1. Kiln IDF Technical data

Main drive: 2800kW, 6.6KV,

Speed 993 rpm, VFD, operating ~ 88-90%

CUSTOMER DATA :

Inlet pressure (STATIC)	:	-95.00	mbar
Outlet pressure (STATIC)	:	.00	mbar
Inlet flow	:	704000.00	m3/h
Specific weight	:	.590	kg/m3
Dust concentration	:	80.	gr/m3
Inlet temperature	:	330.	°C
Barometric pressure at inlet	:	934.	mbar
Design temperature	:	430.	°C
Specific heat coefficient ratio	:	1.40	
Accessory at inlet	: inlet box		
Accessory at outlet	: pelican diffusor		

RESULT :

Rotating speed	:	990	rpm
Fan total efficiency with its own accessories	:	83.8	%
Calculation pressure of the fan	:	95.	mbar
Pelican diffusor length	:	1.77	m
Pelican diffusor outlet area	:	6.202	m2
Absorbed aeraulic power at (330 °C)	:	2132.	kW
Absorbed aeraulic power at (330.°C) with dust	:	2411.	kW
Absorbed aeraulic power at 20 °C without dust	:	4387.	kW
Absorbed power at 20°C at leakage flow of regulation device	:	1369.	kW
Tip speed	:	~~160~~.	m/s
Minimum power advised for the motor	:	2652.	kW
Special design			

CUSTOMER DATA :

Inlet pressure (STATIC)	:	-76.00	mbar
Outlet pressure (STATIC)	:	.00	mbar
Inlet flow	:	563000.00	m3/h
Specific weight	:	.590	kg/m
Dust concentration	:	80.	gr/m
Inlet temperature	:	330.	°C
Barometric pressure at inlet	:	934.	mbar
Specific heat coefficient ratio	:	1.40	
Accessory at inlet	: inlet box		
Accessory at outlet	: pelican diffusor		

RESULT :

Rotating speed	:	875	rpm
Fan total efficiency with its own accessories	:	84.8	%
Calculation pressure of the fan	:	76.	mbar
Pelican diffusor length	:	1.77	m
Pelican diffusor outlet area	:	6.202	m2
Absorbed aeraulic power at (330 °C)	:	1359.	kW
Absorbed aeraulic power at (330 °C) with dust	:	1538.	kW
Absorbed aeraulic power at 20 °C without dust	:	2798.	kW
Tip speed	:	142.	m/s
Special design			

2. Cooler EP Fan

Main drive: 223kW,

Speed: 750rpm, VFD

CUSTOMER DATA :

Inlet pressure (STATIC)	:	-12.44	mbar
Outlet pressure (STATIC)	:	.00	mbar
Inlet flow	:	481140.00	m3/h
Specific weight	:	.543	kg/m3
Inlet temperature	:	350.	°C
Elevation at inlet	:	20.	m
Design temperature	:	400.	°C
Specific heat coefficient ratio	:	1.40	
Reference specific weight	:	1.257	kg/m3
Reference temperature	:	0.	°C
Reference absolute pressure	:	1013.25	mbar
Accessory at inlet	: inlet box		
Accessory at outlet	: pelican diffusor		

RESULT :

Rotating speed	:	740	rpm
Calculation pressure of the fan	:	12.	mbar
Pelican diffusor length	:	.96	m
Pelican diffusor outlet area	:	7.051	m2
Absorbed aeraulic power at (350 °C)	:	203.	kW
Absorbed aeraulic power at 20 °C	:	432.	kW
Absorbed power at 20°C at leakage flow of regulation device	:	159.	kW
Tip speed	:	81	m/s
Minimum power advised for the motor - Without negative tolerances	:	223.	kW

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  Inlet pressure (STATIC)                    :          -8.00  mbar
  Outlet pressure (STATIC)                   :            .00  mbar
  Inlet flow                                 :     423400.00  m3/h
  Specific weight                            :            .545 kg/m3
  Inlet temperature                          :         350.    °C
  Elevation at inlet                         :          20.    m
  Specific heat coefficient ratio            :           1.40
  Reference specific weight                  :           1.257 kg/m3
  Reference temperature                      :           0.    °C
  Reference absolute pressure                :        1013.25  mbar
  Accessory at inlet        : inlet box
  Accessory at outlet       : pelican diffusor

RESULT    :
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  Rotating speed                             :         618     rpm

  Calculation pressure of the fan            :           8.    mbar
  Pelican diffusor length                    :            .96  m
  Pelican diffusor outlet area               :           7.051 m2

  Absorbed aeraulic power at (350 °C)        :           118.  kW
  Absorbed aeraulic power at 20 °C           :           252.  kW
  Tip speed                                  :          68     m/s
  Without negative tolerances
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3. By pass fan

1.12 AERAULIC CHARACTERISTICS

Flow (inlet)	: 15	m3/sec
Inlet static pressure	: -1960	Pa
Total outlet pressure	: 0	Pa
Inlet temperature	: 400	°C
Speed	: 990	RPM
Power absorbed at normal working temperature	: 36.4	kW

4. Cooler fans

5.1	2 pc	7 rows	8,1 m^3/s	8,8 kPa	132 kW
5.2	1 pc	3 rows	6,3 m^3/s	6,0 kPa	55 kW
5.3	1 pc	6 rows	11,6 m^3/s	5,1 kPa	90 kW
5.4	1 pc	6 rows	10.3 m^3/s	4,7 kPa	75 kW
5.5	1 pc	6 rows	9,2 m^3/s	4,2 kPa	75 kW
5.6	1 pc	6 rows	8,1 m^3/s	3,7 kPa	55 kW
5.7	1 pc	6 rows	7,2 m^3/s	3,4 kPa	37 kW
5.8	1 pc	9 rows	9,4 m^3/s	3,2 kPa	55 kW
5.9	1 pc	10 rows	8,7 m^3/s	3,0 kPa	45 kW