



China: Clean Energy in Progress

## Weekly Briefing

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### A New Energy-Saving Urea Granulation Technology is Widely Put in Operation in China

A set of new technologies by the name of “**Urea Granulation Technology of Double Drums with Fluidized Bed**” (in short for DDG) for production of granular urea is widely put in operation in China today.

#### 1 The Features:

The tech could be used either in revamping an existing prilled plant or in establishing a new one, in which both the prilled and the granular urea can be produced. Therefore, the plant will benefit significantly by fitting demands of the international market.

In comparison with the same sort and same level of technologies applied in the world today, this technology will let urea plants reduce 35% of investment, and the energy cost of urea facilities will be reduced by 40%.

#### 2 The Innovation:

The basic contents of the DDG Technology is to put the melted urea into the granulation drum, and make it to meet the prilled urea back from the shaken sieve, so that to make the pellets enlarged enough to reach the required size. After the sieved pellets come out of the granulation drum, let the eligible granular urea move into the cooling drum for cooling down, then the product can go out for sale. The tail gas will be out to the sky after being washed up by the washing system.

### **3 The Advantages:**

The granular urea produced by the DDG technology has the following features:

#### **(1) High Quality Product:**

a) The product meets the high-class grade products by China National Standards GB2440-2001;

b) Granular sizes can be selected freely by customers' requirements through their orders;

c) Strength is greater than 27N/  $\phi$  3mm without adding any methanal.

#### **(2) Lower Investment:**

The total investment is only equal with 65% of the same level technology in the West.

#### **(3) Lower Energy Consuming:**

The Energy consumption in production by DDG technology is only 60% in comparison with the same level technology in the West. It does not consume steam in normal production.

### **4 The Applications in China**

Starting from August of 2001, DDG technology had been successfully applied in 5 urea production facilities in China, and had reached the expected goals. All of the urea plants have obtained nice benefits from the technological remodeling.

These facilities are:

No	Enterprise	Scale	Time
1	Hunan Baling Petrochemical Co., Ltd. (Industrialization Trial Facility)	20,000 mt	2001,8
2	Shanxi Fengxi Fertilizer Group	50,000 mt	2002,2
3	Shanxi Fengxi Fertilizer Group	150,000 mt	2002,3
4	Shandong Hualu Hengsheng Petrochemical Co., Ltd	300,000 mt	2004,2
5	Shandong Yankuang Group, Lunan Fertilizer Plant	200,000 mt	2004,7

There are another 3 big urea plants in China that at present time are with the tech provider by using DDG technology, among which one is under construction and two are in the process of LOI.

## **5 Honors:**

China Nitrogenous Fertilizer Industry Association had organized urea production specialists in China and had made an on-the-spot inspection of the DDG technology at the remolded facility. It also conducted a special seminar on this issue. The specialists and their consisted Technological Appraisal Committee attested that the DDG technology has a good value for spreading in the urea production area in China, and had issued an announcement in this regard to all of the urea production plants of China.

## **6 Owners and Services:**

The technological developers, designers and patent owners of DDG technology are senior technological specialists who worked for a long time respectively for *China National Petrochemical Corporation (Sinopec)* and *Tsinghua University*. They enjoy having both deep expertise in urea production theory and the practical experiences of urea production.

*SinoBright Petrochem Technologies Ltd.*, an associated company of Sinopec group, is the exclusive promotion and service company of DDG technology. On behalf of the DDG technology owners, we are responsible to supply a package of services to all of our friends in the urea business overseas.

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**If you would like to have more information on this issue or others, or you have an intention to get involved in clean energy development in China, please contact Mr. Seaga Yue, the editor, or Mr. Jack Ding, the manager of SinoBright Beijing.**