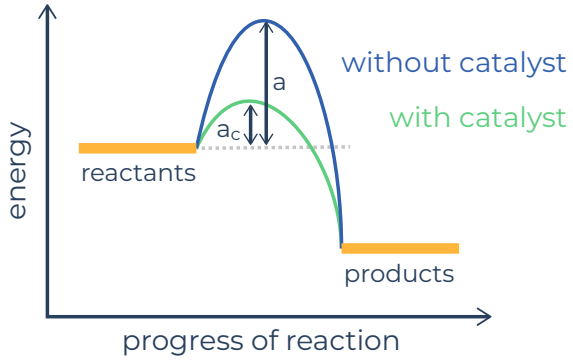
Patented Fitch® fuel catalyst technology

Operating Principle

Patented Fitch® catalyst technology consists of a Heterogeneous Metallic Alloy Composition (HMAC) which reduces activation energy of the chemical combustion reaction.

Catalyst reverses the naturally occurring hydrocarbon fuel biodegradation (Oxidation-Reduction) process by inducing selective hydrogen abstraction and redistribution (Hydrogenation) that promotes selective Oxidation (formation of Alcohols, Aldehydes). Catalyst cracks the aromatic (non-reactive) compounds forming oxygen containing molecules with greater energy yield and higher combustibility.





Catalyst alloy performs at ambient temperatures and pressures, and in the fuel restoration process is not consumed lasting for 10,000 operating hours.

Overview

- Reformulating all fuel oil types
- Average ROI 4 to 6 months
- No moving parts
- No electrical hook up
- No significant pressure loss
- No magnets
- No chemical additives
- Minimum overall maintenance with no maintenance for lighter fuels
- Easy to install (after fuel filter, before engine or generator)
- Excellent results with all marine fuel oils
- US Coast Guard accepted
- Military grade and quality
- UL Listed

Benefits

- Reduce fuel consumption by over 2%
- Reduce carbon footprint and greenhouse gases by over 2 %
- Reduce bacteria growth
- Enhance and stimulate combustion
- Enhance useful energy content
- Ensure fuel quality during storage
- Improve fuel lubricity
- Increase cetane number
- Improve engine power and torque
- Lower soot content in the lubricating oil
- Minimize fuel system maintenance
- Minimize exhaust system maintenance
- Reduce carbon build up within engine
- Extend engine lifetime

Application Range

- Container ships
- Bulk carriers
- Oil & chemical tankers
- Gas carriers
- Passenger ships
- Offshore service vessels
- Tugs
- Yachts
- Dredgers
- Fishing vessels
- Navy ships
- Cargo ships
- Roll-on, roll-off ships

Technical Specification

- Die-cast aluminum head
- Steel bowl assembly
- Viton “O” ring seal
- Wide range of NPT threads
- Black powder coated components
- Locking ring collar
- Designed to withstand 150 PSI (10 bar)
- Maximum temperature with Viton “O” ring 437 °F (225 °C)
- Manual drain and vent valves
- Low pressure drop of 1.5 PSI (10 kPa)
- High pressure units up to 24 bar available upon request

Fuel Flow Rate per Catalyst Model

Catalyst Model	MGO/MDO		HFO	
	GPM	LPM	GPM	LPM
FHD-5-19-1.5	5	19	4	13
FHD-10-38-1.5	10	38	7	26
FHD-15-57-1.5	15	57	11	40
FHD-20-76-1.5	20	76	14	53
FHD-25-95-1.5	25	95	18	66
FHD-30-114-2	30	114	21	79
FHD-40-151-2	40	151	28	106
FHD-50-189-2	50	189	35	132
FHD-60-227-2	60	227	42	159
FHD-70-265-2	70	265	49	185
FHD-80-303-2	80	303	56	212
FHD-90-341-2	90	341	63	238
FHD100-379-2	100	379	70	265
FHD110-416-2	110	416	77	291
FHD120-454-3	120	454	84	318

Smaller units for lower fuel flow requirements available
GPM – gallons per minute
LPM – liters per minute

Installation Samples

- **Ocean Class Tug project**
  Engine: Twin Caterpillar
  C280-12 – 8,133 kW
  Engine: Wärtsilä – 5,800 kW
  Fuel Savings: 4-9%


- **UK based Cruise ship operator**
  Engine: 4 x MAN B&W 14V 48/60 - 58,800 kW Combined Power
  Fuel Savings: 4%


- **US based marine operator installed catalysts on 30 super seiners**
  Engine: GE16V250MDB
  4,038 kW
  Other engines: EMD645F, CAT3412, MAK 6M551AK, CAT C32.
  Fuel Savings: 5-8%

Certificates, Tests, and Approved Inspection Reports

DNV·GL

ABS & AFFILIATED COMPANIES

Lloyd's Register

Underwriters Laboratories

intertek
Total Quality. Assured.

UCONN
UNIVERSITY OF CONNECTICUT