

MEASUR example fan for V INPLT training

ACME Cement

Kiln ID fan

Fan configuration: Double Width Double inlet fan

Fan type: Radial Tip

Hours of operation 8500 /year

Cost of electricity 0.066 \$/kWh Average

Fan inlet notes:

Since the traverse measurements are taken in the inlet box of the fan, there is no pressure loss between plane 3, plane 4 and plane 1

The cross sectional area of planes 4 and plane 1 is the sum of the two traverse planes (planes 3a and 3b)

The static pressure at plane 3 is the same as the static pressure at planes 4 and plane 1

Fan outlet notes:

Since the measurements at the fan outlet are very close to the fan, there is no pressure loss between planes 2 and 5

The cross sectional area of plane 2 is the same as plane 5

Density:

The gas is not air, so choose "other gas" and use the density given rather than using MEASUR to calculate density

Drive Side Plane			
Density	lb/ft3	0.044	
ports & points per port		8	4
Plane Dimensions	inches	78.25	32.125
Ps1	"WG	-26	
Temperature	oF DB	442	

Non-Drive Side Plane			
Density	lb/ft3	0.044	
ports & points per port		8	4
Plane Dimensions	inches	78.25	32.125
Ps1	"WG	-26	
Temperature	oF DB	435	

Points	Pv
1	1.28
2	1.78
3	2.18
4	2.22
5	1.25
6	1.82
7	2.8
8	2.35
9	1.45
10	1.7
11	2.95
12	3.3
13	1.05
14	1.7
15	2.6
16	3.6
17	1.17
18	1.8
19	2.4
20	4.4
21	1.2
22	1.8
23	1.9
24	2.6
25	1.17
26	1.6
27	3.2
28	2.6
29	0.86
30	1.4
31	1.71
32	2.4

Points	Pv
1	1.11
2	1.48
3	1.65
4	2.88
5	1.15
6	1.82
7	2.17
8	2.62
9	1.08
10	2.1
11	2.45
12	2.72
13	1.05
14	2.16
15	2.4
16	2.8
17	1.03
18	2.1
19	2.6
20	3.55
21	1.64
22	2.03
23	2.2
24	3.7
25	1.13
26	1.84
27	2.26
28	2.25
29	1.06
30	1.6
31	1.7
32	2.45

Outlet Test Plane

Dimensions	61.75	49 inches
Ps2		-3.5 "WG
Temperature		452 oF

Atmosphere

Temperature	75.3 oF
Barometer	28.98 " Hg
Elevation	617 ft ASL

Motor

Size	1500 hp
Current	170.5 Amps
Voltage	4160 Volts
Load	0.905
Efficiency	0.958
Power Factor	0.856