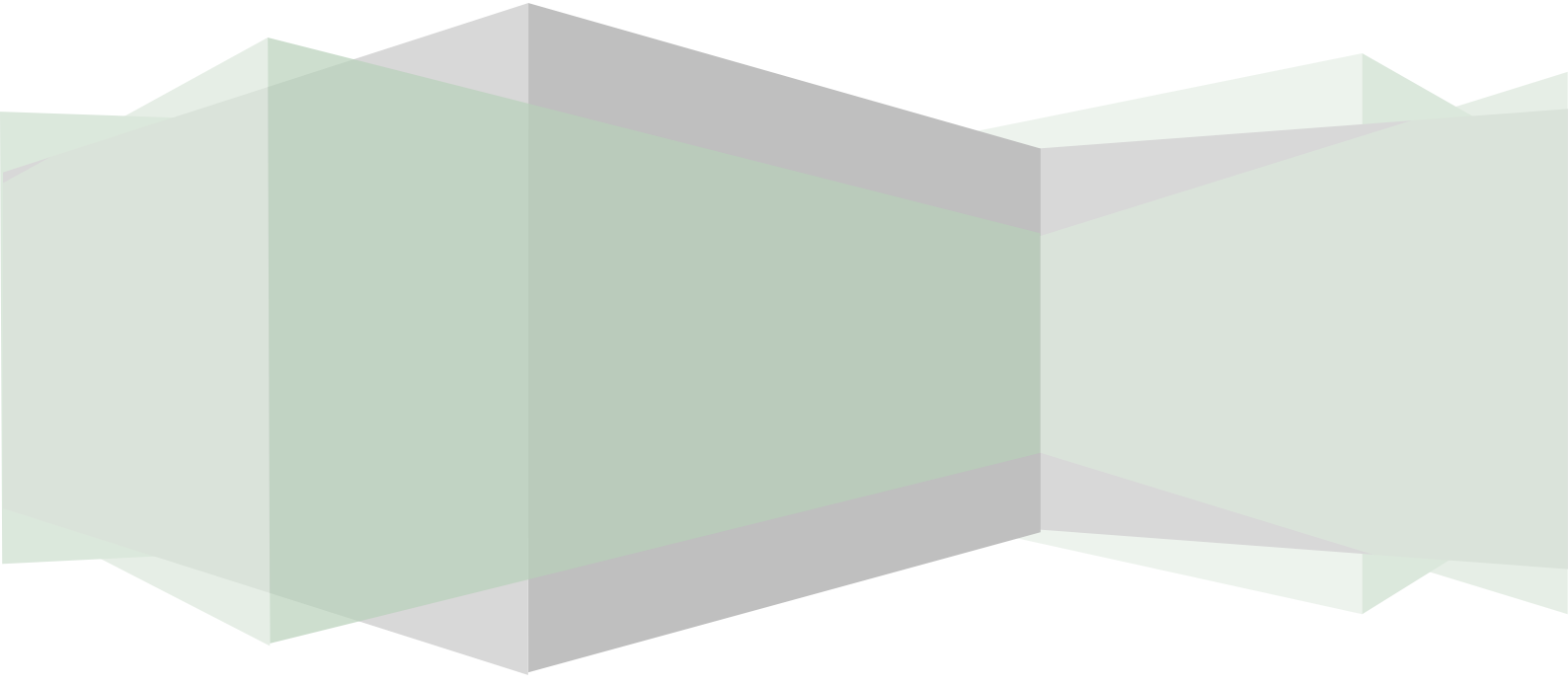
Accelerating Low Carbon Pathways for Climate Change Mitigation in Odisha

Fly Ash Bricks Production Technologies Awareness Workshop Proceedings

12 October, 2012
Rourkela

Organized by:
Regional Industries Centre
Department of MSME
Government of Odisha

In Association with:
Development Alternatives, New Delhi
and
Shakti Sustainable Energy Foundation
New Delhi



Introduction

An awareness workshop on Accelerating Low Carbon Pathways for Climate Change Mitigation in Odisha was organized by Regional Industries Centre (RIC), Rourkela in association with Development Alternatives and Shakti Sustainable Energy Foundation, New Delhi. The workshop, organized on 12th October 2012 at Brahmani Club, Rourkela focussed on promoting cleaner brick production technologies in the state with emphasis on fly ash brick technology.

