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Activation Analysis May Aid In Measuring Engine Wear

neasurements of wear of engine parts are needed, researchers may employ radioisotopes using nuclear activation analysis facili-

Two Texas A&M students recently completed wear investigation on connecting rod bearings in a special engine using activation analysis. They are Frank M. Tovey and Kenneth W. Oates of Houston, both mechanical engineering students.

Robert H. Fletcher, associate professor of mechanical engineering, said the students' test procedure points the way to many more uses of isotopes to measure and control engineering variables more accurately.

Tovey and Oates performed the research under guidance of Fletcher and N. B. Poulsen, an instructor in the Nuclear Engineering Department.

Although the new method of measuring very small amounts of wear is more expensive than the old method, it produces continuous results of high accuracy. The old method involved dismantling the engine and weighing each part after each test. However, it was impossible to determine the amount of wear at specific times.

Tovey and Oates found it was possible to find the amount of wear at any time through the use of their method. For instance, they learned the greatest amount of wear occurred immediately following the start up of the engine, and that a definite increase in wear for a full load was evidenced over comparison with a half load.

In the test, the students first used activation analysis to determine the composition of the bearing material, then chose the necessary activation time and other highly technical information. They installed radiated connecting rod bearings in the engine and ran the engine for a specified period of time. Then they pumped the oil from the engine and used technical instruments to determine wear as reflected by radioactive particles from the bearings.

Chemistry Prof Lectures Monday

Dr. Frederick R. Duke, Welch Professor of Chemistry, will speak at 8 p.m. Monday in a Summer Sciences Lecture on the Texas A&M campus. The free, public lecture will be held in Room 113, Biological Sciences

"Why Aren't You Driving an Electric Automobile?" is Dr. Duke's topic. He will tell of his continuing research on batteries or fuel cells.



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Martha Tucker She graduated from Stephen F. Austin High School before enrolling at Mc-Kenzie - Bald-Kenzie - Bald-win Business College for the Secr e t a r i a l course. She suc-cessfully com-pleted this course and received her diploma before accepting a position as stenographer with the F.B.I. in Washington, D. C.

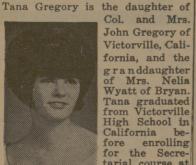
Carol Russel is the daughter of



sell of Bryan and the late Mr. Russell. She graduated from Bryan High Bryan High School where

she was prominent in FHA work. She enrolled for the General Office Course at Mc-Kenzie-Baldwin Business College. She is em-

ployed as ste-nographer for the Federal Bureau of Investiga-tion in Washington, D. C.



tarial course at McKenzie-Baldwin Business
College. She
passed the examination and is now employed
with the Federal Bureau of Investigation in Washington D. C.

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