

DESIGN AND ANALYSIS OF EXCAVATOR BUCKET AND TEETH

A PROJECT REPORT

Submitted by

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in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

in

MECHANICAL ENGINEERING



T.J.S ENGINEERING COLLEGE



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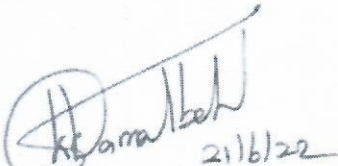
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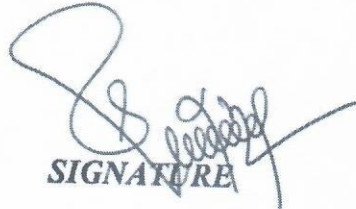
BONAFIDE CERTIFICATE

Certified that this project report "DESIGN AND ANALYSIS OF EXCAVATOR BUCKET AND TEETH" is the bonafide work of "S.GOPINATH (112818114012), B.KAMARAJ (112818114018), R.KARTHIKEYAN (112818114020), S.MOHANAPRASATH (112818114026)", who carried out the project work under my supervision.


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Submitted for project viva - voce examination held on 22-6-2022


INTERNAL EXAMINER

22/6/22



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EXTERNAL EXAMINER


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ABSTRACT

An excavator is a typical hydraulic heavy-duty human operated machine used in general versatile construction operations, such as digging, ground leveling, carrying loads, dumping loads and straight traction. After doing such operation, there is possibility of breaking of pin in tooth adapter assembly as well as bending of tooth point.

The objective of this paper is to design an excavator bucket by using CATIA-parametric 5.0 software. Model is exported through IGES file format for meshing in analysis software Boundary conditions and the forces are applied at the tip of teeth of excavator bucket. Static analysis is done in ANSYS analysis software.

In this paper the stresses developed at the tip of excavator bucket teeth are calculated. Percentage error between stress Analytical result and stress ANSYS result are calculated.




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