

# **TATA STEEL LONG PRODUCTS LTD. (TSLPL)**

## **JOURNEY OF FLY ASH**

- ✓ Tata Steel Long Products Limited (TSLP), formerly known as Tata Sponge Iron Limited.
- ✓ We are in the business of manufacturing high alloy steel, primarily for the auto sector and wire rope industry.
- ✓ Capacity of ~1 million tonne capacity in the long product segment.
- ✓ We have coal based captive power plant of capacity ~70 MW apart from other steel making & waste heat recovery boilers.
- ✓ These Coal based power Plant generate ~ 18 KT/Month of Fly Ash (Including Bottom Ash).
- ✓ Initially most of the Fly Ash (90%) was being stored at ASH Mounds before accusation of Usha Martin.
- ✓ Post acquisition TSLP tried to push the Fly Ash Utilization in Brick Making / Cement Plants & other Paver Block manufactures.
- ✓ Door to Door Campaigns were run to spread awareness, whereas the transportation cost was born by TSLP in 2019.
- ✓ Bottom Ash was still a challenge to convince for its usage and consumptions.





## OUR VISION

*To be one of the most innovative and enterprising by-products division of the world*

## PURPOSE OF THE BUSINESS

- ✓ Reduce , Reuse & Recycle.
- ✓ Value creation of By-Products
  - Converting into marketable products
  - Moving downstream in the Value Chain
  - Reducing top soil erosion by providing Fly ash

