

5th MARCH 2022

A REPORT ON Industrial Visit



PREPARED BY SAMBHRAM P

About the Stone Calibration Industry...



The stone cutting industry, **Advent Stone Calibration PVT. LTD**, is situated in chokkanahalli, Hesaraghatta Holi, Bangalore North Additional Taluk, Rajankunte - 560064

This industry specializes in breaking down big block of rocks and produce number of different types of stone based accessories used and seen in day to day life.

For example, this industry produces stone pillars, marble floors, aesthetic and decorative stone statues/sculptures etc.

Visit Description...

An industrial visit was arranged for the EEE students of **6th Sem of Presidency University**, to familiarize the students with the practical application of different kinds of motors, generators and Electrical machineries.

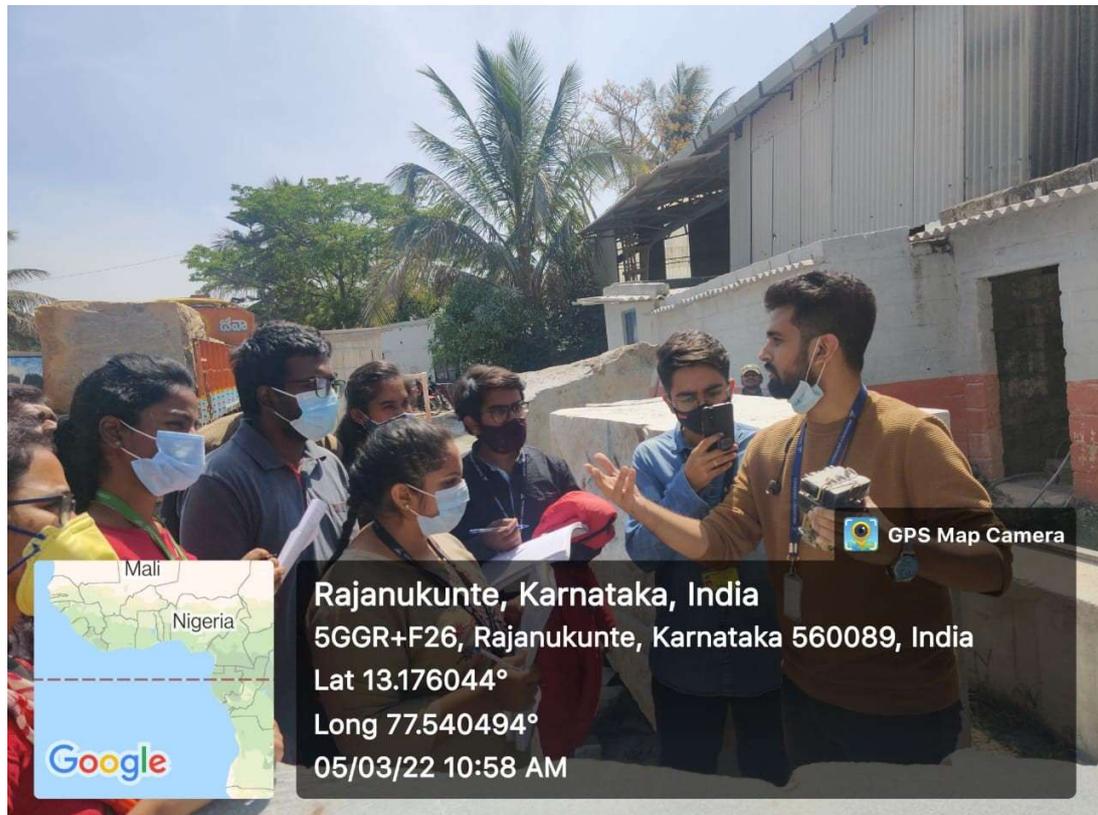
so, **Advent Stone Calibration PVT. LTD**, which is a Stone calibration industry, was chosen to make the students understand the practical applications, Working, Rating, Power consumption that takes place in an actual industry, so that it could help them in the near future and as well as to gain good knowledge over Electrical machineries that are used for various purposes in an industry.

Our Goals and Objectives

- To know practical applications of Electrical Machineries.
- To understand the working of motors in person.
- To know what kind of motors are used for various processes.
- How many units are consumed by an industry.
- How much power is consumed to run various kinds of machineries.



About the Visit...



This industrial visit was organized by the HOD of Electrical and Electronics Department for 6th semester students to give them a good idea about where and how the Electrical machineries are used in a day to day working Industry. The students visited the industry at around 10 AM.

The visit started with the manager introducing us to the head of the employees and agreed to show us around and clarify any of the doubts the students had. He started explaining all the procedures that goes in calibrating stone.

So the first step was to unload the big block of rocks that weigh anywhere around 20-40 tons. This unloading process is done by using a Crane.



The crane consists of three, 3 phase induction motors which are used to move the crane around as desired. 2 motors are situated at the legs of the crane, so that it could be moved forth and back and one motor is situated on the head of the crane which is used to pull up and drop down the rock blocks.

3 Phase Induction Motor configuration are as follows:

KW (Hp): 1.5

RPM: 930

VOLT: 415 +/- 10%V

FREQ: 50 +/- 5%Hz

Efficiency: 75.20%

AMP: 3.9Y

Capacity: 60 tons (recommended 4max 40 tons) 04



Then to cut the big chunks of rocks into convenient sizes, a machine named wire saw is used. This machine is coupled with a DC motor so that it can be controlled easily and used to cut the rocks slowly.

The crane and wire saw machine are next to each other, so they both have a common control panel where power is distributed from.

since, the crane uses Alternating Current and Wire Saw uses Direct current and also they both have the same control panel, a AC to DC converter is used with star and delta configuration and has a timer set for 4 seconds so that when DC power is required for Wire saw, the AC is converted to DC in a span of 4 seconds.

After cutting the rocks into rough convenient sizes, they are moved inside the industry, so that they can be cut again properly into their required dimensions. This process is done by the using Bridge Saw.



Bridge Saw again consists of three, 3 phase induction motors in which one motor is situated at the legs of the bridge that takes 930 V to move the bridge back and forth. Two other motors are situated on the head, so that one is used to actually spin the blade and it has 20 HP and one is used to move the blade up and down which has 3HP. The Saw's motor has 5HP, runs at a speed of 1400RPM and has a rating of 3.7kW. In the control panel of the Bridge saw, there is an AC drive of 1.5kW of 2HP motor which is used to control the speed of the blade's spin and a timer can be set, so that the motor stops automatically after the time is up.

Later, we saw the main control panel through which the entire industry was controlled. This panel had a Busbar cabin, cable chamber, a switch through which the entire industry can be turned on and off.



Later on, we checked out the other industry where the same process takes place and then the manager took us to his office and gave us hospitality. After a while, the owner of the company showed up and he spoke to all of students about the visit and cleared some the doubts as well.

The students and the teachers gave bid goodbye and headed back to university at around 4 PM. This is how the industrial visit was commenced.

Staff & students

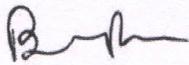
THE PEOPLE BEHIND THIS INDUSTRIAL VISIT.

TEACHING & NON TEACHING STAFF:

- Mr. Bishakh Paul
- Mr. Shaik Zabiullah
- Ms. Bhavya Shri
- Mr. Ashoka V

STUDENTS:

- Sambhram. T
- Sharanya. P. C
- Arun Shetty
- Sagar. B
- Varsha. B. N
- Bindhu Reddy
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Signature of coordinators



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