**‘’Design of Fabrication System of Drill Work Piece after Parting Operation.’’**

A synopsis submitted to University of Mumbai in Partial Fulfillment   
of the Requirements of the degree of

**BACHELORE OF ENGINEERING in**

**MECHANICAL ENGINEERING**

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DEPARTMENT OF MECHANICAL ENGINEERING**

**RAJARAM SHINDE COLLEGE OF ENGINEERING**

**PEDHAMBE, TAL - CHIPLUN, MAHARASHTRA**

FINAL YEAR MECHANICAL (2014 - 15)

**CERTIFICATE**

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This is to certify that the project entitled “Design of Fabrication System of Drill Work Piece after Parting Operation” is a bonafied work of

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**DECLARATION**

We declare that this written submission represents our ideas in our own words and where others ideas or words have been included, our have adequately cited and referenced the original sources. We also declare that we have adhered to all principles of academic honesty and integrity and have not misprinted or fabricated or falsified any idea/ data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Date :

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**ABSTRACT**

Raw material (steel rod) is cut using an automatic lathe machine. The requirement of the job is such that the job blank is cut using three tools.

When these tools apply force on the job blank, the effective force is such that the job flies off in any direction and collects in a tray situated below the chuck and tool arrangement. Their direction of fall is uncertain i.e. in a random manner.

Further operation requires the job to be collected with their pointed end facing upward i.e. uniform arrangement . This is because the pointed end is further machined to form the tip of the flute, only after heat treatment. The heat treatment and the machining is done on the frontal 2/3 part of the job. If the arrangement of the job blank is wrong, the wrong end of the job blank would undergo heat treatment which would result into complete wastage of the work piece.

Currently the randomly fallen jobs are collected and arranged manually. This requires a manpower of 3 per shift.

We are designing a mechanism to solve this problem. When the work-piece flies off there would be an arrangement which would prevent the flying off of the job. this would be done by a channel which would restrict the motion and guide it into the second part which is a pipe this pipe guides the job in the same orientation as cut by the lathe machine. The third part includes the rearrangement and modification of the tray which would result into collection of the job in a systematic manner.

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