

CASE

STUDY

Kiln Exhaust ID
INVECEM (Venezuela)



Applications:

Metals: Mill stands, winders, pumps, fans.

Marine: Main propulsions, thrusters, pumps and compressors, dredgers.

Oil & Gas: Drillings, pumps, compressors, blowers. Water,

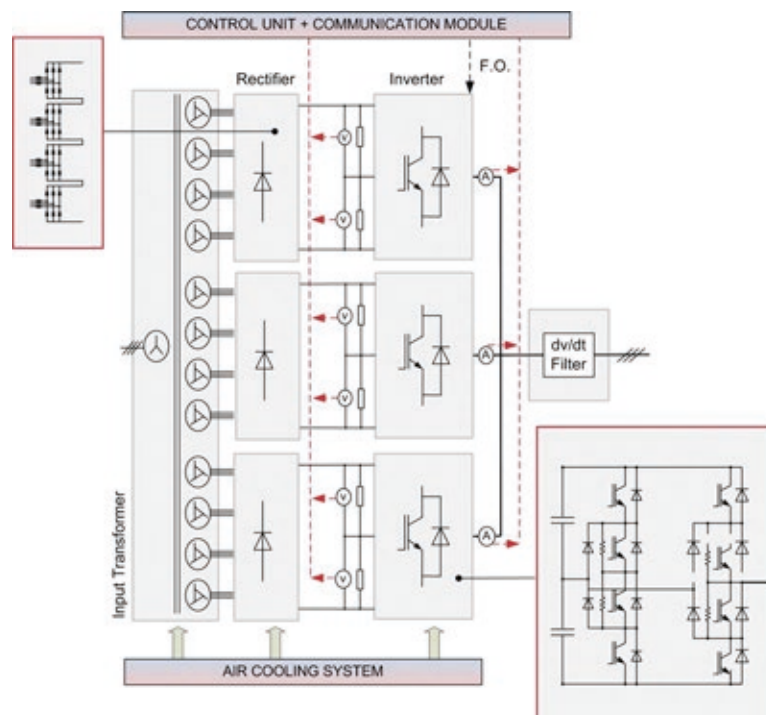
Wastewater and Power Generation: Fans and pumps.

Cement, Mining and Minerals: Mine hoists, grinding mills (SAG mills, ball mills, etc.), conveyors, crushers, fans

Ingeteam received an order from Scheuch, Austria, to supply the main drive package composed of: Line phase-shift rectifier transformer + frequency converter + motor, (ELIN make) to drive the kiln exhaust Induced Draft (ID) fan for INVECEM, Venezuela (former Holcim), in the frame of the expansion phase II of the Puerto Cumarebo Plant aimed at increasing the clinker production up to 4200 t.p.d.

Production of clinker generates exhaust gases that exit from the cold end of a rotary kiln. The solids leaving a cement kiln system in suspension in the exhaust gases are called cement kiln dust (CKD) – typically 30 grams per cubic meter-. By use of a fan (extractor), these particles evolved by the raw materials, are drawn out of the rotary kiln and collected for its treatment. Particles are captured by means of such extractors, which flow is efficiently controlled with a frequency converter which controls the motor and coupled fan

Achieve the optimal flow control and save energy



Converter type
Rectifier
Inverter
DC-Bus system
Cooling method
Type
Power rating
Speed
Voltage
Scope of Supply

Project management
 Basic and detailed engineering
 Equipment supply:
 · Ingedrive MV700 converter with integrated phase-shift rectifier transformer
 · Asynchronous motor (ELIN motoren)
 Commissioning
 After-sales services (360°CRS)

Technical Features
Ingedrive MV700

3x 24 Pulse Diode Front End (3x 24P DFE), non-regenerative
 Five level voltage source inverter with HV-IGBT power semiconductors, using PWM modulation techniques based on voltage vectors
 Consisting of high-capacity long-life polypropylene capacitors
 Air cooled, with redundant set of fans

Other Features
Induction Motor (Squirrel Cage type)

HKL156Z06
 2855 kW
 1180 rpm
 6,6 kV

