Used SS 304 Spray Dryer Disc Atomizer Type

Make	Raj Process Equipment System Pvt Ltd, Pune
Year	2010
Capacity	
Evaporation Rate	110 kg/Hr. @300 ° C inlet and 110 ° C outlet (since the chamber height is more than the regular designs, slight modification in blower will enhance the capacity to over 200 kgs water evaporation per hour)
Product Rate	48 kg/hr @ 0.5% w/w moisture
Feed Rate	160 kg/hr @ 30% w/w solids.
Feed Properties	
Solid Content Range	30- 35 % w/w
Form	Solution
Dissolved / Dispersed Solids	No
Solvent	Water
Viscosity	<150 CP
Specific Gravity	1.2 to 1.3
Temperature	<50 ° C
Product Properties	
Product Moisture	≤ 0.5% w/w
Max. Temp. Of Material	<40 ° C
Collection	Single Point Collection
Operating Conditions	
Mode of Heating	Oil Fired Air Heater
Fuel used Properties of Fuel NCV Kcal/Kg	LDO / HSD LDO 10200 HSD 10400
Inlet Air Temperature Range	280- 300 ° C
Outlet Air Temperature Range	100 - 120 ° C
Air Heater Max. Design Temp.	325 ° C
Material of Construction	**For Contact Parts**
Feed / Product	SS304
Hot Air	SS304
Cold Air, Exhaust Air & Flue gas	Mild Steel Epoxy painted

Site Conditions (assumed)	
Ambient Temperature	Min.: 15 ° C Max.: 40 ° C Avg.: 30 ° C
Humidity	70 % RH at 35 ° C
Altitude	< 100 M above MSL
Installation	Indoor
Area	Non-Hazardous / Non-Explosive / Non-Flameproof

UTILITY SPECIFICATIONS

Power	Voltage : 415 V / 4 wire / 3 phase Frequency : 50 HZ (Assumed)
Connected Load	21.5 hp
Consumed Load	16 hp
Motor List	Motor Rating hp
Supply Blower (FD)	3
Exhaust Blower (ID)	7.5
Conveying blower	2
Rotary Atomiser	1
Feed Pump	1
Scrubber Pump	1
Burner	0.25
Rotary Valve – 03 nos.	0.25 x 3= 0.75
Dehumidifier	5
Fuel	LDO/ HSD – NCV- 10,400 kcal/kg.
Consumption	10 kg/hr
Burner Rating	18 kg/hr
Process Water	Clean filtered at 2 kg/cm2 g
Maximum	4 to 5 lpm
Normal	3 to 4 lpm
Tolerance	± 2%
Space requirement	4M W X 8M L X 8M H

FABRICATED ITEM

Feed Tank

Capacity	:	150 lit.
Material of Construction	:	Stainless Steel SS304, 2mm thick.
Accessories	:	Support legs, Drain plug, outlet ball valve.

Water Tank

Capacity	:	25 lit.
Material of Construction	:	Stainless Steel SS304
Accessories	:	Ball valve at outlet

Air Heater (Indirect Oil Fired)

An indirect Hot Air Generator having multiple concentric shells is provided. The construction of the shells does not permit the mixing of the product of combustion with the process air. An explosion door is provided on the indirect fired hot air generator. Suitable inlets and outlets are provided for the process and flue gases. The inner most shell of hot air generator is made from Stainless Steel and the remaining shells are made from Mild Steel plates which are spray metalised.

Type : Concentric multiple shell in shell construction
Mounting : Horizontal
Heat Capacity : 1 Lac kcal/hr
Material of Construction
Inner Shell - Stainless Steel AISI 321 ,3 mm Outer Shells - Mild Steel 3 mm thk. Sand blasted to 120 µ and spray metallised to 70 µ
Accessories : Explosion door, cleaning hole.
Heat Insulation
Mattress : Mineral wool hand woven 50 mm thick.
Cladding : Aluminium 24 G

Flue Gas Duct

Size	:	250 NB
M.O.C.	:	Mild Steel HRA painted.

Hot Air Ducting

Size	:	215 X 215 mm.
M.O.C.	:	Stainless Steel AISI 304, 2mm thick.

Air Distributor		
Type	:	Tangential Entry
Material of Construction	:	Stainless Steel SS 304
Heat Insulation		
Mattress	:	Mineral wool felt 100mm
Spray Chamber		
Diameter	:	
Chamber	:	2600 mm
Height (mm)	:	
Cylinder	:	2000 mm
Cone	:	2700 mm
Powder discharge	:	150 mm
Material of Construction	:	
Chamber	:	Stainless Steel SS304 Shell : 2 mm thk. Cone: 2 mm thk.
Outside stiffener	:	Mild Steel :6mm thk.
Heat Insulation	:	
Mattress	:	Mineral wool felt 100 mm
Cladding	:	Aluminium 24 G
Accessories		
Doors	:	750 x 500 1 no.
Sight/Light Glasses	:	2 nos.
Hammer	:	Electromagnetic - 3 nos. Make: Ambica Electricals