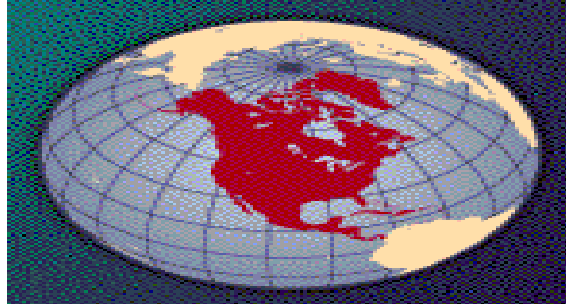


POWER CORRECTION SYSTEMS INC.



CEMENT & CLINKER GRINDING PLANTS

BRAHM SEGAL

LOS ANGELES, CA USA

PHONE NO. 310-247-4848

CELLULAR NO. 310-505-213

bsegal@activeharmonicfilters.com

COMMON QUESTIONS

VSK – VERTICAL SHAFT KILN CEMENT PLANTS

QUESTIONS / ANSWERS

QUESTION 1. For clinker and cement, please indicate electrical (Kwh/ton) and calorific consumption (kcal/kg) per ton produced.

ANSWER: Power consumption for clinker processing: 80.0-85.0 units/ton, power consumption for total cement: 110 -120.0 units/ton (which includes clinker processing). Heat consumption is 900 to 950 Kcal/kg for clinker.

QUESTION 2. Please clarify process environmental controls throughout for both VSK's emissions and cement pollution. (i.e. emission to atmosphere, to ground, etc)

ANSWER: Bag filters provided for Secondary crusher inlet and discharge. In the raw mill house, mill outlet is vented through a bag filter. The Blending and Storage silos have their own bag filters. In the VSK house, Bag filters are provided for the Noduliser and at the VSK discharge. The Cement mill outlet is also connected to a bag filter. Bag filters are provided for the Cement storage silos and the Packing section. In all these sections, dust emission is kept within 100 mg/Nm³. Dust control in open storage area is controlled through water spray.

QUESTION 3. Please clarify average production cost for Cement & Clinker per ton produced (Us\$/ton).

ANSWER: The production cost of clinker on the average works out to \$33 per tone. In regions with very high fuel and energy costs the production cost of cement is \$45.0 per ton. In regions with favorable economies of scale and appropriate fuel / energy management registered production costs are much lower.

QUESTION 4. Verify if your company has ever worked in partnership with a construction company to develop a complete turnkey project, where your company took responsibility for the entire project from inception to completion.

VSK CEMENT / CLINKER GRINDING PLANTS
QUESTIONS / ANSWERS

ANSWER: We have supplied turnkey projects directly to a number of customers. However, we has not tied up with any large construction group on an exclusive basis. On a specific region, we'll apply our construction company selection process on a case-by-case basis, in order to insure strict compliance with our standards, insure finished Plant's timely delivery and exercise tight controls costs.

In most cases, however, our customers select their own construction company and take responsibility of the civil works. In this case, we provide our customers with drawings related to the civil works as well as all equipment / systems, commissioning and training services

QUESTION 5. Please elaborate on fuels to be used with the kilns. If a mixture is used, what is the % of pet coke that can be mixed with other liquid combustibles for use with the VSK?

ANSWER: Low VM coal or coke is preferred in VSK Plants in order to maximize fuel utilization. There are a number of VSK plants operating using 100% Pet. coke. A few plants operate on 50% Pet. coke mixed with Coke breeze. There are some plants operating on 100% Coal of marginal quality. However, coal consumption is 10% higher than consumption of coke.

QUESTION 6. Average clinker temperature at the VSK's discharge.

ANSWER: Average clinker temperature at discharge is about 80 to 100 deg.C. Clinker coolers may be added if required.

QUESTION 7. Full project execution program including timetable diagrams for plants above, covering the entire project execution, from contract signing to finish.

ANSWER: See typical bar chart below showing the project execution program for a Cement Plant.