Figure 1 : The Distinguished Panel

Energy intensive technologies like Clamps, Fixed and Movable chimney Bull's Trench Kilns (BTKs) are prevalent in Odisha although there is a ban on the operation of movable chimney BTK and clamps. Therefore, this workshop was extremely important in context of creating awareness on alternate low carbon technologies available which are appropriate to Odisha conditions and have a greater impact on climate change mitigation especially in the brick industry.

Panel and Participants

The workshop was attended by over 125 participants along with various prominent personalities like Mr. R.K. Nehru, Executive Director (MM), Rourkela Steel Plant, Dr. Soumen Maity, Programme Director, Development Alternatives, Mr. Chhabada, GM Marketing-RSP, Mr. S.N. Xess, AGM Environment RSP, Mr A.K. Gouraha, DGM, CPPI SAIL, Mr. S.K. Thakur, DGM CPPI SAIL, Mr. V.K. Pandey, DGM (Opn.) NTPC-SAIL, Dr. P. Sahu, Assistant Director, Dalmia Institute for Scientific and Industrial Research, officials from different government departments like Odisha State financial Cooperation (OSFC), Industrial Development Cooperation (IDCO), RIC Rourkela, District Industries Centre (DIC) Jharsuguda and Sundergarh and Presidents of Rourkela Chamber of Commerce and Industry, Orissa Association of Small and Medium Enterprises, District Small Scale Industries Association andOrissa Young Entrepreneurs Association, press and media, and entrepreneurs from Rourkela, Sundergarh and Jharsuguda.

Figure 2 : ED - MM, RSP - Mr .R.K. Nehru addressing the workshop

Proceedings

Welcoming all the guests, Mr. S. Hota, GM, RIC Rourkela mentioned the need of an awareness workshop in the state. He elucidated on the various schemes provided to new and existing entrepreneurs by the government for setting up small scale industries and urged them to avail their benefits. Dignitaries present in the Workshop were invited to share their thoughts and viewpoints on how all the stakeholders can work together to promote industrialization in the state in an environment friendly manner.

Figure 3: Mr Hota, GM RIC, Rourkela, opening the workshop

Speaking on this occasion, Chief Guest Mr. R.K. Nehru, t commended the efforts of Development Alternatives for gathering a diverse range of stakeholders on a common platform. He stressed on two major points. The urgent need for awareness about clean brick production technologies especially fly ash utilization technologies amongst various stakeholders both waste producers and waste utilizers. He called for immediate action on creating suitable policies for the adoption of fly ash bricks to create a market, thereby supporting entrepreneurs willing to adopt cleaner technologies.

Dr. Soumen Maity, Senior Programme Director, Development Alternatives, shared the status of brick industry in various Asian and African countries and their efforts in introducing cleaner practices and techniques. He also presented the various issues being faced by India today on production and utilization of industrial wastes. He highlighted the proactive policies in states of Orissa, Bihar, Delhi, etc. on promoting clean brick technologies and products. He also introduced the entrepreneurs to a variety of adoptable clean brick technologies like Vertical Shaft Brick Kiln, Zig-Zag technology, Hybrid Hoffman kiln, Fly ash etc.

Mr. V.K. Pandey, DGM, NTPC-SAIL highlighted the initiatives taken by NTPC-SAIL for easy supply of fly ash to various entrepreneurs free of cost. He stressed on the importance of quality control of finished products which was stressed to be the key for increasing acceptance among customers. The mindsets of the people also

Figure 4 : The workshop attended by government, industry and entrepreneurs

need to be changed for the acceptance of fly ash bricks. In this regard NTPC has already been spreading awareness by using fly ash bricks in their own construction.

