

## **YADESHWARI AGRO PRODUCTS LTD., Unit No. 2 Khamgaon Barshi**

### **Action Plan for expansion of existing 2500 TCD to 4500 TCD plant.**

- 1 Existing cane unloader Bridge modification and verify correct capacity of cane unloader 12.5 metric ton is available with power and gearbox capacity?? And to correct it.
- 2 To add additional cane unloader Bridge and two 12.5 metric ton new cane unloader trolleys, heavy duty directly coupled with nutech make crane duty gear box & motor only.
- 3 To add one feeder table of 8" X 7" mtr size.
- 4 To do necessary modifications in feeder tables for proper cane dropping in existing cane carrier.
- 5 To overcome difficulties and avoid huge investment for cane carrier replacement and preparatory devices replacement add our self-designed, innovative, miracle and new concept unit number 1 (Brahmastra) as per our design for chock less and jamming less patented design to increase sure shoot crushing.
- 6 To replace existing cane Kicker by cane Chopper with 250 HP and 300 RPM, 1600 mm swing dia. and minimum 32 Nos knives.
- 7 Existing cane leveller power to be increased to 300 KW, 585 RPM. (Existing 250 HP motor to be reused for new chopper)  
Cane preparatory index to be increased from existing 80 to 86 minimum.
- 8 For overall plant smooth, uniform, consistent and constant crushing with increased milling and boiler thermal Efficiency and to increase bagasse saving to install our self-designed, innovative, miracle and new concept unit No. 2 (Overall plants stabilizer)
- 9 Two No. 36" X 72" & 40" X 80" Ulka mill to be added with 500 KW AC VFD drive motor and planetary gear box with proper ratio.
- 10 Existing 33" X 66" mill to be shifted to mill No. 2 as it is, with motor and gearbox.
- 11 Existing 300 KW 400 HP motor - 2 No. to be replaced by 500 KW AC VFD motor considering our proposed ultimate crushing rate 6000 +.

- 12 Existing FRC Power, HP of motor, gear box is less to be replaced by new one.
- 13 New modern and accurate auto cane feed control system to be installed.
- 14 Existing TRPF bottom roller to be converted into perforated type.
- 15 Existing mill roller grooving angles and mesh chart depth to be rectified for adopting more crush rate and improve juice drainage.
- 16 Corrections to be made in existing hydraulic system.
- 17 Existing pump capacity to be verified and replaced where are bottlenecks for 5000 TCD.
- 18 Existing boiler capacity to be increased by 10 ton per hour from 60 TPH to 70 TPH.
- 19 Existing boiler travelling gate problem to be solved.
- 20 Problem of incomplete combustion & hips on travelling gate to be rectified.
- 21 Boiler, 3 element drum level control and combustion automation to be installed.
- 22 Existing turbine instrumentation and 33 KVA export grid work to sort out.
- 23 Mechanical seal to most Imp pumps are essential.
- 24 New ICE grader 35 ton per hour capacity to be added.
- 25 A - 1750 kg batch type centrifugal machine to be added – 1 No.
- 26 New continuous machine 1500 – 2 Nos. to be added, 1 for massecuite & 1 for B massecuite.
- 27 A batch type pan– 100 ton to be added.
- 28 U shape 125 ton per hour capacity air cooled crystallizer – 2 Nos. to be added.
- 29 Continuous pan 25 ton per hour – 1 No. to be added considering all crushing with C massecuite boiling.
- 30 Existing all condenser to be replaced with spray engineering with full automation.
- 31 Mechanical circulators to all batch type pan for proper purging & reduce pan dropping time.
- 32 Automatic hydraulic system to pan cut valve.
- 33 Molasses pump 4" X 4" to be replaced with 6" X 6" with stand by.
- 34 For existing Dorr 5<sup>th</sup> compartment provision, to accommodate higher crush rate.
- 35 3000 m<sup>2</sup> semi kestner – 1 No. to reduce steam % cane & higher crush rate.
- 36 300 m<sup>2</sup> - 3 Nos tubular juice heater for higher crush rate.
- 37 PHE – 1 No. for condensate juice heating.

- 38 Sulfur burner continuous type – 1 No. 140Kg – 1 No.
- 39 Sulfur burner continuous type – 1 No. 100 Kg – 1 No.
- 40 New vacuum filter 14” X 28” - 1 No.
- 41 Lime grit separator for better evaporation efficiency.
- 42 PRDS new auto system with dome.
- 43 Auto PH control system.
- 44 Excess condensate cooling and recirculation arrangement.
- 45 Spray pound to be made waterproof & delta T to be maintained to 8 deg.C minimum.
- 46 Overall plant instrumentation system improvement with digital indications pressure, temperature gages and modern systems.
- 47 Electric system upgradation.
- 48 3 new BE, Diploma trainee engineers.
- 49 20 new ITI temporary workers.
- 50 Training program to workers, engineers and staff.
- 51 To reduce water consumption and load going to ETP.
- 52 To achieve uniform, smooth, consistent and constant crushing of 5000 ton by fine tuning.
- 53 For a centrifugal machine better sugar quality & capacity improvement, a new machine plough assembly with air scavenging system to be provided.
- 54 For A C/F machine flap valve assembly to avoid black droplets of massecuite dropping in sugar hopper, which spoils sugar color & quantity.

This is our observation, study & required addition, changes, rectification, modernization, modification & proposed expansion & crush rate of 5500 + TCD which we should carry out in 2 or 3 phases.

Our consultancy services are result oriented, foolproof, challenging & innovative with vast practical back ground.

Now you are requested to finalize our consultancy service & our self-designed two new units for increasing crush rate in your existing cane carrier & preparatory devices.

**R B PATIL  
TECHNICAL DIRECTOR  
R B PATIL & ASSOCIATES**