

M/s NSL SUGARS LTD. UNIT II, (LESSEE OF SSKN), ALAND

Name of the Unit	M/s NSL SUGARS LTD, UNIT II, (LESSEE OF SSKN), ALAND
Location	Bhusnoor – Village, Aland – Tk, Gulbarga – Dist, Karnataka
Nearest Railway station	Gulbarga : 40 KM
Nearest Airport	Hyderabad : 250 KM
Nearby towns	Aland : 12 kms
Salient features of the plant	❖ The plant is located at just 9 Km interior from the SH-10 (Gulbarga- Solapur highway)
	❖ M/s SSKN Limited has been established in 1989 with a capacity of 1250 TCD. Subsequently it had been taken over by M/s Shree Renuka Sugars LTD on lees basis in 2006 and the Sugar plant was operated with a capacity of 1250 TCD till crushing season 2007-08 from 2006. At this juncture, the Renuka Sugars Management has handed over to SSKN again in 2008.
	❖ NSL Group which has its core strength in Agri business like Seeds, Cotton & Sugar taken over the sick Sahakari Shakar Kharkana Niyamath, Aland on 30 years LROT (Lease, Rehabilitate, Operate & Transfer) basis of 1250 TCD sugar plant & took possession of the factory on 06-Mar-2010 .
	❖ NSL Sugars has operated plant at 1250 TCD during 2010-11 season. Simultaneously plant has expended to 7000 TCD with 34 MW co-generation and commissioned 2011-12 season.
	❖ The plant has been installed with state of art equipments for sugar to achieve 7000 TCD and 34 MW bagasse based power plant.
	❖ The plant is located amid cane fields which are fed by Amarja dam covering the cane field which yields around 10 lacs tons cane per annum.
Land Area in acres	127 Acres
(I) SUGAR PLANT	
Capacity	7000 TCD,
Year of Establishment	2010
Supplier Name	a. Mill – ISGEC

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	<ul style="list-style-type: none"> b. Boiling house – ISGEC (IJT) c. Centrifugals – Thyssen Krupp
Specification of Sugar Plant	<ul style="list-style-type: none"> a. 7000 TCD, 5 Mill tandem of 40"X82" size of mill, with swing hammer Fibrizer. b. Juice Clarifier 444 of 710 cu mtr, Falling film evaporators. c. B & C vertical continuous pan, circulator for A pan. Cigar vessel for flash recovery system. d. SEDL condensing system with spray pond. e. Batch centrifugal machine 5 no's 1750 kg/ch each. f. 50 t/hr FBD 1 nos. Grader 35 t/hr- 02 nos. g. Molasses storage tank 4 Nos. (4000 MT (2Nos) & 6000 MT (2Nos)). h. Sugar ETP :1500 KLD, CPU : 1500 KLD
Innovative Adopted Technology	<ul style="list-style-type: none"> a. Cane preparation: 3 Cane unloaders and one Grab with 3 feeder tables to ensure capacity crushing and Chopper followed by Leveller and Swing hammer Fibrizer to ensure 90+ PI always.
	<ul style="list-style-type: none"> b. Mill size 40" x 82" with under feed roller and Donnelly chute. Drive: Each mill individual AC drive with planetary gear boxes to ensure maximum extraction. All motors are fitted with VFD drive to ensure with less power consumption.
	<ul style="list-style-type: none"> c. Clarification: The process is double sulphitation. The house is equipped with all Direct Contact heaters for raw juice and Sulphited juice heated by low temperature vapors to ensure steam economy and prevent heat injury to juice.
	<ul style="list-style-type: none"> d. Evaporation station: Two sets of Evaporators, each set having 1st body Semi Kestner followed by four bodies Robert type having 9600 sq meter heating surface. Additionally having one old evaporator set with 1st and 2nd body Falling film evaporator followed by three Robert bodies having handling capacity of 3880 sq meter. The last body vapor is used as heat raw juice heating by Vapor line juice heaters and 2nd body vapors to B and C continuous pans and 3rd body vapor for A pans. The Pan Station has batch pan for 'A' and continuous pan for B and C. The Sugar house is equipped with ultra modern centrifugals of high capacity to handle the crushing rate and drying in modern FBD and grading in ultra modern Sizer to ensure customer satisfaction.

