

MIRACLIN60

fuel saving additive to heavy oil

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additive to heavy
oil


A drop which is demanded by present time!
Just one drop of Miraclin60, which is 1000-3000 times higher than
the amount of heavy oil, saves 5-10% of fuel costs!
This is an efficient use of limited resources!



From the monthly consumption of all Japan of heavy oil, issue of the fuel saving Miraklin60 can save volume, comparable to 80% of the volume of one of the tallest skyscrapers in Tokyo - Sunshine-60! (height 240m)!

Miraclin60 allows you to use your precious oil resource with maximum efficiency!





Miraclin60 is the latest specially formulated heavy oil flammability additive that can reduce oil consumption by 5-10%.

The addition of Miraclin60 to heavy oil in a ratio of 1/1000 - 1/3000 allows achieving almost complete combustion, effectively preventing environmental pollution with nitrogen oxides and soot. In addition, it prevents carbon and ash from sticking, and also has an anti-corrosion effect, which increases the life of boilers and improves combustion performance.

If Miraclin60 was used for all consumed fuel oil in Japan, which is 80 million cubic meters per year, then 8 million cubic meters of heavy oil could be saved!

To visually represent the size of the savings, let's take the volume of one of the tallest buildings in Tokyo (Sunshine, 240m).

Its volume is $60\text{m} \times 60\text{m} \times 240\text{m} = 864.000\text{m}^3$.

$80.000.000\text{m}^3 \div 864.000\text{m}^3 = 9.26$ buildings / year or 0.77 buildings / month.

This greatly contributes to the efficient use of valuable resources.





Just a drop (proportion of Miraclin60 to fuel oil
 $\frac{1}{1000} \sim \frac{1}{3000}$), which is worth it!

Miraclin60 is a landmark heavy oil and other fuel combustion accelerator that our company has developed through research and experimentation over the years.

To use it, no special expensive equipment is required!

Easy adding the agent in a ratio of 1/1000 - 1/3000 allows you to save 5 - 10% of raw materials while maintaining the same energy during combustion, and its also indeed for low quality grades of fuel oil. In addition, this accelerator helps to reduce the amount of soot and nitrogen oxides.

Applications: Factories and plants, high-rise buildings and hotels, saunas, ships, power generators, agriculture-forestry-fish industries.



SAVING FUEL OIL, PREVENTION OF POLLUTION, EXTENDING THE OPERATING LIFE OF THE BOILERS, INCREASING COMBUSTION POWER!

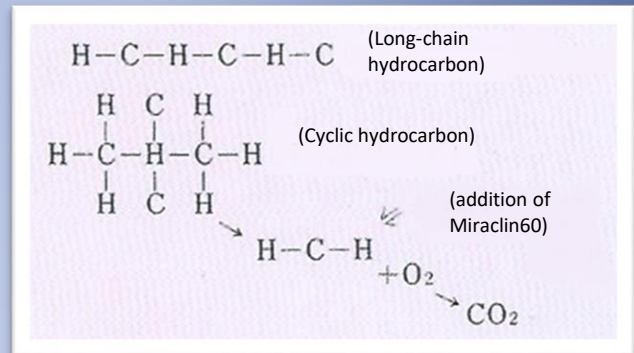
MIRACLIN60

Reducing the cost of producing the same amount of energy by improving the flammability of fuel oil and reducing losses associated with the life of the boilers. Miraclin60 breaks down into small particles and mixes large quantities of flammable components such as tar and so on contained in heavy oil.

In addition, it makes cyclic and long-chain hydrocarbons close to one carbon through chemical attack during combustion.

In other words, it is possible to almost completely burn fuel oil by spraying the heavy oil and expelling it from the burner tip, as well as due to the two-stage effect of strong catalytic action.

As a result, the combustion efficiency increases, the excess air is limited, and, in addition, the amount of supplied fuel oil can be reduced by 5-10% by cleaning the inner surface of the boiler.



Effective prevention of boiler pollution by reducing nitrogen oxides and soot. Fuel oil with improved combustion characteristics by adding Miraclin60 approaches complete combustion, reducing the amount of soot and intake air (excess). In addition, Miraclin-X reacts with nitrogen, significantly reducing the amount of nitrogen oxides (NOx)

With almost complete combustion, the amount of ash entering in the boiler is significantly reduced. This extends the service life and further improves the boiler performance and as result to fuel savings. By improving the combustibility of fuel oil, the amount of unburned carbon and ash that sticks to the boiler drum, water pipe and inner wall is significantly reduced. It is also achieved an anti-corrosion effect. As a result, cleaning work becomes easy what extending the life of the boiler. Reducing excess air saves over 10% on fuel oil costs.

