PADDLE DRYER

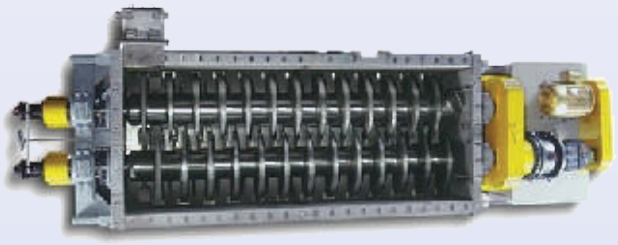
WORKING

A paddle dryer is a heat transmission dryer, a machine that processes organic and inorganic granular and powdery materials. It dries (or cools) these materials by bringing them into direct contact with relvolving paddles without using gas as heating medium. The drying process of a paddle dryer differs from that of conventional dryers. In the later, hot air is used as a heating medium. In a paddle dryer heat is supplied by transmission of heat from the paddle shaft and jacket. Hot air is used only as a carrier to prevent evaporated vapor from condensing. The evaporated water or solvent in a paddle dryer is preheated by heating medium. When boiling point is reached, evaporation escalates rapidly thus accelerating the drying process and drying occurs at a constant rate.

When the moisture has mostly evaporated, the temperature of the processed material begins to rise and approaches the temperature of the applied heating medium and the moisture contained in the particles is driven away(descending rate drying).As compared with the boiling point of the evaporated material at this time, the higher the temperature of the heating medium, the better the heat transmission, and the larger the driving force.

ADVANTAGES

* Conduction mode of heat transfer results in very high thermal efficiency.
* Compact equipment – large heat transfer area packed in a small volume.
* Capable of handling material with high moisture content up to 85% without any back mixing.
* Low air requirement reduces loss of heat.
* Reduction in size and cost of downstream equipments like cyclones, bag filters, scrubbers, fans, heaters and ducts.
* Uniform and controlled drying.
* Suitable for all types of granules and free flowing materials.
* Can also handle abrasive and sticky materials.
* Low product attrition.
* Suitable for stream, hot water or hot oil as heating medium.
* Integral dryer-cum-cooler combination.



APPLICATION:

- ETP Sludge
- Speciality chemicals

Model No.	Paddle HTA (m2)	Jacket HTA(m2)	Total HTA(m2)	Effective vol (m3)	Speed of Rotation (rpm)	Motor (kw)
PD-1.6	1.7	0.8	2.5	0.065	25	1.5
PD-5	12.7	4.9	17.6	1.12	17	7.5
PD-7	24.4	8.3	32.7	2.5	13	15-22
PD-10	55.7	18.5	74.2	7	10	55
PD-12	81.9	25.3	107.2	11.4	9	75-90
PD-13	94.3	28.1	122.7	13.7	8	75-90

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