

## DB3) ELEMENTAL TRANSMUTATION BY ENER(OR BROWN) GAS TREATMENT

오홍국

아주대학교 기계 및 산업공학부

### 1. RESOLUTION OF HARMFUL GASES BY ENER GAS(OR BROWN GAS)

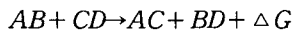
#### 1-1. ABSORPTION OF $\pi$ -RAY AND ELECTROLYSIS

Each atom is enclosed with  $\pi$ -rays, which were produced by the alternating magnetic field that is made by the electron's going and returning between atoms.

If some resonant  $\pi$ -rays are supplied to and suppress the fencing  $\pi$ -rays, the bonding will be broken because the equilibrium distance for the electron moving between atoms can not be maintained. Electrolysis process supplies  $\pi$ -rays of Gibb's free energy to the reactant atoms and then the component atoms are divided into and are induced to both electric poles.

#### 1-2. PRODUCTION OF $\pi$ -RAY AND CELL REACTION

Electric cell produces Gibb's free energy between two poles by their chemical reactions. For example



By the change of the equilibrium distances for the electrons' moving between atoms some remaining  $\pi$ -rays (Gibb's free energy) can be produced.

Table of Standard Electric Pole Potentials shows the sequence of the oxidants and reductants and suggests the possibility of the cell reactions.

#### 1-3. ENVIRONMENTAL IMPROVING REACTION AND BROWN GAS

Brown gas is produced when water ( $H_2O$ ) is electrolyzed without separation membrane.

Hydrogen atoms and oxygen ones are mixed in atomic states.

Brown gas is very safe in an mixture state without explosion because of the crystallizing  $\pi$ -bonding of hydrogen atoms and oxygen ones.

The atoms of the crystallizing  $\pi$ -bonding absorb more  $\pi$ -rays than the atoms of covalent bonding, which needs more electric energy than the conventional water electrolysis and provokes more current reduction during the electrolysis.

When Brown gas is burned much  $\pi$ -rays are generated because of the alternating magnetic fields due to the crystallizing  $\pi$ -bondings. The generated  $\pi$ -rays can induce chemical reactions. If Brown gas applies in any airpollutional smokes of environmental reactions, any harmful gases (CO, NO, etc) can be ceased to be produced.

### 2. ELEMENTAL TRANSMUTATION BY ENER GAS TREATMENT

The infrared rays produced from the oxidation of hydrogen molecules are changed into  $\pi$ -infrared rays by the crystallizing  $\pi$ -bondings of oxygen and hydrogen atoms.

The open type  $\pi$ -rays may be agglomerated. The open type agglomerated  $\pi$ -rays can be changed through two different courses, unresonant and resonant. The unreasonant agglomerated  $\pi$ -rays are outwardly expanded into electromagnetic wave(heat). The other resonant agglomerated  $\pi$ -rays are inwardly imploded into closed types. The closed types construct any nucleons quantum-mechanically and then the nucleons create cold fusion.

It is well in agreement with that some recent experiments about cold fusion show heat generation

or transmutation.

The fact that unresonant agglomerated  $\pi$ -rays (collision of mesons) are changed into open types is confirmed also in the case of the implosion bonding of nucleons (strong interaction in nucleons). The transformed open types are again imploded and absorbed to the nucleons by the strong gravitational attraction.

The difference of the elemental compositions (C, H, N, S) between in furnace and in stack is due to the transmutation by the implosion of the  $\pi$ -rays and cold fusion.

### 3. EXPERIMENTAL RESULTS

#### □ Testing Results

##### • Temperature (°C)

-Furnace: The temperatures in the furnace were in the range of 364~417°C (Average 385°C).

-Stack: The temperatures at the stack were in the range of 195~263°C (Average 222°C).

##### • CO

-Furnace: Very high concentrations of CO such as 1,000ppm to above 2,000ppm were generated in the furnace due to incomplete combustion of high-moisture pulp sludge.

But, CO was monitored only in its concentration of less than 2,000ppm due to the monitor's detection limit (Max 2,000ppm).

Therefore, the real concentrations of CO might be much higher than those listed in Table 1 because CO concentration were mostly in the upper detection limit.

-Stack: After flue gases passing through the Enerpec Gas treatment chamber, CO concentrations were drastically decreased to 1 or 0 ppm. It showed that Enerpec gas burned out almost all of unburned carbons and led to complete combustion.

##### • Dust

-Furnace: As shown in Table 1, very high concentrations of dust such as 484 to 159  $mg/Nm^3$  (average 269  $mg/Nm^3$ ) were generated in the furnace due to the incomplete combustion of high-moisture pulp sludge. Apparently, the colors of collected dusts in filters were black. From this fact, it could be guessed that these black dusts might be unburned carbons, which were resulted from the incomplete combustion of pulp sludge and waste tyre.

-Stack: As shown in Table 1, very low concentrations of dust such as 3.12 to 6.88  $mg/Nm^3$  (average 4.79  $mg/Nm^3$ ) were showed at the stack. Apparent colors of collected dusts in filters were white when the pulp-sludges were burned, while those were grey when the waste tyre was burned. From this fact, it could be guessed that most of unburned carbons were almost burned out after flue gases passing through the Enerpec Gas treatment chamber.

##### • NOx

-Furnace: Very high concentrations of NOx such as 689 to 895ppm (average 787ppm) were recorded over the whole incineration testing period. These NOx seemed to be thermal NOx, which were resulted from the high temperature of LPG gas supplied into the furnace through the narrow tip of torch.

-Stack: Relatively low concentrations of NOx such as 162 to 193 ppm (average 180 ppm) were monitored at the stack.

As a provable reason of this result, it could be simply guessed that the high concentrations of NOx in furnace were diluted by Enerpec Gas supplied after passing through the Enerpec Gas treatment chamber.