GO GREEN...

Confederation of Indian Industry

NEED FOR THE PRACTICE

Present practice:

- The distillery is a largest red category industry which has the Conventional effluent treatment system.
- Effluent is rich in Nutrients like N, P & K and other micro nutrients
- Conventional method of treating this effluent is mixing with press mud to produce bio compost which is sold as a fertilizer as well as sold to cement industries to use as alternative fuel & grinding agent.

Need for change:

- With the above technology, we were permitted to operate the plant only for 270 days a year and we were proposing to operate 365 days a year
- To achieve ZLD with new a concept & technology
- To create wealth from waste

UNIQUENESS OF OUR DISTILLERY

- Distillery can operate 365 days
- Zero Liquid Discharge
- Creating waste to wealth in terms of Potash rich fertilizer
- Converting the spent wash in to renewal energy through Incineration
- Entire concentrated Spent wash fired in the incineration boiler at 60 Bx
- Converting the fly Ash (Solid waste) into Fertilizer – Value added product
- Converting the emitted C02 gas in to valuable liquid product form
- Recycle & Reuse of the generated process condensate from Evaporation including the spent lees(Distillation) back into fermentation to conserve the ground water.

METHODS ADOPTED IN OUR DISTILLERY UNITS

DISTILLERY EFFLUENT – SPENT WASH

Evaporation- MEE system

Condensate

RO PLANT

Fermentation

Recycle/Complete ZLD

Con Spent wash

INCINERATION

Fly Ash

POTASH FERTILIZER

WAY FORWARD – PROJECT IMPLEMENTATION

Project title No.1 CONVERTING THE SPENT WASH INTO RENEWABLE ENERGY

- M/s THERMAX has partner in this journey
- Project Commencement date : 02nd May 2008
- Completion date : 31st Jan 2009

PROJECT TANGIBLE BENEFIT - 17 Crores per Annum

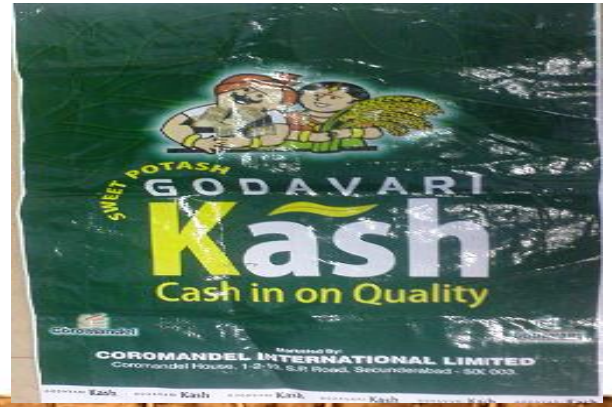
Boiler Steam generation	: 480 TPD
Actual Coal requirement	: 120 TPD (1MT coal generate 4MT of steam)
Input of **C**oncentrated **S**pent **W**ash	: 195 TPD (1MT CSW generate 1.8MT Steam)
Steam from the Con Spent wash	: 352 TPD
Coal Savings by Con Spent wash	: 88 TPD
Coal savings per annum (300 Days)	: 26400 Mt

Project title No.2 *FLY ASH (SOLID WASTE) INTO FERTILIZER – VAP*

- In house innovation - Rich in water soluble potash 20 to 22 %
- Project Commencement date : 15th Jan 2010
- Completion date : 12th Jan 2013

