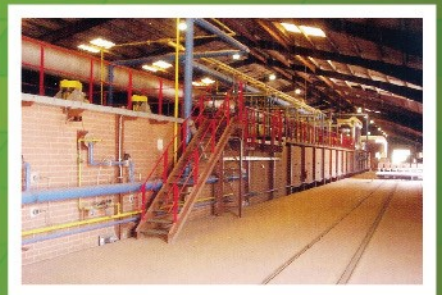


CONCEPT NOTE

Eco Friendly, Energy Efficient
Automatic Brick Manufacturing Project



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Energy Efficient, Eco Friendly Automatic Clay Brick Manufacturing Project (Gas Fired or Coal Spray Technology)

Fully Automatic Coal Spray Tunnel Kiln

Fully Automatic Coal Spray Tunnel Kiln is the most advanced tunnel kiln in the clay brick manufacturing industry. It is highly energy efficient, environment friendly, low emission, full automatic firing system, more automatic production line compared to traditional kilns.

In general, brick making process divided to following phases:

1. Clay Preparation / Raw material treatment
2. Green Brick Forming
3. Brick Drying
4. Pre-Kilning
5. Brick Firing

Following are some key facts for a fully automatic brick production system:

Basic Info	
<i>Type of Bricks</i>	Clay Solid Bricks
<i>Other Products</i>	6/10/11 round hole engineering bricks, 6/10/11 Rectangular hole engineering bricks, Pavement Bricks and others of similar type. (Max void up to 50%)
<i>Optional Product</i>	Facing Bricks, Roof Tiles, Button Tiles etc. (Need additional machines)
<i>Brick Size</i>	Solid Bricks: 9.5" x 4.5" x 2.75" Pavers: 8" x 4" x 2" Or as per buyer's requirement
<i>Production Capacity</i>	120,000 bricks (Solid/Perforated) / day (@ 100% utilization)
<i>Firing Method</i>	Fully Automated Coal Spray
<i>Energy Source</i>	Coal (Pulverized Fine Coal)
<i>Coal Consumption</i>	16 Tons / 100,000 bricks (@5200 kCal/kg++)
<i>Power Requirement</i>	1500 KW (total installed load)

<i>Land Requirement</i>	8 Acres +
<i>Annual Cycle</i>	330 days production
<i>Operation Period</i>	Forming 12 hours /day Drying & Firing 24 hours / day
<i>Number of Tunnels</i>	One tunnel for drying One tunnel for firing (Built-in Pre-kiln)
<i>Housing</i>	Enclosed workshop for brick forming, dryer and kiln Enclosed Coal Quarry and Open Shed for Clay Quarry
<i>Brick Setting</i>	Double Stage Setting
<i>Setting Automation</i>	Fully automatic system for dryer car loading & unloading Manual setting for kiln car loading
<i>Kiln Temperature</i>	Up to 1050° C
<i>Fire Control</i>	Fully Automatic Via Programmable Console
<i>No. of Production Labor</i>	20~30 technician/operator for 1 shift 10 technician/operator for 3 shifts (excluding laborer)

Financial Info

Head	Amount (BDT)
Building and Civil Works	120,132,544.80
Imported Brick Machines	190,769,176.58
Generators	21,298,368.00
Payloader, Excavator, Forklift	14,784,000.00
Duty Tax for all imported Machines @ 7.5%	17,013,865.84
Handling and installation expenses	21,013,520.00
Substation, Cable etc	18,000,000.00
Local Engineering Works	15,000,000.00
Other Expenses	24,535,280.00
Total	442,546,755.23

**BDT Forty-Four Crore Twenty-Five Lac Forty-Six Thousand
Seven Hundred Fifty-Five and Paise Twenty-Three Only**

Note: Above budget is estimated based on standard condition and excludes land, land development, IDCP, WC. Actual cost of the project will be calculated based on the project location, surrounding condition, soil profile, clay profile, financing source(s) and so on.

Means of Finance	
<i>Source of finance</i>	Syndicating Finance: IDCOL/BIFFL
<i>Rate of Interest</i>	8~9%
<i>Debt-Equity Ratio</i>	Up to 70:30
<i>Payback</i>	5 years (Approx)
<i>Loan Tenure</i>	8 years + 1.5 years (Grace)

Cost Analysis

Product A- Solid Bricks		
	Yr1	Sales
Clay cost per pc	0.75	
Coal cost per pc	1.68	
Electricity per pc	1.60	
Diesel per pc	0.85	
Direct Labor per pc	0.35	
Total Cost per pc	5.23	10.00+
Product B- 10 Round Hole Engineering Bricks		
Clay cost per pc	0.50	
Coal cost per pc	1.20	
Electricity per pc	1.40	
Diesel per pc	0.85	
Direct Labor per pc	0.35	
Total Cost per pc	4.30	12.00+
Product C- Pavers		
Clay cost per pc	0.35	
Coal cost per pc	0.95	
Electricity per pc	1.30	
Generator Diesel per pc	0.85	
Direct Labor per pc	0.35	
Total Cost per pc	3.80	14.00+

Note: Cost of Brick may vary in different location as it depends wholly on the cost of raw materials.

Product Images

