



NOMINATION FOR ANNUAL AWARD FOR BEST ENGINEERING PROJECT 2009



KILN IN OPERATION

CARIBBEAN CEMENT COMPANY KILN NO. 5

LOCATION: Rockfort, Kingston

PROJECT TEAM

CLIENT/COORDINATOR: **Caribbean Cement Company Ltd.**

PROJECT MANAGER: **Ken A. Wiltshire**

ARCHITECT: **F.L. Smidth Inc.**

CIVIL/STRUCTURAL ENGINEER: **Penta Engineering Corp.**

MECHANICAL/ELECTRICAL ENGINEER: **Penta Engineering Corp.**

DESCRIPTION:

To Construct a new 2,800 metric tonnes per day Clinker Manufacturing line. Major elements required over 100,000M³ of excavation, 19,000M³ of concrete, over 2,500 tonnes of rebar, in excess of 3,500 tonnes of structural steel, 4,500 tonnes process equipment, 2,000 tonnes of refractory lining, thermal insulation and commissioning.

COMMUNITY BENEFITS:

Capacity to meet local market growth for 15 plus years, earning hard currency for export sales, over US\$3 million spent on human capital development and over J\$20 million spent on community training.

SPECIAL ENGINEERING:

Efficient equipment design, reduction in specific fuel consumption by 30% and specific power consumption by 40%. Use of *Carib Cement Plus* for all major foundations including preheater foundations of 1,800M³ to support 1,150 tonnes, 128M high tower.

OTHER ACHIEVEMENTS:

Formalized stakeholder relationship management process, no 'community' security, no riots or work stoppages, very high community work force input from HEART. Over the life of the project, over 2million man hours were worked without any lost limbs, serious injury or death.



COMPLETED CONCRETE KILN WITH STRUCTURAL STEELWORK FRAMING ADJACENT



HEALTH & SAFETY ON SITE



ERECTION OF STRUCTURAL STEELWORK ON RC FRAME



FORMWORK & CONCRETE PLACING TO KILN