Mr. J. Vajir, President, Rourkela Chamber of Commerce and Industry raised concern on the large amounts of fly ash being generated. He urged the entrepreneurs and Government in looking at ways of collaborating with industries to manage this. Development Alternatives was also requested to manage the same. He also requested to consider other applications besides bricks, raising awareness among customers, economic viability of fly ash units and how schemes can contribute towards this, taking into account realistic expenses in present context. Mr. Pradush Mishra, President of District Small Scale Industries Association highlighted the dependence of our country on thermal power generation and the benefits of fly ash bricks. He suggested that the government and promotional agencies should create awareness about these opportunities in the MSME sector and make the financial regime more favourable for the brick entrepreneurs. It was also suggested that the State Government should look at making available land at concessional rates to entrepreneurs willing to set up fly ash based brick production units.

Dr. P. Sahu, Assistant Director, Dalmia Institute of Scientific and Industrial Research focussed on the scientific facts related to fly ash. He reiterated that fly ash generation would increase in the coming years due to increasing thermal power generation in the country. He praised fly ash technology saying that they are economically feasible and sustainable.

Service Providers like TARA Machines and Tech Services Pvt Ltd and Dass Engineering also attended the workshop and presented entrepreneurs their technologies and services. Mr. Kulamani Mishra, an existing fly ash entrepreneur recounted his experience of starting this enterprise with the help of TARA Machines. The quality of fly ash bricks being produced by TARA Machines technology was way above those presently being available in Rourkela and nearby areas. However, he was saddened by the limited market for fly ash bricks due to less awareness about the use in both public and private construction.

The presentations were followed by an open discussion with the entrepreneurs. They put forth their main concerns in front of the officials present. These ranged from the availability of raw material like fly ash and lime sludge to land issues. Availability and allocation of land was one of the main barriers faced by entrepreneurs. Discussions about sanctioning land and creating industrial parks and areas were discussed.

The workshop ended with a vote of thanks by Kriti Nagrath, Development Alternatives. After lunch, a site visit to an operating fly ash unit in Kalunga was conducted. Many new and existing entrepreneurs visited the unit to learn about the good practices in fly ash brick production technology and management.

Way Forward

Some of the key points raised in the workshop are summarised below. Development Alternatives was requested to initiate and follow up on the action points. The major action points are:

- Devise strategies and implement action for increasing the awareness of common people about fly ash bricks towards changing mindsets and increasing its adoption.
- Work with Odisha Government to prepare suitable policies which are needed to be introduced by the government to promote use of fly ash bricks in public and private sector.
- Work out suitable financial regime for entrepreneurs interested in setting up enterprises.
- Allocation of land to entrepreneurs is a concern to be addressed by the State Government especially to entrepreneurs willing to set up fly ash brick enterprises.

Figure 5 : Site visit to Fly ash unit

Annex 1: List of participants

Sl.	Name	Email id.	Organization
1	Mr. S.K. Tripathy	sktrips.rkl@rediffmail.com	Entrepreneur
2	Mr. Anttaryami Parida		Do (Mayur Super Brick)
3	Mr. Deodatt Prasad	jaibalaje12345rourkela@gmail.com	Jaibalaji Enterprise
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8	Mr.Sayantan Patra		Entrepreneur
9	Mr. Anamay Ranjan	aranjan@taramachines.com	TARA Machines
10	Mr. Sujit Kumar Lal		Entrepreneur
11	Mr. Felix Toppo		F.M. Bricks
12	Mr. Pushkar		Entrepreneur
13	Mr. R.G. Nandi	national1951@indiaffmes.com	Entrepreneur
14	Mr. B.B. Ramen	rew12345@bsnl.in	Rana Engineering Works
15	Mr. Pabitra Bilwal	pbilwal@taramachines.com	TARA Machines
16	Mr. G.B. Pani	ggnbhr@yahoo.co.in	OSFC
17	Ms. Smrutireekha Mohanty		Entrepreneur
18	Ms. Deepika Mohanty		Entrepreneur
19	Mr. Sajjan Kumar Band		Entrepreneur
20	Ms. Anjali Mehera		RIC
21	Ms. Damayanti Tandi		RIC
22	Mr. M.K. Chawdhury		G.M., DIC, Sundergarh
23	Mr. M.N. Sahoo		G.M.., RIC (??)
24	Mr. Manidhyel		RIC
25	Mr. Udaynath Patra		Asst. Mngr., RIC
26	Mr. R.N. Goswami		RIC
27	Mr. N. Patra		Senapati Engg. Works
28	Mr. H.K. Mahapatra		Neegam Auto Engg. Works
29	Mr. S.K. Sitani		Entrepreneur
30	Mr. S. R. Narsania	srnarsaria10@gmail.com	Entrepreneur

