Ammonium Sulfate

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The company designs features of ammonium sulfate units

Engineering company of " Petro Rahbar Pahang " which is included by expert groups in chemical fertilizers units designing and has done widespread researches and variety pilot plants, has caused improving of the technology and quality of the unit's products. Technology of ammonium sulphate fertilizer producing that is one of suitable chemical fertilizers, is very significant in the company. Generally, ammonium sulfate is produced by reaction between ammonia gas or solution, and sulfuric acid or SO3 gas.

Ammonium sulfate is produced in aqueous solution in the most places of world, so this is why it is able to produce ammonium sulfate by crystallization operation. The operation is useful if there are low quality raw materials that be used as a byproduct. It will cause costs of unit making and factory to be cut down if the dry method is chosen to produce the product. The company is one of them that has gotten technology for producing the material by dry method.

Wet method:

Needle shape of crystals and different amount of ammonium sulfate solubility at different temperatures, cause the deposition be taken place by mechanical and thermal shock in the process. The company has developed a special process based on its experiences to minimize the amount of depositions while the process is in progress. Ammonium sulfate crystals grown, is always the most important parameters of producing. The produced crystals size has gotten more optimized by special design of crystallizer , reducing the producing temperature and Saving the produced energy. Corrosion inhibitor is one of the important parameters in this unit that the company suggests making proper temperature condition , using the proper alloys and installing proper systems to control corrosion to minimize it.

Getting thickened and lump after packaging the products, is another problems of the material producing that has been completely solved by the company based on research and studying. Using of anti-cakes and enriching of fertilizer by iron avoid the material to getting lump, Electricity and water saving and also produced as byproduct.

Dry method:

- Reducing of ammonium sulfate producing units construction costs over 50% compared with the wet process.
- Possibility of ammonium sulfate granular compared with ammonium sulfate crystal
- Reducing of overhead costs by over 30% .
- Reducing of necessary electricity consumption of factory to 40% compared with wet method
- Possibility of mixed fertilizer producing with ammonium sulfate fertilizer