FOUNDRY SLAG WASTE BASED CONCRETE PAVER BLOCK TECHNOLOGY



Foundry Slag Waste (FSW) based Paving Block technology is a process of utilizing foundry slag waste into quality paving blocks through mechanized mixing and compaction processes. The technology has been developed based on scientific analysis of the waste materials and process engineering. The technology relies on the principle of correct sizing of raw materials and proportioning & mixing technique.

Technology Specification

- Raw materials foundry slag waste, river or quarry sand/ stone dust, 43 grade Ordinary Portland Cement and potable water
- Machines Hydraulic 70 tonnes compaction machine/ vibrating table, concrete mixer, jaw crusher and mechanical sieving machine
- Block fabrication methodology compaction/ vibration
- Curing period 28 days

Product Specification

- Product developed utilizing foundry slag waste meets the M-30 grade (>30 N/mm² compressive strength¹) designation of paver blocks as per IS 15658: 2006
- The paver blocks can be used in **non-traffic application** such as building premises, monument premises, landscapes, public gardens/ parks, domestic drives, paths and patios, embankment slopes, sand stabilization area etc.

¹Property tested at Maulana Azad National Institute of Technology, Bhopal, Madhya Pradesh and Shriram Institute for Industrial Research, New Delhi

Research support by:



100	C
11	S
. 200	C
ননকার বেয়ন	C





FOUNDRY SLAG WASTE BASED CONCRETE PAVER BLOCK TECHNOLOGY



Foundry Slag Waste Based Concrete Paver Blocks Technology: Facts and Figure

	Hydraulic Compaction	Vibration Technique
Energy Consumption		
Power Rating	5 HP, 3 Phase	2 HP, 3 Phase
Enterprise Features		
Machine Requirements	Jaw Crusher, 70 tonnes hydraulic compaction machine, steel moulds, concrete mixer and mechanical sieving machine	Jaw Crusher, vibration table, PVC moulds, concrete mixer and mechanical sieving machine
Daily Production	1,200 – 1,500 pavers/ day	1,000 – 1,500 pavers/ day
Operation Area	10ft X 15ft (including shed)	10ft X 15ft (including shed)
Machine Operation		
Construction & Machine Installation Time	1 – 3 days	1 – 3 days
Manpower Required	5-6	5-6
Enterprise Investment		
Machine Costs	INR. 500,000	INR. 700,000
Working Capital	INR. 100,000	INR. 75,000

For further details please contact:

Ayan Kumar Keora (akkeora@devalt.org), Dr. Soumen Maity (smaity@devalt.org)

Research support by:





SEED DIVISION Department of Science & Technology Government of India



