DE LA SALLE UNIVERSITY

GEDES – AN EXPERT SYSTEMS IN GEAR DESIGN

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by

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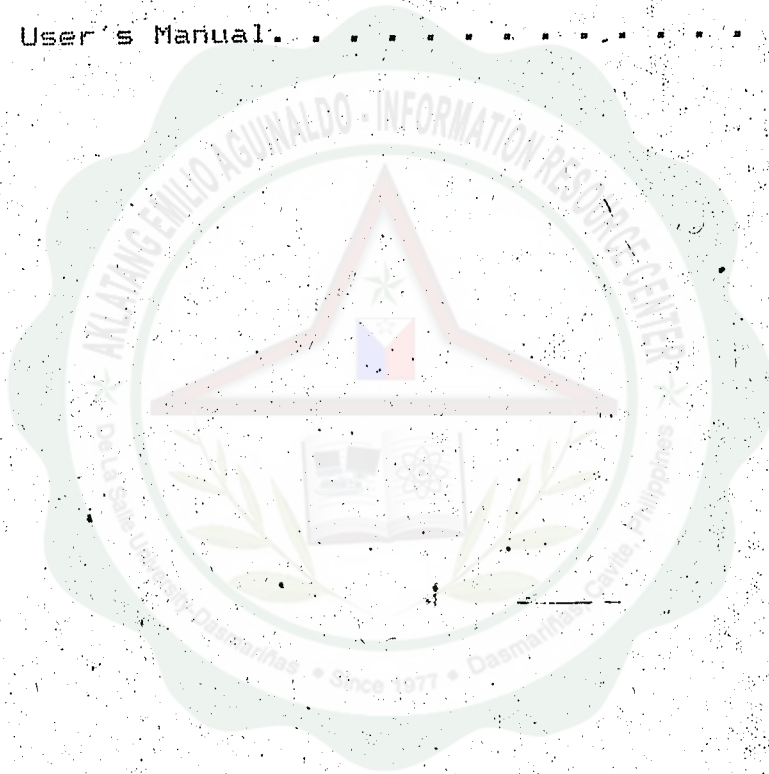
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ABSTRACT

This study aims to explore the application of expert systems, a field of artificial intelligence, in gear designing. The expert system simulates the expertise of a human designer.

The pencil and paper approach is traditionally the standard method used by local engineers in designing gear sets. Otherwise, the gear sets are mere duplicates or rebuilts from numerous models. This designing technique is time consuming and limits the ability to exploit the benefits of modern technology.

The paper intends to demostrate the capability of expert system implementing the gear design techniques of the AGMA and PSME procedures in dimensioning and evaluation of the gear set.

The expert system (GEDES) provides a realistic design (a gear set) from relatively incomplete data. The material is specified and could explain the particular design process.