The effect of the Miraklin60 in figures:

(The proportion of Miraclin60 additive to fuel oil is 1/1000 or 0.1%)

I. Experimental data about the reduction of soot and nitrogen oxides (NOx)

Boiler size	Soot		Nitrogen oxide (NOx)		Plant name
	before	after	before	after	
120T/H	90ppm	12ppm	150ppm	80ppm	Nanigashi Petrochemical Plant in Kawasaki
40T/H	200ppm	50ppm	300ppm	150ppm	Nanigashi Rubber Plant in Hiratsuka

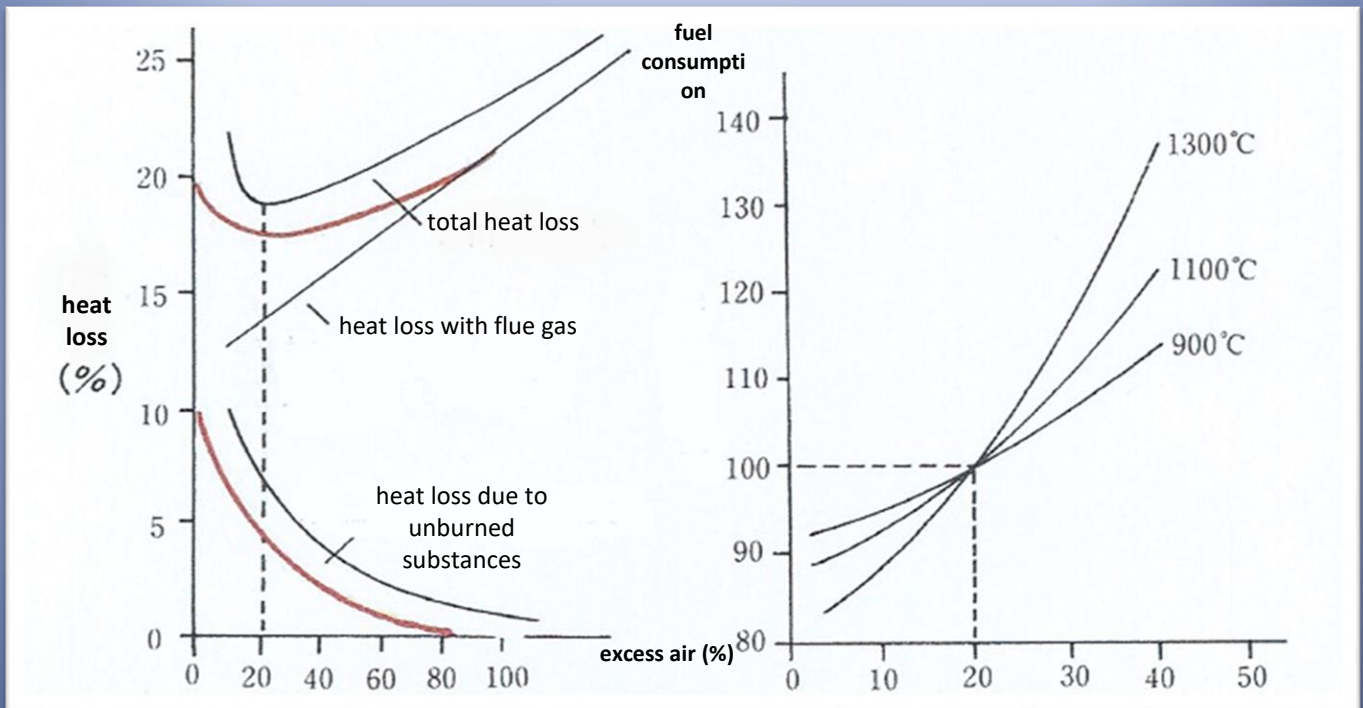
II. Experimental data on the economy of using fuel oil

(Nanigashi petrochemical plant in Kawasaki boiler - 120 T/H, fuel oil class C)

	Miraclin60			
	before	added in proportion 1/1000		
excess air (%)	15	15	10	5
soot (ppm)	90	12	45	80
reducing (%)		(87%)	(50%)	(12%)
NOx (ppm)	150	140	105	80
reducing (%)		(7%)	(30%)	(47%)

— before using of Miraclin60

— after using of Miraclin60



Interconnection between air ratio (excess air ratio) and heat loss

Excess air and fuel consumption

* The composition of Miraclin60 does not contain components with negatively affect on inner part of a boiler, such as iron, sulfur and nitrogen.

**Energy saving effect:

- (1) Reducing the power required for ventilation;
- (2) Reducing the volume of flue gases;
- (3) Decrease in flue gas temperature.



- (A) Reduction of heat losses with exhaust flue gases;
- (B) (B) Energy saving effect due to increased efficiency of heat transfer by increase in combustion temperature (decrease in the consumption of the combustion unit)

- 1) The fuel is atomized;
- 2) Mixing fuel and air at low load;
- 3) Air-fuel ratio control.

Methods for adding Miraclin60:

1. When using a storage tank, first pour Miraclin60 directly into the tank in a ratio of 1/1000 ~ 1/3000, then after pour fuel oil.
2. For tank trucks: add Miraclin60 to the fuel oil in the tank truck beforehand and then pour the mixture into the boiler.