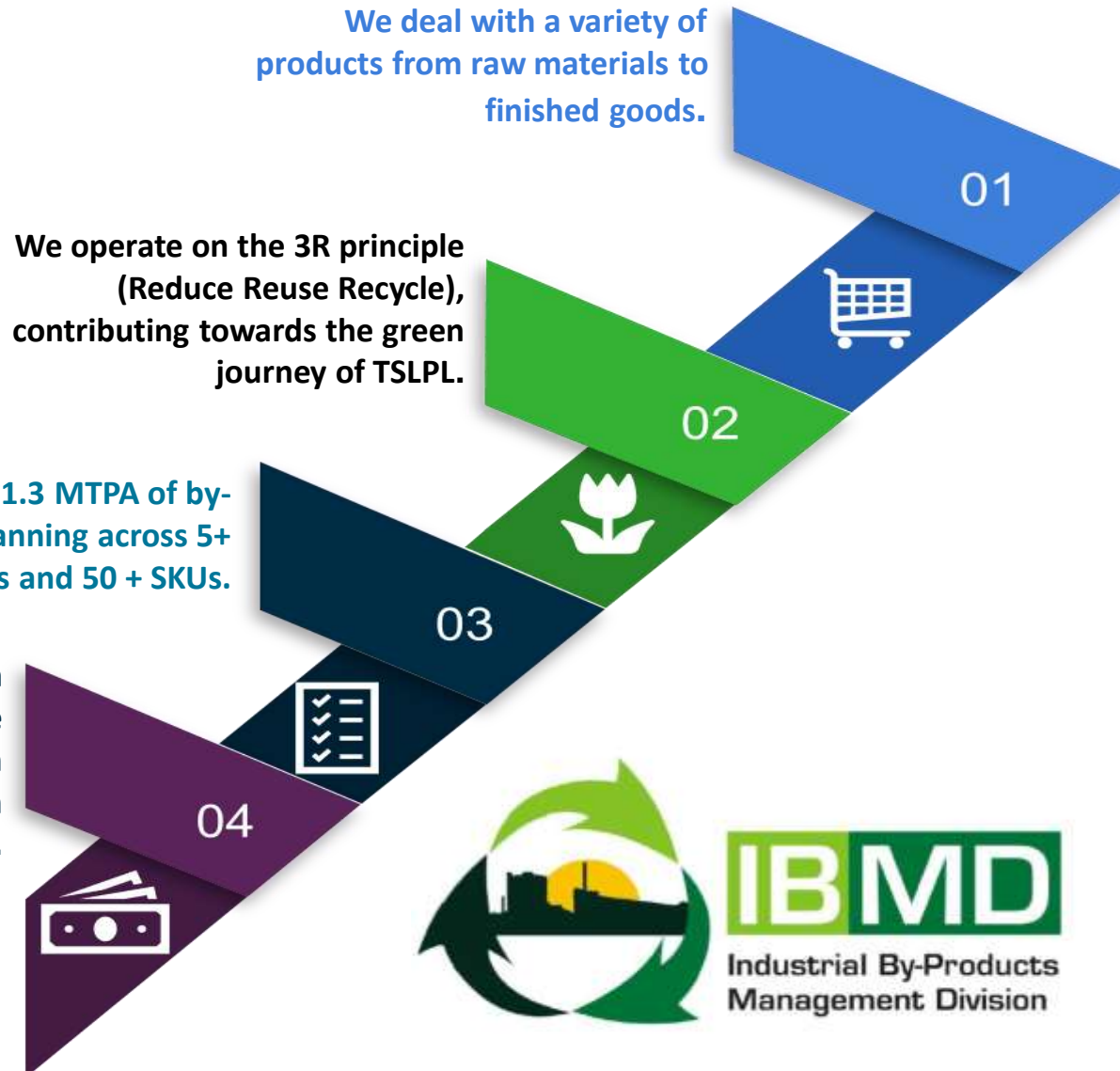
## FACTS

We deal with a variety of products from raw materials to finished goods.

We operate on the 3R principle (Reduce Reuse Recycle), contributing towards the green journey of TSLPL.

We handle ~1.3 MTPA of by-products spanning across 5+ categories and 50 + SKUs.

Downstream Value Enhancement in collaboration with stakeholders.



**IBMD**

Industrial By-Products Management Division



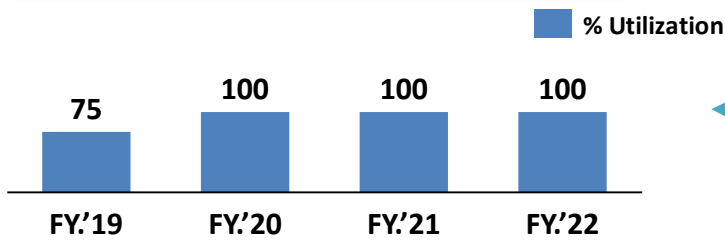
- ✓ Bricks made of Fly Ash are less strong than brick made of clay.
- ✓ Fly ash bricks are not environment friendly and have more water abortion.
- ✓ High cost of production may require cement for binding etc.



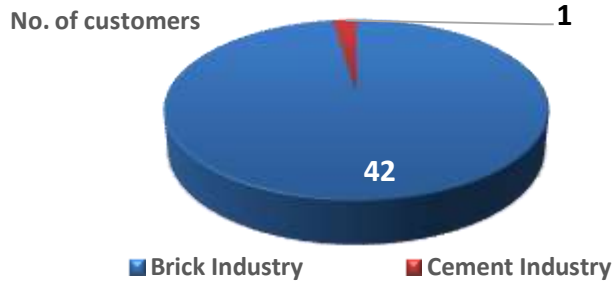
- ✓ Bricks are light in weight and hence are very suitable for multi-floored buildings.
- ✓ Fly ash bricks absorb less heat and considering the Indian climate, it makes it better when compared to clay bricks.
- ✓ At cost front, it requires less mortar during construction. Further, the machine requires less labor too.
- ✓ The costs associated with water wastage and raw material wastage are lesser too.
- ✓ The compressive strength is very high, and they are less porous. They absorb less water and saves cost there, as well.
- ✓ It is environmentally friendly and hence allows your business to take a step towards sustainable development.
- ✓ Production of fly ash bricks requires no fossil fuel and hence does not lead to the emission of green house gases.
- ✓ Production of clay bricks damages the top-soil and this is prevented in the manufacturing process of fly ash bricks.
- ✓ There is no pollution or environmental damage, as a result of which it has been put into the white category of products.
- ✓ Fly ash bricks are stronger, more uniform and denser as compared to clay bricks.
- ✓ While their mortar consumption is low, their wastage is only about 1% as against that of clay bricks which are about 10%.

