KILN FABRICATION

M/S Excelsior Design & Projects
Kailash towers, Behind STC colony
Western express highway
Andheri East
Mumbai, India

Kiln Burner
Maker - Sterling Process, UK/Type – Lance/Model - 980147
Fuel - Propane
Series - NG/P - 8/45 - 6
Rating - 2093KW, 1.8g cal/h
Voltage - 380 V 3ph 50 hz/220 V 1ph 50hz nat/prop
Pressure - 276/276 mbar - 205.5/80.5 Nm3/h
Burner projection in the kiln
1350 mm + 200 mm brick

Combustion air fan

Burner fan motor
Maker - Brook hansen
Type - W-DA 132 SE/KW-5.5/V-380 - 415 / 660 - 720 Y/I - 10.5 - 9.9 / 6.1 - 5.7/amps
Rpm - 2910 rpm
Hz – 50/Cos ϕ - 0.89/Class - F
Burner fan/No. – 48167/Size - 21 MEB 1
3 phase,380V,50Hz supply.

10%	1851m3/hr	60%	4067m3/hr
20%	2264m3/hr	70%	4313m3/hr
30%	2852m3/hr	80%	4471m3/hr
40%	3445m3/hr	90%	4760m3/hr
		100%	4640m3/hr

Kiln hood suction .94m/s φ120mm.

Fuel	propane	Spec.	C2	00.3% Vol
			C3	99.3% Vol
			C4	00.3% Vol

Density 0.5081 kg/L
Calorific value 12042.32 Kcal/kg. (theoretical)

Present kiln Slope

	15.70mm/1000mm
Kiln speed range	.571 to 1.14 rpm.
Motor speed	1490 rpm
Kiln load	12 – 15.5 A Rated 42 A /22kW
Kiln driveMotor	Make - SEW Eurodrive/Type - DV 180L4/No. - 3266427412.0002.98/IM - B3/KW – 22/Cos ϕ - 0.82 Speed - 1465 rpm/Hz – 50/V - 400 / 690 Y/A - 12.5 / 24.5 amps/CL – B/IP – 54/Wt. - 182 kg
Gear box	Make - Greaves gear/No. – 323867/Type - H3 200 Ration - 42.5/1 D1

Internal tube dimenstion for the cyclone seperator 600 mm dia. X 730 mm

ROTARY COOLER	1 m X 8.8 m
Kiln coolerWeight	3T
Motor RPM	1460
Gear box ratio	1 : 42.5
Output	1460/42.5 =34.3529
No. of spur gear teeth	80
No. of pinion gear teeth	16
Ratio	80/16 = 5
Pulley gear	14”
Motor pulley	7”
Ratio	2
r.p.m of cooler	(34.3529/5)/2 = 3.435 rpm
cooler refractory	approx 5 m
drive motor (belt drive)	make - SEW Eurodrive/KW - 7.5/ Type - DV 132 ML4/ V-400/ 690 Y/Hz – 50/A - 15 - 2 amp/ 8.8 amps/Class – F/IP – 54/Cos ϕ - 0.82/Nr - 3256427411.0002.98/ Wt. - 76.6kg
Gear box	Maker - greaves gears/No. – 323868/Serial no. - HG 4969 Type - H3160/Ratio - 42.5/1 p1
Plumber block	SMR - SNA - 520
Kiln cooler drive base frame	Date - 09/07/98/Wt. - 1.5 T/RC - 6

Cooler shell radiation

Discharge hood inlet hood

61/68/75/81/86/96/102/112/121/126/142/168/186/147/162/87/59

Damper open

Air flow rate at fan discharge	temp of air 70 degC fan designed for 400 Deg C
25%	7110 m3/hr
50%	11405 m3/hr
75%	12480 m3/hr
100%	12210 m3/hr
Cooler fan	Motor/Maker – PEM/Type - A synchronous motor C18 KW - 18.5/Speed - 1478 rpm/V- 420/32 amps

	insclass–B/connection-/frequency - 50 Hz/no. - 022 Wt - 180 kg
Fan ABB	Type - HCMB - 3 50 -1-1-3-2/M/C no. – 9863051/ Temp. - 400 deg C/Ref No. IAHLWB - 8044-1001 Speed - 2710 rpm