

Thermal Power from Fossil Fuel will probably be the most stable, Cleanest and Cheapest Source of Energy

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So far thermal power from fossil fuels has created a toxic source of emissions and is the reason for global climate change due to the enormous amount of CO₂ it emits into the atmosphere. However, the research results and published by Nguyen Dan [1-7], have changed the situation radically. The author has demonstrated systematically by empirical research that emissions from thermal power plants with fossil fuels can be fully processed and utilized at the current large industrial scale now. Industrial dust is recovered and it will be a material to produce building materials, CO₂ separated in the form of clean liquid CO₂, or moist NaHCO₃ powder. There is also a mixture of clean exhaust gas, which is basically nitrogen used to produce ammonia. Take a look at the main conclusions of the project to overcome the greenhouse effect to combat global climate change.

Conclusion on Generation of the New Machines

If we want to solve large and difficult problems as to handle industrial-scale emission of millions of tons per hour, we need a generation of the new equipment. If we do not find new devices such as 9 new dust separators, 4 gas liquid solid heterogeneous reactors, continuous filtration decanted flocculation tank and with 4 new devices along with related that, then make sure that we can not resolve the issues raised on this one completely.

Conclusion on the New Technologies

There are new devices, not entirely solve the problem, the more important is to find the new technologies. There are need be the new no-waste technologies. As this, a high economic efficiency as possible, environmental protection issues solved thoroughly. Thanks to the new no-waste technologies are applied, which we absolutely can handle industrial emissions with any large scale to do. We absolutely can overcome entirety greenhouse effect.

Conclusion on the Two Stages for the Treatment of the Industrial Exhaust Gases

We believe that treatment of industrial exhaust gases to go through the following two stages:

1-processing to thoroughly eliminate the dust and toxic chemical compounds from industrial emissions, because, we can not accept the existence of any dust and any toxic chemical compounds in our atmosphere. Thus any basis for any production, big or small, waste gas lines must be processed dust and toxic chemical compounds, prior to discharge into the human living environment.

Separation of CO₂ from industrial emissions

As we know only need to reduce CO₂ in the atmosphere today is a half, the tragedy by the greenhouse effect will be resolved. So we do not have to separate CO₂ from any industrial emissions, we can choose some plants have large emissions, and will jointly conduct process and separation of CO₂ from these industrial emissions. We need to maintain a certain amount of CO₂ in the space to maintain the necessary temperature for human life.

Conclusion on Separation, Storage and Transportation CO₂

Based on a new technology proposed by us, the separation of CO₂ from industrial emissions, as well as storage and transportation it under the form of moisture powder NaHCO₃.

Conclusion on the Storage CO₂ on the Deep Ocean

Solution: Storage CO₂ in the form of food Clean liquid CO₂.
Solution: Storage CO₂ in the form of dry ice.

Conclusion on the Economic Efficiency of the Project

Project will be implemented through two stages, and economic efficiency expressed differently. The first stage, the product obtained is food pure liquid CO₂, with collection costs from emissions is only a half the price of food cleaning liquid CO₂ on the market today, therefore, in the first stage, CO₂ obtained will sell on the market for the food industry with 100% interest can, then, when we have to supply adequate to the market, we conducted a storage and bury CO₂ to the deep ocean, with the cost is less than the today cost, about 10 times (theoretical data).

General Conclusion

Summing up, we can recognize that, we absolutely can treat industrial emissions do with any scale, especially industrial waste gases emitted from thermal power plants using fossil fuels, so, greenhouse effect as will be resolved, by new no-waste technologies, make sure that the living environment for humans will be protected, on the other hand, if we come to a decision, it is imperative to thoroughly treat dust and toxic chemicals of all industrial waste gas stream, to ensure habit at for humans, so we can co-solve the two problems are equally important:

