

Hardheim, November 2017

New NPK fertilizer plant with EIRICH technology in Turkey

More and more renowned fertilizer manufacturers are seeking out the advantages of our preparation technology, which enables mixing and granulating to be performed in a single unit. DRT - Doktor Tarsa Tarım Sanayi ve Tic. A.Ş from Turkey is the latest manufacturer to opt for EIRICH technology, with a new system that also includes a grinding system.

In Turkey, demand is also increasing for fertilizers for use in agriculture and for domestic use. This is why DRT, which is a leading supplier across the whole country, has added a completely new production line to its manufacturing facilities, where it will be manufacturing a broad range of granulated mineral fertilizers. After extensive trialling at the test center in Hardheim, DRT opted for an EIRICH preparation system.

At the heart of the system is the EIRICH mixer, featuring a rotating mixing pan and a mixing tool that can provide anything from low to extremely high mixing energy input to suit the requirements of a given application. This means that this machine is just as good at mixing as it is at granulating or coating – and it can do all of this from the same, single unit. For customers, this represents a major simplification compared to other units (such as roller presses) and offers numerous advantages. Not only this, but by making simple changes to machine parameters in the granulating process it is possible to manufacture grain sizes ranging from 100 µm to several millimeters. For the customer, not only can this system be used to manufacture a broad range of different products at consistently high quality, but it also offers viability for the future. These advantages can be achieved both on new production lines as well as in production upgrades or modernizations of existing systems. Here, the services and products offered by EIRICH range from simple mixer/granulating units right up to turnkey systems.

DRT is a further fertilizer manufacturer who has now also opted for the grinding technology from EIRICH. During production, if the raw materials are not provided in the required fineness, a grinding and dispersing process is used upstream of the mixing and

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granulating process. EIRICH offers various milling systems to do this, including impact mills with an integrated air classifier that are marketed under the trade name TurboGrinder. In these mills, which are designed for the grinding and drying of soft raw materials (up to Mohs hardness 3), the material to be ground is broken down with high impact forces and shear forces, which act on the material via the fast rotation of a rotor. An air flow is directed through the mill to discharge the material and enable a continuous grinding process. The required finished material fineness can be quickly and easily adjusted with the aid of the integrated air classifier. If the process also requires drying during grinding then hot air is directed into the grinding zone; feed material moisture values of up to 25% are possible. These mills, which grind up feed material of up to 30 mm to a grinding fineness of d_{97} ranging from 20 to 400 μm , are characterized by a relatively simple machine construction, which in turn keeps maintenance simple. Nine different machine sizes are available for throughput rates from 50 kg/h to 30 t/h.

The mixing and grinding trials at the EIRICH Test Center convinced DRT that they had found a capable and competent partner in EIRICH. The scope of supply encompasses several mixers and one impact mill with integrated classifier, plus the metering and control systems. The new production system in Antalya, which will be taken into operation in the fall of 2017, will enable the manufacturer to further expand its leading position in Turkey.

More information:

Contact: Europe - Ahmet Aksu, e-mail: ahmet.aksu@eirich.de

Contact: North America - Chris Clark e-mail: cclark@eirichusa.com

The EIRICH Group, with Maschinenfabrik Gustav Eirich as its strategic center in Hardheim, is a supplier of industrial mixing, granulating/pelletizing, drying and fine grinding machinery, systems and services. EIRICH has core expertise in processes and techniques used for the preparation of free-flowing materials, slurry and sludge. The main applications for these processes are in the ceramics, refractory, foundry, construction materials, plaster, rechargeable battery, battery compound, fertilizer, glass and ore dressing industries. Close co-operation between our own test centers around the world and collaboration with the research and academic community enables the "hidden champion" to provide solutions for innovative, cost-efficient products and processes. The family-managed company was founded in 1863 and operates from twelve locations on five continents.