PROJECT TANGIBLE BENEFIT - 2.50 Crores per Annum

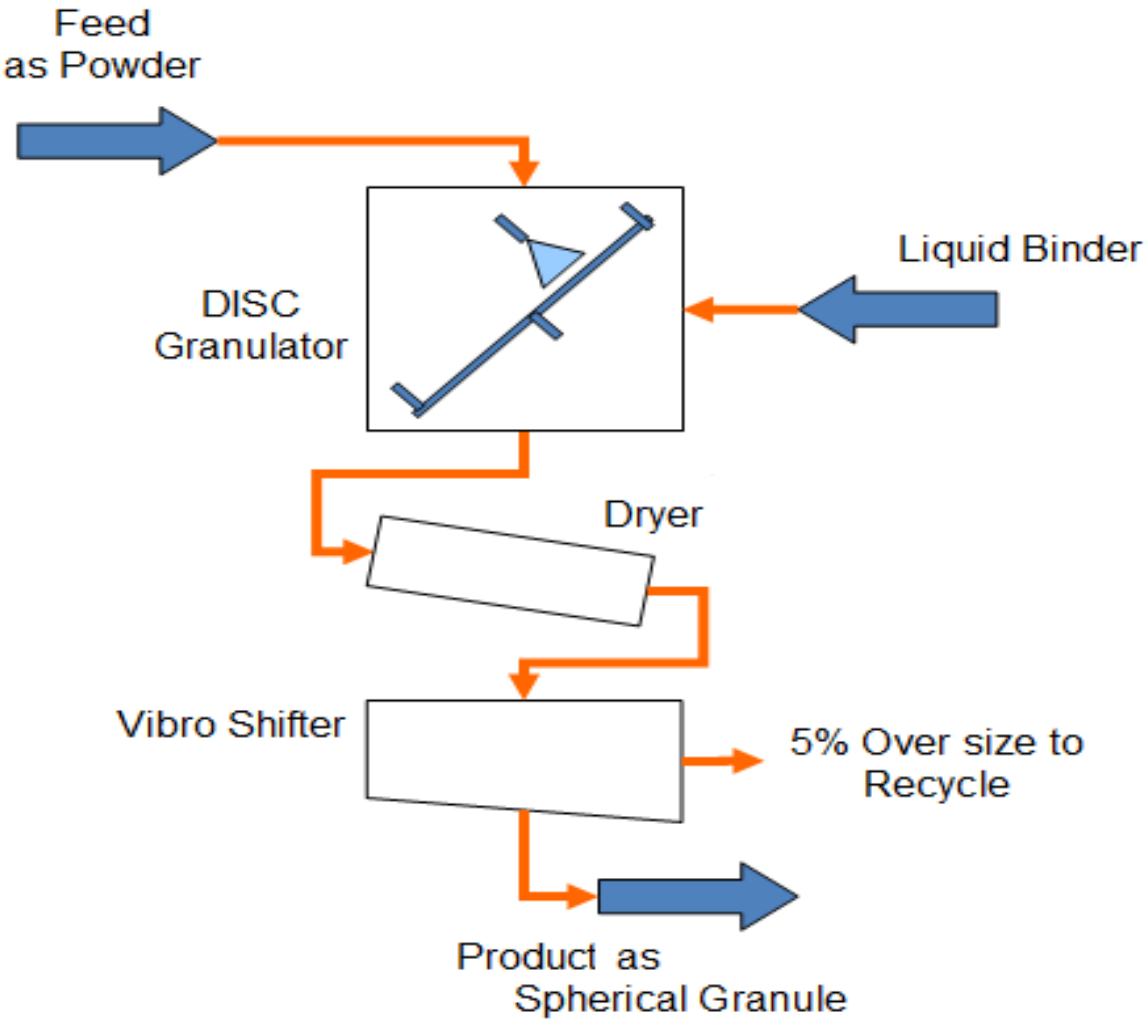
Fly Ash generation : 26 TPD.
CSW as binding agent : 10 TPD (55% solids @ 58–60 bx)
Expected production per day : 35 TPD (4.0 - 6.0 % moisture)