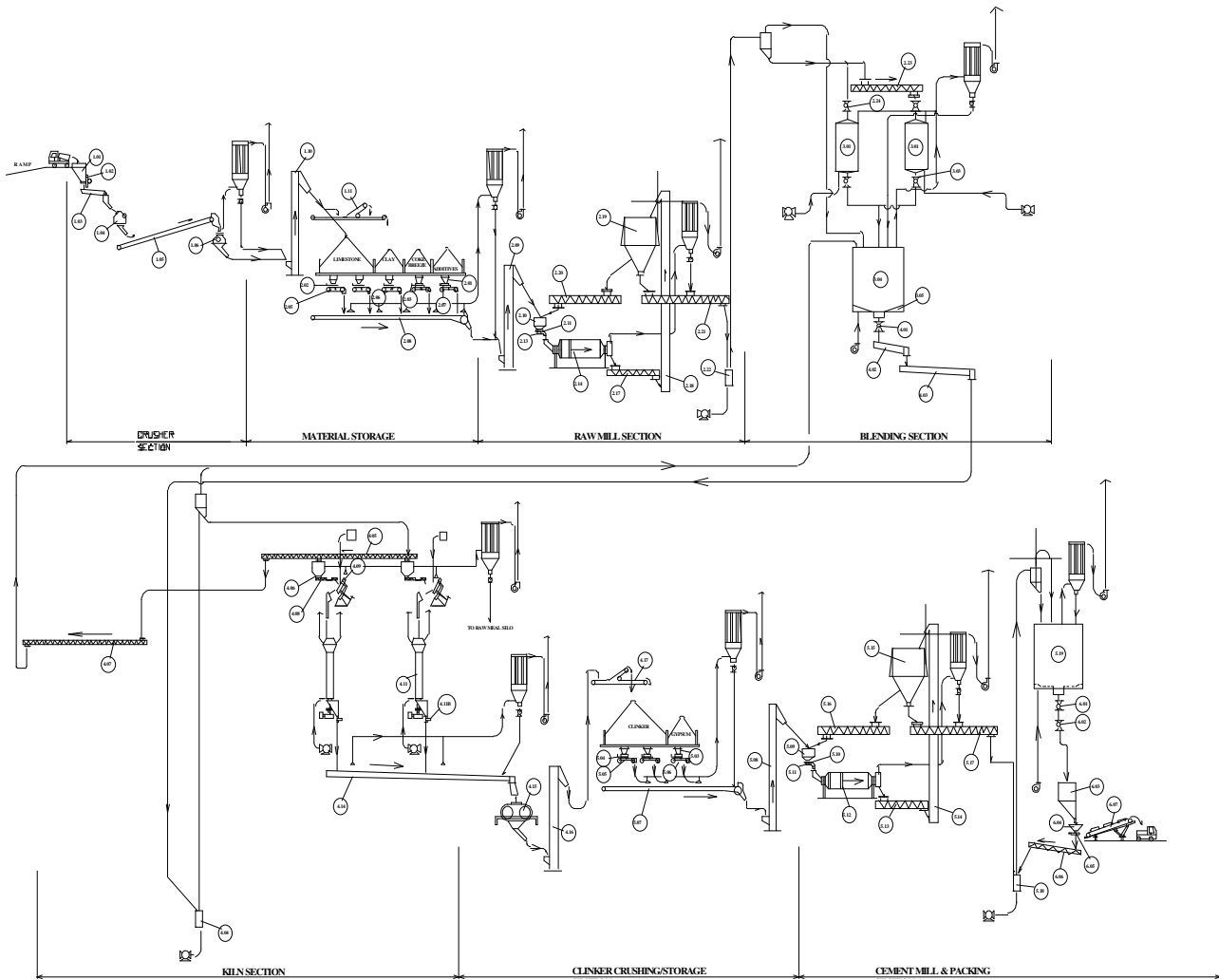
VSK CEMENT / CLINKER GRINDING PLANTS
 QUESTIONS / ANSWERS

PROJECT IMPLEMENTATION BAR CHART FOR 300 TPD VSK CEMENT PLANT

SL. No.	DESCRIPTION	*SIGNING OF CONTRACT (MONTHS)																	
		*0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1	PLACEMENT OF ORDERS FOR AND OPENING THE LETTER OF CREDIT (BY CLIENT)		█																
2	SUBMISSION OF TECHNICAL SPECIFICATION, LAYOUT, KEYPLAN			█	█														
3	RELEASE OF CIVIL CONSTRUCTION DRAWINGS				█	█													
4	STARTING AND ENDING OF CIVIL CONSTRUCTION (BY CLIENT)					█	█	█	█	█	█	█							
5	STARTING AND ENDING OF DISPATCH OF MACHINERY							█	█	█	█								
6	ARRIVING OF MACHINERY AT SITE										█	█	█	█					
7	STARTING AND ENDING OF ERECTION (BY CLIENT) (MECHANICAL AND ELECTRICAL)											█	█	█	█				
8	SETUP OF LABORATORY FOR ANALYSIS OF RAW AND RAWMIX DESIGNS													█	█				
9	TRIAL PRODUCTION (BY US & CLIENT)																	█	█
10	COMMERCIAL PRODUCTION (BY US & CLIENT)																	█	█
11	MAN POWER TRAINING (BY US)													█	█	█	█	█	█

VSK CEMENT / CLINKER GRINDING PLANTS
 QUESTIONS / ANSWERS

300 TPD VSK CEMENT PLANT



NOTE:-
 1) PLEASE READ THIS FLOW SHEET IN CONJUNCTION WITH EQUIPMENT LIST.
 2) ALL R.C.C. WORKS INCLUDING SILOS, HOPPERS, STRUCTURES, SUPPORTS AND BUILDINGS ARE IN CLIENT'S SCOPE.

REV.		DATE		BY		CHKD.		DATE		JOB NO.	
TITLE: 300 TPD (2x150) VSK CEMENT PLANT (TUNNEL BELT CONVEYOR) FLOW										DRG. NO. PDT-106-785	
DES: SELVAMAN										SUPERVISOR:	
DATE: 22-5-2003										SCALE:	
FILE NAME: PDT785.DWG										SHEET: 0	