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Re: Coal to Syn-Oil Technology


To Whom It May Concern:

Today's coal to syn-oil is not yesterdays ten football size arenas pounding out little while dumping large amounts of coal in and making a mess along the way, no it is a brand new technology that can be set up in any area of the United States where there is coal or not and will compete with the largest of the oil companies working the fields in oil production at half of the cost.

What we are presenting in this package is a coal to syn-oil technology that will explain the plain simplicity of talking coal that is readily available and relativity cheap when purchased by the ton and processing it into oil that is expensive when sold and it can either be refined on-site by adding on our refinery to the unit or shipped to a oil refinery, either way coal to syn-oil profits are enormous enough to capture an investor(s) interest.

In this paper you will not find the unit cost of our machines that will be manufactured in the United States and in different sizes depending on the users tonnage, but all cost associated will disclosed to interested parties.

Yours Truly,



Stephen A. Cooper
per:ajr

Coal to Syn-Oil Technology

The Conversion of Coals to Liquid Fuels

The process of converting coal into liquid hydrocarbons has been around since the beginning of the 20th century when it was first developed by two German scientists. The first process known as the Fischer-Tropsch synthesis was based on indirect coal liquefaction and developed into a process of using either high temperature carbonization or rapid pyrolysis. Direct coal liquefaction known as hydrogenation was developed shortly thereafter.

The first two processes produced high quality diesel fuels. The latter process produced high quality synthetic aviation and motor fuels. Through the 1950's and into the early 1980's advances were made with the introduction of three direct coal liquefaction processes which allowed all three fuels to be produced at the same time.

The only problem is that until now, all processes of coal liquefaction were tremendously expensive, not environmentally friendly, very water intensive and required massive footprint.

Our New Process

We have developed a new process for coal liquification which uses low processing temperatures and low processing pressures. The energy expenditure is low as are the maintenance and operating costs associated with metal consumption and fatigue. The catalysts used in the chemical reaction are waste by products of the metallurgical industry: pyrite, magnetite, and hematite.

The production units are modular making the facility portable and allowing the facility to be set up on any site including existing mining operations. If a facility consisted of five units it would be the combined size of a football field.

Most importantly this technology creates no emissions during the liquefaction process.

Coal to Syn-Oil Technology

The New Technology

We have created a new process to convert coal to liquid hydrocarbons. This new technology uses an electropul and plasma chemical reaction which breaks down the organic structure of coal resulting in the direct conversion of coal to liquids. This new technology is patented. This process creates a 20% diesel fraction and a 70% petrol fraction with only a 10% sediment fraction.

The feedstock can be any type of coal, whether brown coal, anthracite, lignite or bituminous coal. Depending on the carbon content of the coal, 2.5 to 3.5 tons of raw coal processed produces 1 ton of liquid hydrocarbons: diesel, gasoline, jet fuel, fuel oil. The technology can be adjusted to accommodate any type of coal regardless of its moisture content or ash content. The higher the carbon content the less coal is needed to produce 1 ton of liquid hydrocarbons. The refining process can also be adjusted to produce a higher percentage of diesel, gasoline or synthetic motor fuels.

In our process coal is transported to course and fine wet grinding unit, at the output of this unit we obtain a finely disbursed coal suspension with a particle size of not more than 200um, (micrometer).

The suspension is pumped through 25kV high-voltage pulse processing unit where additional disintegration occurs to particle sizes of 10-15 um, (micrometer), where at the output of the node coal oil is obtained and sent through the attached refining process where the rectification of oil and the production of fuels are carried out with a diesel fraction content of at least 25% as well as gasoline, kerosene fuel, and other hydrocarbon fractions. The ratios of oil products produced is determined by the initial type of coal used and the settings on the processing system. The attached refining system is optional to the end user depending on their own needs and the market.