31	Mr. M.K. Mishra	mkmishra29@gmail.com	Entrepreneur
32	Mr. S.K. Jagdev	sant.jagdev@gmail.com	Entrepreneur
33	Mr. Vibhor Sharma		Entrepreneur
34	Mr. Susanta Behera		Nakshatra Jyoti
35	Mr. Pawan Agarwal		Jai Sai Ram Udyog
36	Mr. P. Senapati		Racon Industries
37	Mr. Amadeep Singh		Weld Tech. Engineers
38	Mr. Kamal Kishore Khullal		Smart Engg. Works
39	Dr. P. Sahu	psahu@dalmiainstitute.in	Dalmia Institute of scientific and Industrial Research
40	Mr. V.K. Pandey	vkpandey31@gmail.com	Addl. G.M. (Operation+Chem.), NTPC-SAIL Power Ltd.
41	Mr. T. Nagaraju	raju_hyd14@yahoo.co.in	Asst. Mngr., NTPC-SAIL Power Co. (P) Ltd.
42	Mr. Roshon Toppo		Entrepreneur
43	Mr. Rajan Singh	rajansingh@gmail.com	M/S Nirmal Bricks
44	Mr. Kalpataru Nath		M/S Dass Engineering Works
45	Mr. S.K. Mohanty		Asst. Mngr., DIC,Jharsuguda
46	Mr. A.K. Pattanaik		SAIL, RSP
47	Mr. S.N. Xer		SAIL, RSP
48	Mr. S.K. Thakoor		SAIL, RSP
49	Mr. Sanjay Mittal		Jai Sri Ram Fly Ash Bricks
50	Mr. Jagdeep Singh		Entrepreneur
51	Mr. Ranjit Samarh	premier_klg@yahoo.com	Entrepreneur
52	Mr. Somnath Pandey		Entrepreneur
53	Mr. Manoj Kumar Das		Entrepreneur
54	Mr. Siddharth Patnaik	siddharth_patnaik@yahoo.com	Entrepreneur
55	Mr. Mahendra Singh	cn.singh@sailrsp.co.in	DGM, RSP
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57	Mr. Sanatan Naik		VSBK entreprenuer
58	Mr. O.P. Gupta		S.B. Fly Ash Brick
59	Mr. P.K. Kalo		Jr. Clerk, RIC, Rourkela
60	Mr. J. Kuilu		Jr. Steno, RIC, Rourkela
61	Mr. M.C. Sahu		Sr. Steno, RIC, Rourkela
62	Mr. Narendra Bag		RIC, Rourkela
63	Mr. Samir Agarwal		Entrepreneur
64	Mr. P.R. Patra		RIC, Rourkela
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66	Ar. S.S. Markand	arsapneswar@rediffmail.com	Entrepreneur

