

**VISVESVARAYA TECHNOLOGICAL
UNIVERSITY,BELAGAVI- 590 018**



A MINI PROJECT REPORT ON

“Arm Mounted Hammer Drill Machine ”

Submitted By,

Mahantesh	4AL17ME029
Gautham S N	4AL18ME013
Preetham S	4AL18ME026
Nagachandru B M	4AL19ME407

Under the Guidance of

Mr Abhijith S

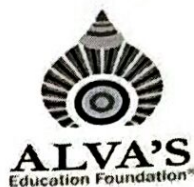
Assistant Professor



**DEPARTMENT OF MECHANICAL ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MOODBIDRI-574225, KARNATAKA**

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ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY
MIJAR, MOODBIDRI D.K. -574225
KARNATAKA



DEPARTMENT OF MECHANICAL ENGINEERING
CERTIFICATE

This is to certify that the Mini-Project entitled “ **Arm Mounted Hammer Drill Machine** ” has been Successfully Completed


By

Mahantesh
Gautham S N
Preetham S
Nagachandru B M

4AL17ME029
4AL18ME013
4AL18ME026
4AL19ME407

The bonafide students of Department Mechanical Engineering, Alva's Institute of Engineering and Technology, affiliated to VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI, during the academic year 2020-2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report. The report has been approved as it satisfies the academic requirements in respect of Micro-Project work prescribed for Bachelor of Engineering.


Mr. Ashish S
Guide


HOD ME
H.O.D.
Dept. Of Mechanical Engineering
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

ABSTRACT

Drilling is a process having recurring use in fabrication as well as civil work. Drills allow for making holes in various materials using drill bits. Manual drills are slow and occupy a hand while working continuously slowing down the work. So here we design a arm attached hammer drill for instant drilling along with drill hole measurement for high accuracy drilling. The drill system we propose makes use of an arm attachment frame so as to keep the hand free to hold nails or nail plugs that are to be inserted into the hole. The drill machine is powered by a high torque motor for drilling operation. Another geared DC motor is used with a shaft attached to the wheel. This is used to provide a hammering motion to the drillbit.

The connecting rod between drillbit and the drilling motor is used to deliver perpendicular force to the drillbit which increases the drilling efficiency by over 60%. This reduces the effort required for drilling operation also increasing the drill speed. Moreover the machine also consists of a drill hole depth measurement rod. The rod can be adjusted to ensure the exact hole depth to be drilled.

The mechanism gives the following advantages to the arm attached hammer drill