Coal to Syn-Oil Technology

Advantages

1. CAPEX and OPEX of this process is very low.
2. Process temperatures and pressures are low.
3. Metal consumption and power consumption of equipment are low.
4. The facility is portable and modular with a small scale footprint.
5. The catalysts used are waste by products of the metallurgical industry and inexpensive.
6. The technology can process nearly any type of coal.
7. The feedstock is abundant and inexpensive.
8. The liquefaction process produces no emissions therefore carbon tax or cap and trade costs will be negligible.
9. The process results in high quality fuels which do not require chemical treatments or major processing in order to be marketable.
10. The process will generate revenues even with the price of oil at historic lows.

Coal to Syn-Oil Technology

Specifications

The new patented technology converts coal to oil with no combustion and zero emissions.

The largest unit manufactured will handle 60 tons of coal per hour producing 20 tons of syn-oil per hour. These units will be manufactured in the United States, under an agreement.

The cost per individual machine depends on the size and output and will be disclosed to interested investors.

The power consumption per unit is 15 KW per ton of coal used.

The noise levels are 35 DB

The unit uses 26 gallons of water per ton of coal, however this water is recycled and fully recovered as part of the process.

There will be 11 employees needed to operate a 60 ton unit.

The size of a 60 ton unit will be approximately twelve 40 foot containers less than 2 acres not including coal and/or tank storage.

The unit can operate on any type of coal. Coals with less sulphur (ash) and higher carbons work best requiring less input.

The maintenance schedule for each unit is 10 days per year.

The life expectancy of the machine is 20 years running at full capacity.

The ideal setup is having 5 to 10 units operating continuously producing between 100 to 200 tons of syn-oil per hour.

Coal to Syn-Oil Technology

Cost to Operate the Unit

In 2017, the national average sale price of coal from coal mines was \$33.72 per short ton, and the average delivered coal price to the electric power sector was \$39.09 per short ton, resulting in an average transportation cost of approximately \$5.37 per short ton, or about 14% of the delivered price.

The **cost to transport** crude **oil** or petroleum products by pipeline is a fraction of **the cost** of other modes of transportation. The **cost to ship** crude **oil** by rail is generally \$10 to \$15 per barrel versus under \$5 per barrel by pipeline.

The following chart sets out the cost of operation and profit based on a 10 unit operation with the cost of delivered coal being \$39.09 a ton.

10 Units	Tonnage	Hourly	24 hour period	Monthly
Tons Oil Output/gross sales	200	\$ 80,000. 00	\$ 1,920.000.00	\$ 57,600.000.00
Tons Coal Input/cost per ton	600	\$ 23,454.00	\$ 562,896.00	\$ 16,886.880.00
Rail cost				\$ 12,600.000.00
Electricity cost				\$ 259,200.00
<u>Employees/administration cost</u>				<u>\$ 1,584.000.00</u>
Net Profit		\$ 56,546.00	\$ 1,357.104.00	\$ 26,269.920.00

This chart does not take into consideration the infrastructure cost needed for oil storage tanks, pipeline, pipeline access, rail and rail access, where none presently exist.

Oil pricing based on August 2019 averaging at \$403.00 a ton.

Coal to Syn-Oil Technology

This coal production and sales chart from a Pennsylvania mine, demonstrates that if they had been using our coal to syn-oil technology to bolster their bottom line as shown on page 5 of our presentation, their revenues would have come in at more than 200% higher. Any coal mines using our technology will will have these same results, average coal, greater profits.

		Three Months Ended	
		December 31, 2018	December 31, 2017
Coal Production	million tons	6.8	6.2
Coal Sales	million tons	7.0	6.2
Average Revenue Per Ton	per ton	\$49.81	\$46.36
Average Cash Costs of Coal Sold	per ton	\$30.54	\$27.30
Average Cash Margin Per Ton Sold	per ton	\$19.27	\$19.06

Our Team

Our team supplies and installs the units for each facility. This is a turn key operation. Installation takes 3 to 4 months and can occur anywhere there is rail access.

Conclusion

This process will allow the coal industry to maximize profits and to increase shareholder stock value. The liquification process is environmentally friendly and may even result in carbon credits. Finally, the production of high-quality fuels and oils will help lessen America's oil dependence on foreign countries.