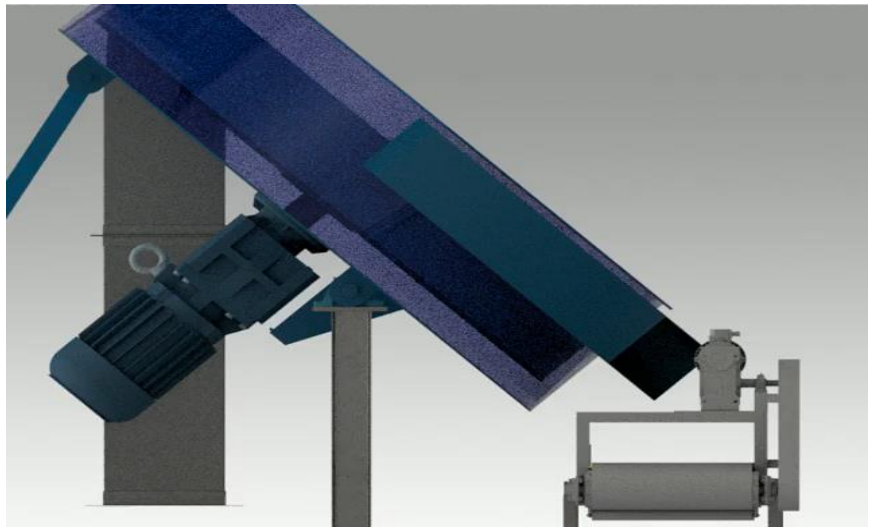


Fly Ash as Waste from Boiler

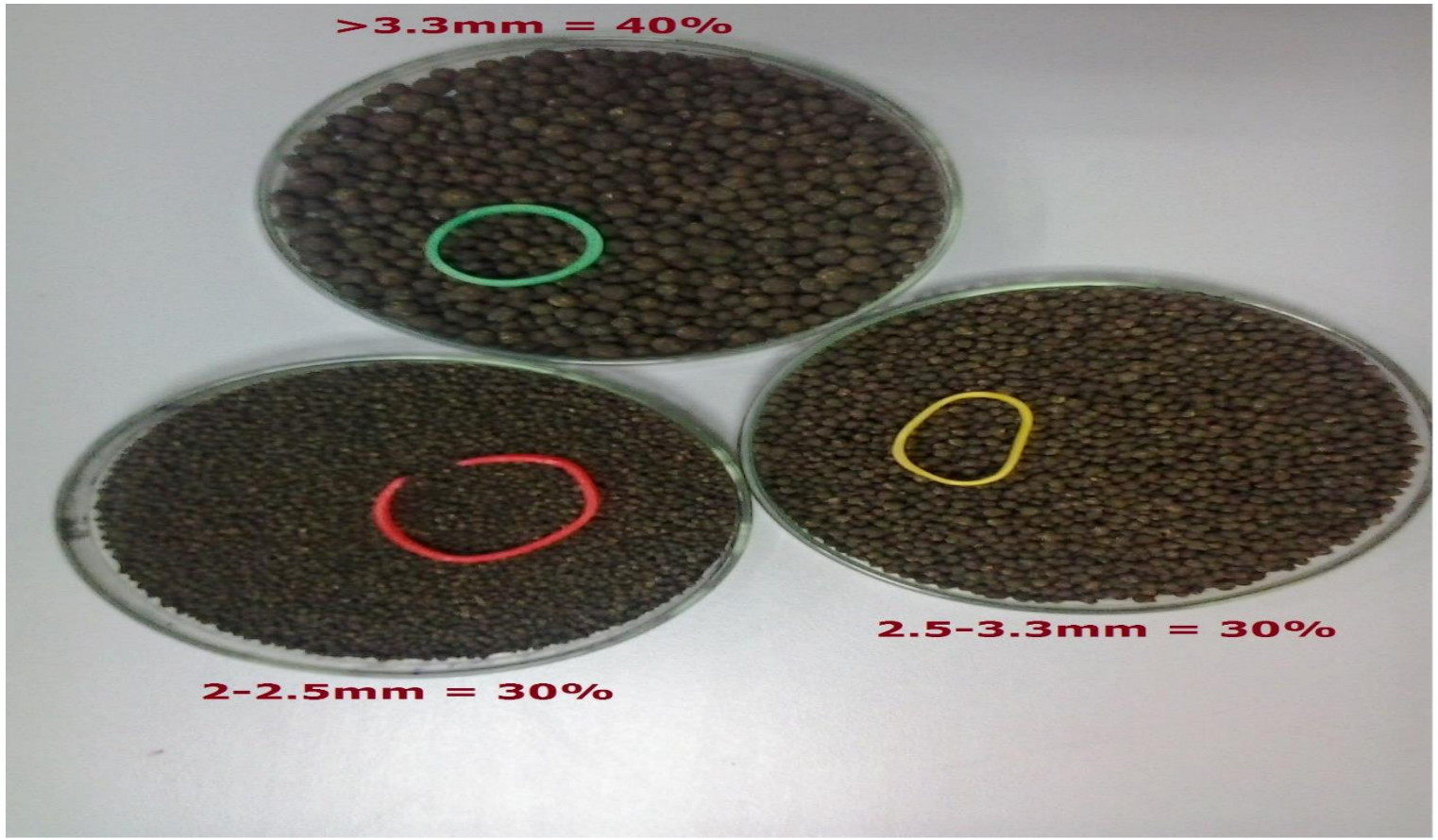
Sweet Potash Granules as Product of Fertilizer

SCHEME-2: DISC- Granulation





- Boiler ash rich in Potash is sold as fertlizer.
- Ash is granulated to a size of 2 mm to 6 mm and sold.
- Survey conducted in various state and good feed back is obtained from the farmers.



Green Revolution

Govt of India – Fertilizer division – Fertilizer control order has listed this product as **"Fly ASH (KASH) derived from Molasses"**

Sl.No	Parameters	FCO Norms(%)	KASH G Results(%)
1	Moisture	< 4.79	< 4.50
2	Water Soluble Potash	>14.70	>18-19.5
3	Total Nitrogen	>1.66	>0.65
4	Total Phosphorus	>0.39	>0.30

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IFFCO Tie up

IFFCO
Indian Farmers Fertiliser Cooperative Limited

In addition, we have produced fertilizer (Spent wash Ash) and established a partnership with IFFCO as per our mutual agreement. Our fertilizer is being distributed by M/s. IFFCO and sold across India.

Field Trial and Findings

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As a

Our Journey Continues For Excellence…

THANKS TO ALL