Air intake operation:

When adjusting the air intake, use the damper to narrow it down just before the smoke is darkened.

*** To remove carbon deposits adhering to burner strainers, etc., our company has developed a special chemical agent "Culverse".

Composition of Miraclin60:

- Aromatic hydrocarbon
- Aliphatic hydrocarbon
- Nonionic surfactant
- Anionic surfactant
- Miraclin-X (our proprietary compound chemical agent)

(Specific gravity 0.83, calorific value 10,000-10,500 kcal / kg, flash point 70 ° C and above)

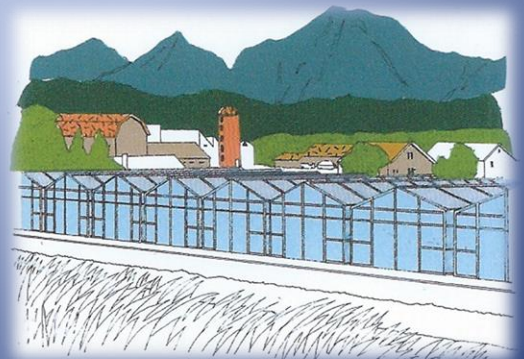


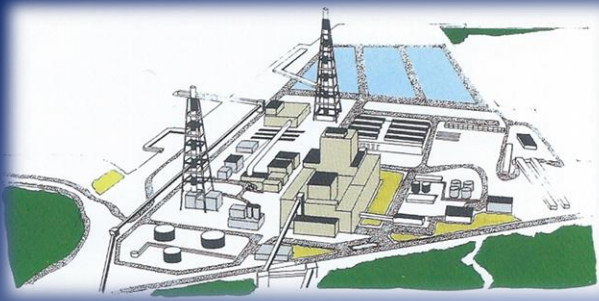
**Vehicles /
Ocean and river vessels**

Transportation / cargo transportation in Japan consumes 460,000 kiloliters of fuel oil class C per month. At a price of JPY45 / l x 10% - the cost of Miraclin60 1/1500 = JPY996.655.000
Saving appreciable amount:
JPY 996.655.000

**Agriculture, forestry and
fisheries**

Agriculture, forestry and fisheries in Japan consume 580,000 kiloliters of fuel oil class C per month. At a price of JPY45 / l x 10% - Miraclin60 costs 1/1500 = JPY1.148.345.000
Saving appreciable amount:
JPY 1.148.345.000





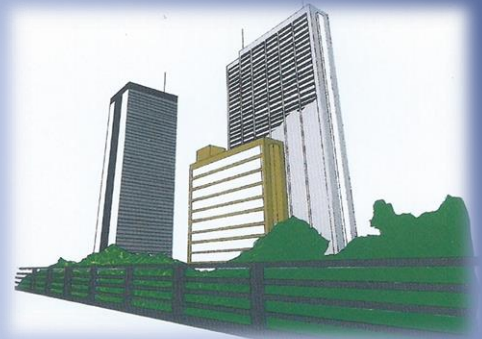
Power plants

For electricity generation, Japan uses 2,900,000 kiloliters of C-class fuel oil per month. At a price of JPY45 / l x 10% - Miraclin60 costs 1/1500 = JPY6.283.345.000
Saving appreciable amount:
JPY 6.283.345.000

Buildings

The monthly consumption of A-class fuel oil for a 6-storey building is approximately 12t, with addition of Miraclin60 in a proportion of 1/2500, this will be 0.27 of full canister.

Saving appreciable amount:
JPY 188.000



Hotels

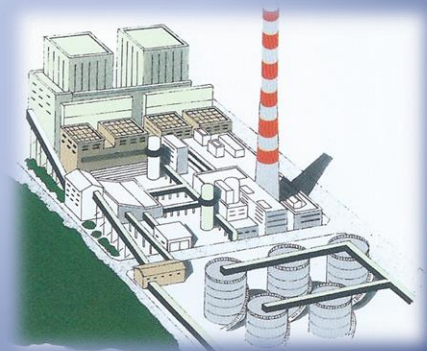
The monthly consumption of C-class fuel oil for the hotel is about 70 t, which will require only 2.7 canisters of Miraclin60! As a result, the savings amount will be 7t of fuel oil or JPY207.655!

Saving appreciable amount:
JPY 207.655

Plants and Manufactures

The monthly consumption C-class fuel oil for the plant is about 500 t, which will require about 18.5 canisters of Miraclin60. As a result, the possible savings amount to 50t of fuel oil or JPY1,084,500 in cash!

Saving appreciable amount:
JPY 1.084.500



Saunas

The monthly consumption of C-class fuel oil for saunas is about 30t, which will require only 0.7 canisters of Miraclin60! As a result, the savings amount to 1.5 t of fuel oil or JPY46,500!

Saving appreciable amount:
JPY 46.500