

Experiences of first pilot project of Construction and Demolition Waste Management in Delhi

In 2009 the Municipal Corporation of Delhi (MCD), and IL&FS Environmental Infrastructure and Services Ltd (IEISL) took a pioneering initiative of setting up a pilot project to process 500 tons per day (TPD) of C&D Waste in Burari, Jahangirpuri, Delhi, which is a first of its kind plant in the country, on Public Private Partnership model. A Concession Agreement for a period of 10 years had been signed and 7 acres of land provided by MCD for setting up the processing unit.

The project is based on an integrated approach covering collection and transportation of C&D waste from designated points and processing of C&D waste. C&D waste is collected from designated points by using JCBs; transportation to the processing site is through vehicles fitted with GPS.

Process flow

- Incoming waste is subjected to weighment at the site.
- Segregation of undesirable items like rags, plastics, metal, Fiber Reinforced Plastic (FRP) sheets etc. through mechanical and manual means.
- Remaining waste is segregated into 3 parts:
 - a) Whole bricks (it's kept for internal use and sale)
 - b) Large concrete
 - c) Mixed C&D waste
- Collected C&D waste is first screened through the grizzly to remove loose soil and muck.
- Over- sized screened materials are collected in the hand sorting section where bricks and concrete are separated.
- Segregated bigger size concrete boulders as well as mixed concrete are broken.
- Large scale screening of the crushed material is done.
- Crushed waste is then processed through the use of a sequence of machinery consisting of the Grizzly, Vibro Screens, Evo Wash, Thickener etc., which are capable of segregating sand from mixed C&D waste.
- The wet processing technology helps in retrieving fine particles less than 5mm particles as well as controlling the dust and noise.

Final Products

The processed waste is being used for two purposes – making of road sub-base and making of pavement blocks and pre-cast products like kerb stones, paver blocks and square tiles. The loose soil and sand is sold in the market and the by-products are also used in construction of bus shelters in the city.

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