ETHER
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FLUIDIZED BED DRYER (EE-1639)

This is a dryer in which moisture removal takes place by fluidization of solids particles by hot air. The set-up fitted with a specially designed, vertical Glass Column. The lower portion of the column is filled with fluidizing material. The material is supported on the screen mesh held between two flanges. Air from a Blower is heated in the heater box and passed through the column. Flow control valve is fitted in the pipe line to regulate the airflow. At the top outlet of column a cyclone separator is provided to collect any solid particles taken out by the air stream.

SCOPE OF EXPERIEMENTATION

- To study the fluidized bed drying.
- To plot the drying curve under fluidized bed condition

UTILITIES REQUIRED

- Electricity Supply: 1 Phase, 220 V AC, 3 kW.
- Granular and free flowing solid of size 1 to 2 mm.
- Space Required 1500mm x 1000 mm

TECHNICAL DETAILS

➢ Column	:	Material Borosilicate Glass Dia 180 mm. Total length 500mm.
➢ Cyclone Separator	:	Material Stainless Steel, Compatible Capacity with collector
➢ Air Circulation	:	By forced draft fan, Arrangement is done to vary the air flow rate. (Blower)
➢ Heating Chamber	:	Compatible capacity
➢ Heater	:	Nichrome wire heater
➢ Variac	:	0-4 amp
➢ Temperature Sensors	:	RTD PT-100 type.
➢ Control panel comprises of Digital Temp. Controller (For Hot Air)	:	0 199.9°C

Standard make on/off switch, Mains Indicator etc.

- ➢ Instruction Manual : An ENGLISH instruction manual will be provided along with the Apparatus
- ➢ The whole set-up is well designed and arranged in a good quality painted structure.