67	Mr. C.R. Nayan		DIC, Sundergarh
68	Mr. P.K. Nar		DIC, Sundergarh
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70	Ms. Snigdha Rani Mishra	ashis_rkl@yahoo.co.in	Shri Dhabaleswar Industry
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74	Mr. Aswini Kumar Patra		M/S Koel Bricks
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80	Mr. P. Mishra	prabhatmishra@rediffmail.com	RCPL
81	Mr. M.N. Oram		RCPL
82	Mr. Upendra Pradhan		Entrepreneur, Hi-tech fly ash brick
83	Mr. Ashwini Malani	jethsonrkl@gmail.com	Jethson Builders Pvt. Ltd.
84	Mr. Ambar Kumar	dasambar@gmail.com	Jatia Baba Stone
85	Mr. Pratap Padlin	pratapkurkl@gmail.com	Entrepreneur
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87	Mr. S.C. Mahanto	sureshmahanto@gmail.com	Entrepreneur
88	Mr. Om Prakash Killa	killaop@gmail.com	Entrepreneur
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91	Mr. Nunaram Hembrom		RIC, Rourkela
92	Ms. Puspalata Sahu		RIC, Rourkela
93	Mr. Paugamak		RIC, Rourkela
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98	Mr. S.K. Jash	shreedam_08@yahoo.com	
99	Mr. Kamaldeep Singh	kamaldeepsingh@gmail.com	Weldtech Engineers
100	Mr. Kishore Tekriwal	kishoretekriwal@yahoo.in	Krishna Agro Tech
101	Mr. Rohit Mishra		Entrepreneur
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103	Mr. A.R. Singh		Entrepreneur
104	Mr. Susanth Kumar Budhi		Entrepreneur
105	Mr. Satyanarayan Pradhan		Entrepreneur
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107	Mr. Rakesh Agarwal	marutistell19@gmail.com	Maruti Steel

Annex 2 : Presentations

Annex 3 : Promotional Material

Key Initiatives

Accelerating Cleaner Brick Production

Dr. Soumen Maity
Development Alternatives

RIC Workshop, Rourkela
12 October 2012

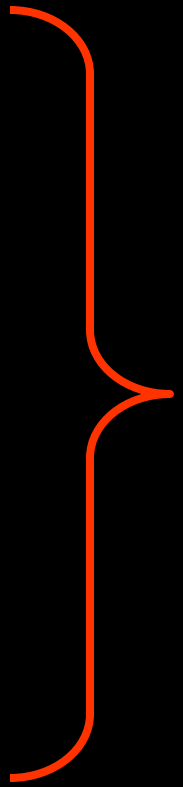
Context

Growth

- Population
- Industrialization
- Infrastructure

Demand

- Raw materials
- Energy
- Water



Urbanization

Degraded environment

Abject poverty

Cities ….


