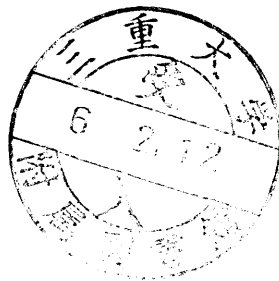


**RESEARCH REPORTS
OF THE
FACULTY OF ENGINEERING
MIE UNIVERSITY**

Vol. 18

December 1993



**PUBLISHED BY
FACULTY OF ENGINEERING
MIE UNIVERSITY
TSU, MIE, JAPAN**