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Steam economy measures adopted	a. All juice heaters are of DCH, Raw juice heaters fed by waste heat vapors. Sulphited juice heating primary and secondary done by 4 th and 3rd vapors. Sulphited juice final heating by 2 nd vapors
	b. A – Pans is boiled with 3 rd vapor.
	c. B and C pans boiled with 2 nd vapor.
	d. Molasses conditioner heating with 2 nd vapor.
	e. PHE is used for SHWW system with exhaust steam to water.
	f. Cigar flash system is used to get flash recovery.
(II) COGEN PLANT	
Capacity	34 MW
Year of Establishment	2012.
Supplier Name	a. Boiler: M/s ISGEC b. Turbine: M/s Siemens Ltd. c. Generator: TDPS
Specification of Boiler & STG	a. Boiler- Rated Capacity- 135 TPH, Steam Pressure-110 Ata, Steam Temp- 540 Deg C. Single Drum, Water Tube Type, Membrane wall, Traveling Grate Type High Pressure, Bagasse & coal fired Boiler. Complete with APH, Economizer and ESP. Stack height is 90meter.
	b. Turbine- Make- Siemens. Multi stage extraction cum condensing Type, Direct Coupled, Model- SST300VE50AL, Year of Mfg.- 2011, Max. Out Put- 33.85 MW, Speed- 6838 rpm.
	c. Alternator- Make- TDPS, Direct Coupled, KVA- 43750, Rated Voltage- 11000, Power Factor- 0.8, Speed- 1500 rpm
	d. System has 2 H.P heaters, at 25ata, 9 ata and 3 ata to get 218.59 Deg C feed water temperature.
(III) DISTILLERY PLANT	
Capacity	120 KLPD (Proposed)

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Energy conservation measures adopted.	a. Mills are driven by individual AC VFD motor with Foot mounted Planetary Gear box.
	b. All motors are of VFD drives to get low power consumption.
	c. Mostly belt conveyors are used to reduce power consumption.
	d. Planetary gear boxes used to achieve greater efficiency and low power consumption.
	e. Screw pumps are used in place of low efficiency disc and gear pumps.
	f. Mill automation ensures low power consumption and FFE & SCP automation ensures low steam consumption.
Water conservation measures adopted.	a. All the body condensates are flashed in a vessel and the hot water needs at desired temperature are drawn at required level.
	b. Excess hot water is taken to storage tanks, cooled and re used for spray replacement as cold water substitute.
	c. Vent and drain losses are controlled and ensured to have 8 – 10% make up the boiler during capacity crush.
	d. To practice dry cleaning wherever possible instead of wet cleaning.
	e. WTP Regeneration water being used for spray pond.
	f. f. 1500 KLD capacity of Sugar Condensate Polishing unit is established and the treated water is used cooling and process.
Environment Management in the Unit	a. High efficiency ESP with 3 fields is connected with 83 mtrs height of RCC Chimney in Cogen Boiler for better air pollution control
	b. The DG sets are provided with acoustic enclosures to mitigate the noise pollution.
	c. The sugar trade effluent is being treated in the existing 1500 KLD capacity of Sugar ETP which consists of Bar Screen Chamber, Oil & Grease, Equalization cum Neutralization tanks, Buffer tank, UASB, conventional Aeration tank, Clarifier, Sludge Drying Beds. The treated effluent is utilized for on land for irrigation.

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	<p>d. The Green belt development is developed as per CPCB guidelines in consultation with the local DFO to mitigate the fugitive emission effects.</p> <p>e. In order to conserve the raw water consumption, 1500 KLD capacity of Sugar Condensate Polishing unit is established and the treated condensate is recycled for cooling and process.</p>
Facilities available at site	Residential Colony, Dormitory with Canteen, Dispensary with Doctor, First Aid Facility, Ambulance etc.
Key Customers	Sugar : Metro Cash and carry, Reliance retail, Walmart, Parle Agro, Ravi Foods, Heritage, Britannia, Parle Products, SDU beverages etc.
Future plan	Sugar will be expanded to 10000 TCD and the Distillery plant will be installed with a capacity of 120 KLPD