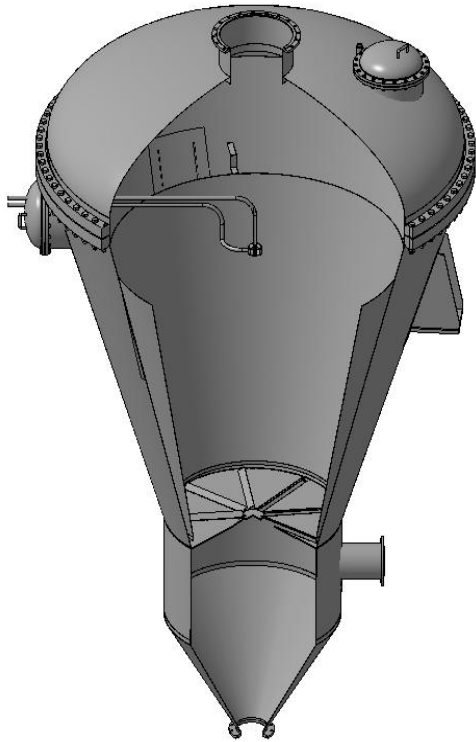




VORTEX GRANULATOR FOR PRODUCTION OF POROUS AMMONIUM NITRATE GRANULES

Vortex granulator is mostly used in the chemical industry and for granulation of various substances from solutions and melts.



Vortex granulator produces granular products without the use of granulation towers. Its granulation from melts, solutions and suspensions is based on the improvement of the granules flow dynamics, which provides:

- Increasing monodispersity of granules which grow in the velocity layer
- Increasing homogeneity of the obtained product granulometric composition
- Obtaining of granules of given structure, classifying them due to their size
- Obtaining of granules of porous structure preserving their firmness (without destroying their internal crystalline structure)

Granulator main advantages

- Its dimensions are small so there is no need in big working place for it, (including height)
- The time of granules spend in the working space of the vortex apparatus is increased
- Control of the granules movement in the granulator working space
- Creating of intense turbulence in the whole granulator workspace
- Multifunctionality (using one device to fulfill both granulation and drying processes)
- High production effectiveness and easy construction
- Quick changeover of the device, possibility of process and construction parameters changing

Industrial tests of the experimental vortex granulator device were hold for producing ammonia nitrate and the results are: 98% of the received product is mono dispersed, humidity is 0,2%, granules firmness is 230-300 g/granule.