

TRILLION GASIFIER



Gasifier technology has been in the market for a long time. However, most designs are unable to generate producer gas of the desired quality suitable for diesel engine operation. Moreover, the efficiency and high cost, both investment and operating cost, is also one of the key deterrents to the mass usage of this green technology. Using “these problems” as the key design criteria that our Trillion gasifier needs to overcome, our designer initiated a detailed research and study on the principle of tar formation from the combustion process involving rice husk, betal nut shell, wood chips, palm oil kernel shell and other biomass waste. The research and study involved a detailed analysis of the physical and chemical properties of tar compound generated by the various type of biomass. With this important information on hand, the next phase was spend to design and develop our state-of-the-art Trillion gasifier that has the full capability to control the formation of tar to the minimum during the combustion process. A in depth study was also carried out to design an economical filtration system that are capable of thoroughly and efficiently cleaning up the gas to give a standard gas quality that is fully in compliance with the FAO specifications, therefore suitable for any engine operation.

Our Trillion Gasifier is designed to be tar-free and easy to operate. It is suitable for use in diesel engine power generation especially in remote area that are far away from the grid line, for running of diesel engine driven pump and in any other application where diesel engine operates on a regular basis etc. The key benefits of using our Trillion gasifier can be summarized as follows:

- *Reduce diesel fuel consumption by 50% to 85% at rated load*
- *Low capital investment i.e. fast payback*
- *Easy to install and simple to operate*
- *Compact design*
- *Low maintenance cost*
- *Low biomass consumption*
- *No unpleasant smell*
- *No engine modification required*
- *No deration on the engine output*
- *Will not affect the engine life span*
- *Improved existing engine performance*
- *Availability of carbon credit for sale*

Today, our gasifiers are widely used in Myanmar with more than 600 units sold in the first 18 months alone. In late December 2008, after some successful trials, the Myanmar military government invited our principal to conduct a study on the mass implementation of our gasifier for power generation to power up the lightings for the villages. The program has now been officially approved and will be implemented in phases with the first two lots of 20 units each delivered in early February 2009.



Fig 1. Delivering the first lot of gasifiers for the Myanmar Military Government village lighting project.



Fig 2. Gasifier used with China single cylinder engine to power the lightings for the village using rice husk.



Fig 3. Signboard put up at the entrance of the village as part of Myanmar Military Government Village lighting project.



Fig 4. Model TG 180 powering a 105 horsepowers FAW gas engine (insert) operating in a rice mill in Azauk, Myanmar using rice husk. The TG 180 and the gas engine is the only power source for the rice mill since 2006.



Fig 5. Model TG 30 operating in PT Daria Dharma Pratama's palm oil plantation in Ipuh, Bengkulu, Indonesia using palm oil kernel shell.



Fig 6. Model TG 70 operating in Felda Palm Industries Sdn Bhd in Kuala Lipis, Pahang, Malaysia using palm oil kernel shell. The gasifier is powering two Lister Petter engine driven water pumps supplying water to a palm oil mill 13 km from this site.

We have now expanded our focus on the export market within Asia and on the demand for bigger gasifier power plant especially for factories with self-contained electric power generating plant. Such applications will not only enable the company to save on the diesel operating cost, it will also gives the company the option to sell their carbon credit.



Trillion gasifier

The ultimate solution to your high energy cost

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