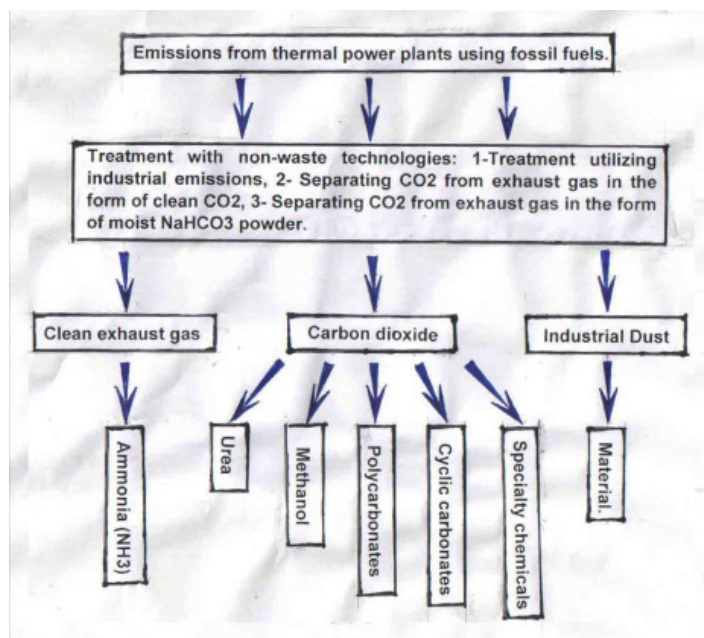
1. Tragedy due to industrial emissions.
2. Tragedy due to global climate change.

It is no longer a threat to humans, if we know act implementing them immediately, without delay.

The success of this project, allows us to think about production by no-waste technologies, as well as the no-chimney industries in the near future. The content of the project is shown by 27 applications for exclusive Vietnamese patent, of which 23 applications are participating in the contest of new inventions held in Toronto Canada in 2017, and all 23 were all awarded, with 15 gold medals and 8 silver medals [4]. The results of the project help us to propose an optimal solution to the fight against global climate change [5]. And answer the question why President Donald Trump pulled out of the Paris agreement against global climate change [6]. Together with us, there are thousands of different scientists from around the world working to convert CO₂ into useful products for society [7].

CO₂ conversion and utilization should be an integral part of carbon management. As an example of utilization of CO₂, approximately 110 million metric tons per year of carbon dioxide are used as a raw material for the production of urea, methanol, polycarbonates, cyclic carbonates and specialty chemicals. The chemical industry has pledged an industry wide goal of reducing its greenhouse gas intensity (ratio of net greenhouse gas emissions to production) by 18% to 1990 levels by 2012. A detailed breakdown and a total of 68 million metric tons for carbon equivalent was reduced in 2001 of which 50 million metric tons were from direct reduction, 16 million metric tons from indirect reduction and 2 million tons were sequestered. A potential upper limit of 650 million metric tons of CO₂ use as a raw material has been estimated.

Which included traditional processes for urea and methanol in addition to plastics, fibers, rubber and other uses. This tonnage is comparable to carbon dioxide emissions from all US fossil fuel power plants. The following is a schematic diagram of the entire industrial process from the treatment of harmful emissions emitted from thermal power plants using fossil fuels to the production processes of socially beneficial products from industrial emissions above.



Through the diagram above we see this is a closed process without waste. From the beginning, there is toxic emissions released from thermal power plants, then thanks to the achievements achieved by Professor Nguyen Dan's scientific collective, we can implement zero-waste technologies to Finally, from the toxic emissions, we obtain a mixture of clean emissions, CO₂, and industrial dust, and finally, based on the appropriate technologies, we obtain useful products for society. The products obtained from CO₂ mentioned here are only of typical significance, because many other useful products are actually produced. As we all know, thermal power is completely unaffected by nature such as electricity from wind, ocean waves or hydroelectricity, which means that thermal power is very stable. Thermal power can again be produced from plants where if all emissions are treated using our no-waste technologies, which means that this thermal power must be the cleanest. The remaining problem is its price. At present, industrial production processes come from utilizing the CO₂ emitted from emission sources that are upgraded daily. People focus on new technology research new equipment and catalysts [7], and we hope that in the near future the income gained from these industrial processes will be greater than the costs used to produce it (thermal power), And that thermal power will have the cheapest price compared to other types of electricity.

In short, in the near future, we can absolutely believe that thermal power from fossil-fuel will be the most stable, cleanest and cheapest power source.

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