. . . Villages

Context

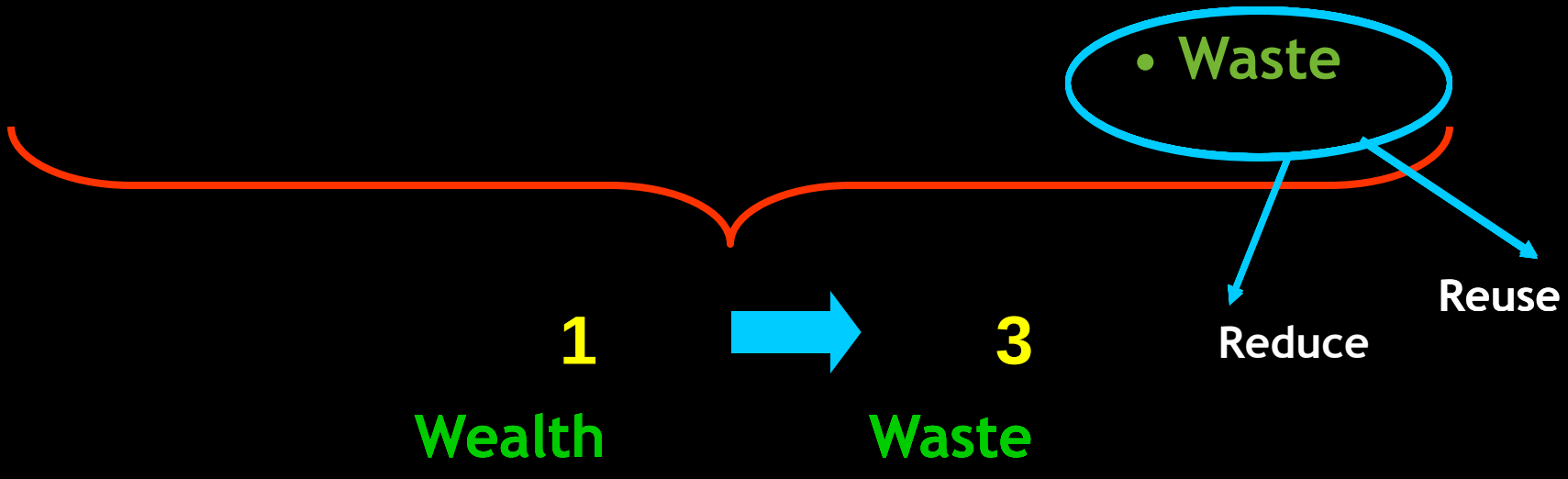
Economic Growth

Inputs

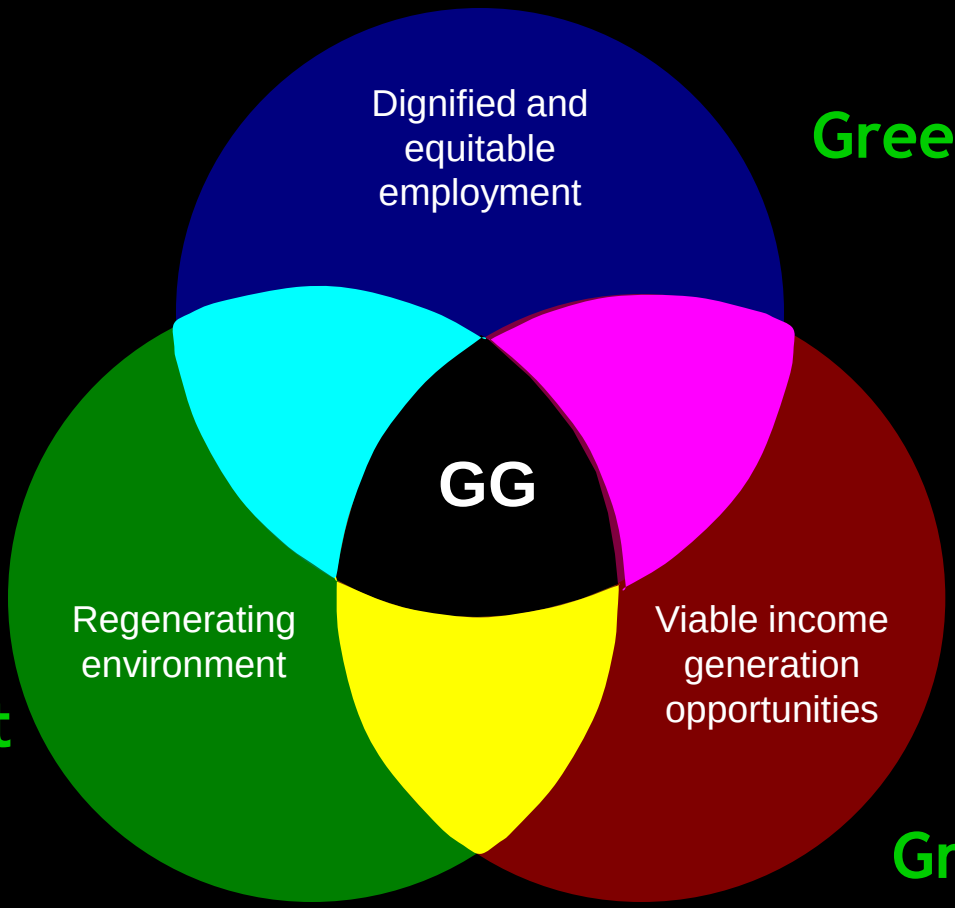
- Natural resources
- Human efforts

Outputs

- Goods
- Services
- Waste



Context


Dignified and equitable employment
Green Jobs
GG
Regenerating environment
Green Environment
Viable income generation opportunities
Green Business

