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TO OVERCOMING GREENHOUSE EFFECT FOR ANTI GLOBAL CLIMATE CHANGE AND CURRENT SITUATION

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The greenhouse effect is caused by CO_2 released from various industrial and agricultural sources. If we overcome about 50% of the global greenhouse emission gases, global warming is considered to be remedied, while half of the total greenhouse gas emissions are nearly equal to the total emissions of greenhouse gases. from all thermal power plants. So if we treat all the exhaust gases from all thermal plants, global warming is considered to be remedied. So far, the greenhouse effects have not been treated yet. On our opinion there are four reasons for this:

1. We do not have a new generation of suitable industrial equipment and suitable technologies
2. We can not remove the dust thoroughly before CO_2 separation from the industrial exhaust gases.
3. We have used ethanolamine to separate CO_2 from industrial emissions
4. We have not had the proper solution to bury CO_2 on the ocean floor.So would like against the global climate change, we must overcome all 4 disadvantages mentioned above.

To overcoming the first disadvantage: Nguyen Dan and his scientific team have proposed 8 new dust separators [1-8], and proposed 4 new gas solid liquid heterogeneous reactors (GSLHR) [9-12]. There are also proposed 3 new no-waste technologies [13,14,15] to treat and reuse industrial exhaust gases, to separate CO_2 gases under the forms of wet $NaHCO_3$ powder, or dry ice. To overcoming the second disadvantage: We must thoroughly treat the dust with no-waste technologies before separating CO_2 from industrial emissions. Technology works as follows. The exhaust gas is directed to the dry and wet cyclone dust separators [1-8], where the acid oxides are thoroughly treated and the dust is recovered almost completely. Clean exhaust gas will be passed through the new GSLHR to perform the reaction between CO_2 and soda solution, $NaHCO_3$ residue obtained is the product of the technological process. The remaining gas is basically nitrogen used for many purposes.To overcoming the third disadvantage: We have to replace the ethanolamine solvent with a more suitable solvent, that is, soda to separate CO_2 from the industrial emissions. This was done excellently thanks to the new GSLHR [9-12], and thanks to the catalyst [16].Reaction between Carbon dioxide and soda solution occurs at 40 °C, with a retention time of 41 seconds, initial CO_2 concentration of 10-15% VL,% conversion of CO_2 to about 90%. To overcoming the fourth disadvantage : To complete this, Nguyen Dan and his scientific collective have proposed the following two methods:

Method 1 [17]: CO_2 is separated as well as stored, transported in the form of moisture $NaHCO_3$ powder , CO_2 is buried into the ocean floor in the form of clean liquid CO_2.

Method 2 [18]: CO_2 is separated from industrial emissions, as well as stored, transported and stored permanently on the ocean floor in the form of dry ice.

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Conclusions of the project:

1-Conclusion on new equipment and new technology: To complete the project, 8 new dust separators [1-8] and four new GSLHR [9-12] were proposed.

2-Conclusions on two stages of treatment of industrial emissions

Stage 1: In this stage, the exhaust gas must thoroughly treat the toxic acid oxides, the remaining dust is collected almost completely, and used as the primary raw material for a variety of purposes.

Stage 2: During this stage, CO_2 is separated from clean exhaust gas in the form of moisture $NaHCO_3$ powder or dry ice.

3-Conclusion on the economic efficiency of the project. Initially, the collection of CO_2 in the form of clean liquid , or dry ice will be sold to the commodity market at a very high profit (200-300%), then CO_2 is buried into the ocean floor. If:

1-CO_2 is buried on the ocean floor in form of clean liquid CO_2 with a total cost of about one tenth the current cost for treating and burying CO2.

2-CO_2 is permanently preserved on the ocean floor in the form of dry ice with a total cost as small fraction of current cost total for the CO2 burial.

Biography

Nguyen Dan, a Vietnamese citizen born in 1941,graduated from the Moscow University of fine chemical technology called M.Lomonosov in 1966. complete thesis PhD in chemistry at the Soviet Union Academy of Sciences in 1982, was appointed associate professor in 1991.Nguyen Dan has been working at the Vietnam Academy of Sciences since 1975 as director of Science-industrial Production Union for Biological and Chemical and retired in 2006.Nguyen Dan author of 21 patents and has received 23 awards at the Canada Toronto invention innovation competition 2017.

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