# TSLPL FLY Ash Overview

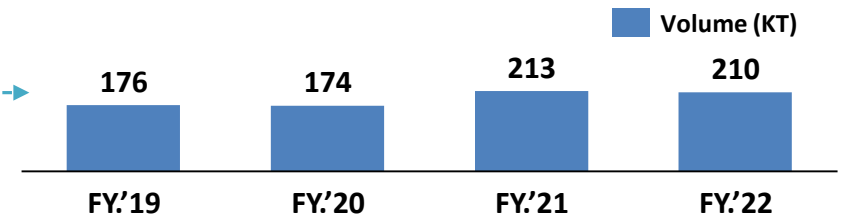
## Ash Utilization Trend



## Market Presence



## Fly Ash Quantity Handled (KT)



## Demand Vs Supply Overview

6 Major FLY ASH producer caters to 85 Brick plants of Jamshedpur



Advance automatic machine used for manufacturing bricks reduces the manual intervention thus increasing the productivity.

Ensuring availability of Ash to customer on FOC basis and in environment friendly manner.



Creating opportunities to the under privilege people of the society

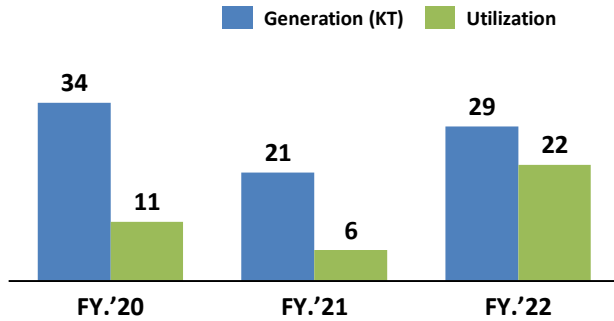
# Commercialization of Bottom ash

## About Bottom Ash

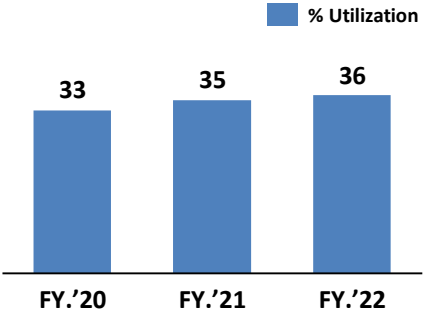


Bottom ash is part of the **non-combustible residue of combustion** in a power plant, boiler, furnace or incinerator. In an industrial context, it has traditionally referred to coal combustion and comprises traces of combustibles embedded in forming clinkers and sticking to hot side walls of a coal-burning furnace during its operation.

## TSLPL Bottom Ash overview



## TSLPL Bottom Ash utilization



## Chemical analysis

Test Type	Chemical Analysis Report				
Parameter	%Fe(t)	%SiO2	%Al2O3	%CaO	%MgO
Bottom Ash	10.33	57.45	19.96	2.13	1.37

## Vision



Identifying avenues for 100 % utilization of Bottom Ash

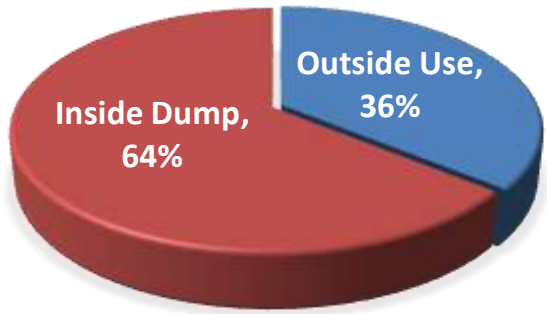


## Idea Evolution

- Utilization in Turf making as a replacement of sand
- Utilization in brick making as a replacement of sand
- Bottom ash utilization in cement making as a binder.

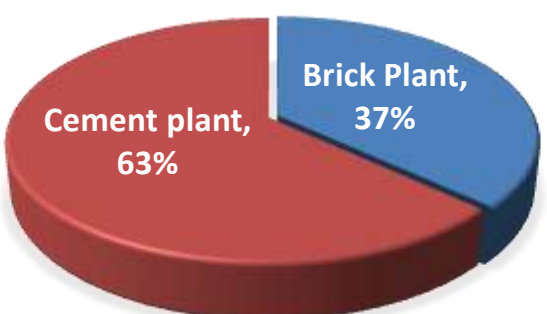
## Current practise & Utilization

FY-22 BOTTOM ASH UTILIZATION OVERVIEW



## Utilization After commercialization

BOTTOM ASH UTILIZATION OVERVIEW



## IBMD Success Story

- 100 % utilization of bottom ash achieved by supplying in brick and cement industry in March-22.
- First ever sales of Bottom ash started in April '22
- One Cement plant has taken a successful trials and shown interest to buy Bottom Ash from us.

# Thanks

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