Key Initiatives

- Technology
- Finance
- Market
- Policy

Technology

Technology Packages

- Accelerate new economic opportunities
- Enhance income of the poor
- Create wealth from waste

Value Creation

Technology

- Improvement of existing technologies
  - Enhance value
- Introduction of new technologies
  - Radical change

Improvement of existing technologies

Use of industrial wastes

Improvement of existing technologies

Mechanization

Improvement of existing technologies

Mechanization

Technology

Introduction of new technologies

Finance

- Business potentials
  - Improvement of existing technologies
    - 125 crore
  - New technologies
    - 600 crore
  - Equipment
    - 50 crore
    - 220 crore

Market

- Private investment
  - Builders and contractors
  - Own construction
- Public market
  - Demonstrate cleaner products

Policy

- Favourable but not forceful
- Demonstration of quality products and product use
- Awareness on cleaner brick technologies
- Single window clearance
- Large scale training and capacity building

THANKS

TARA MechRam-MX

High capacity production system for quality fly ash bricks

TARA MechRam technology offers state of the art production systems designed to manufacture high quality fly ash bricks.

TARA MechRam-MX is a high capacity integrated production system in which the functions of feeding raw materials, including fly ash, and compression of bricks are fully automated. The TARA MechRam-MX optimises manpower requirements while offering an assured productivity of 1000 bricks per hour with a team of eight operators only. The choice of Standard and Chamfered brick moulds is also available.

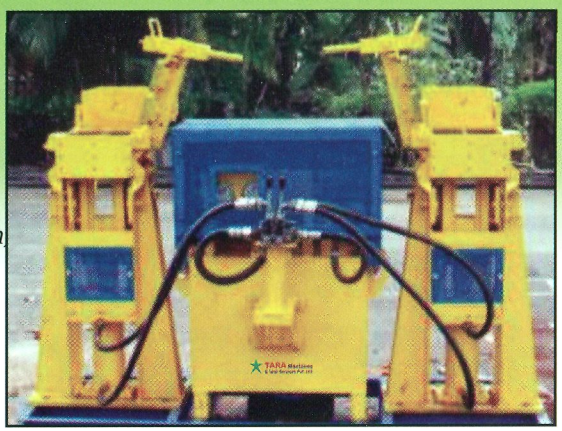
TARA MechRam-MX

Package Specifications

Description	**TARA MechRam-MX**
Effective Mould Area (L×W)	230 mm × 230 mm - 2 nos.
Block Height / Filling depth	75 mm / 130mm
Power Rating	5 HP - 3 Phase
Space Required	7 m × 10 m covered shed
Production Capacity	1000 Blocks/hour
Manpower	4
Description	**Pan Mixer**
Capacity	2 × 300 Kg
Power Rating	2 × 7.5 HP+ 2HP (conveyor), 3 Phase
Roller Pan mixers	300 kg/Charge, 2 nos
Manpower	4
Product Transfer Mechanism	Pallet truck
Description	**Hydraulic Pallet Trolley**
Maximum Load Carrying Capacity	2000 Kg

TARA MechRam-MV

Fly ash technology for high quality bricks



The TARA MechRam-MV is an elegant machine with a twin moulding mechanism powered by a single hydraulic power pack.

The TARA MechRam-MV is capable of producing bricks of different sizes i.e. 230 × 110 × 75mm and 190 × 90 × 90 mm with the uniqueness of producing bricks of both Standard and Chamfered shapes.

TARA Machines provides a complete package of services; including material and product testing, determination of optimum mix, supply of customized machinery and accessories, commissioning of machines and training of operators.

Package Specifications

Description	TARA MechRam-MV
Product Size(Standard/Chamfered)	230×110×75 mm
Production Capacity	650 Blocks/hour
Roller Pan mixer	300 kg/Charge
Electrical Power (3 Phase)	5+7.5 HP
Manpower	8-10 persons
Product Transfer Mechanism	Pallet trolley

Chamfered

Standard