

**Dr. Ambedkar College Deekshabhoomi, Nagpur.**

**Department Of Chemistry**

**Industrial/Educational Visit to MANAS Agro Industries &  
Infrastructure Ltd. Date: 2/2/2018**

**B. Sc. Students of Chemistry Department** of Dr. Ambedkar College, Deekshabhoomi, Nagpur has organised visit to **MANAS Agro Industry Infrastructure Ltd. At Bela, Nagpur on dated 2/2/2018.**

Batch of 47 students visited to all four units of the industry.

**First, we visited to Sugar Plant.** Detail Guidance has received from Plant operator. Raw materials i.e. Sugar Cane requires for this, after extracting juice, chemical process is required. Then by application of  $\text{CaCO}_3$  molasses is separate out from the industry. Then Sulphur is used for decolourisation of Sugar so that white crystal Sugar is obtained. Whole Plant is worked on pressure technique.

**Second visit was arranged to Power Plant** of the same Industry. This worked on raw materials of previous Sugar plant. Very small pieces of sugar plant waste used, burnt which produces high temperature flame. This is used then to produce Steam used in Turbine. Turbine generates Electricity. This electricity supplied to MSEB Department. High temperature Steam then condensed by using larger water condenser water which is then utilize in the power plant.

**Third visit is then arranged at Ethanol manufacturing unit,** which is the side product of sugar industry. Waste of sugar plant ie molasses used for the preparation of ethanol. Molasses contains large quantity of remaining sugar, which is used in the ethanol preparation. It is first fermented in large unit Dom, then by distillation process Ethanol is prepared.

After ethanol preparation, waste of molasses i.e. spent is then again used in the methane gas production and organic manuals, Spent material fermented in large Dom, methane gas obtained then it is used in again in power plant.

**Fourth visit was arranged at Dry ice plant.**

Large quantity of CO<sub>2</sub> outlet of the sugar plant collected and then used for the preparation dry ice. Due to this, it minimises the environmental pollution of CO<sub>2</sub>. Dry ice is collected in the liquid form under pressure & low temperature. It becomes white solid at room temperature. It is used as refrigerant and preventing bacterial growth during shiftiest .

Dr. V.M. Shivankar, Prof. N. G. Telkapalliwar, Dr. Mrs. D.M. Borikar, & Mr. Manoj Neralwar faculty members, arranged Industrial visit along with 47 B.Sc. student of the chemistry Department at MANAS Agro Industry and Infrastructure Ltd, Bela, Nagpur.

# PHOTOGRAPHS OF VISIT AT MANAS INDUSTRY















