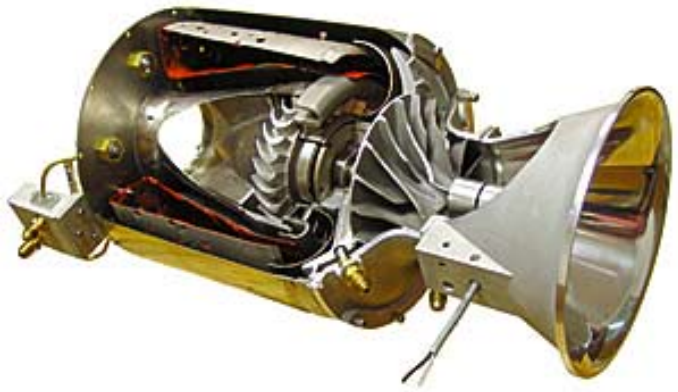
New gas turbine propulsion laboratory headed for Maine Maritime Academy

By Peter Sarnacki

Maine Maritime Academy, with its long standing tradition of extensive hands-on training, parallels theoretical exposure with a laboratory experience. In keeping with this standard, the engineering department at Maine Maritime Academy is currently acquiring a dynamic gas turbine laboratory to enhance the existing gas turbine curriculum.



The dynamic gas turbine laboratory will incorporate the SR-30 micro turbine trainer.

Today's standard for data acquisition demands high speed, real-time analysis of many variables. The SR-30 micro turbine trainer will enhance the academy's development of a bridge between the current laboratory experience and today's industrial standards.

Through careful research and feed back from current users of the SR-30 micro turbine laboratory, the best choice of a dynamic gas turbine laboratory is available from Turbine Technologies Ltd. in Chetek, Wisc. The jet propulsion laboratory represents state-of-the-art micro turbine technology that will enable our students to operate, experiment, and perform maintenance on an actual turbo jet engine.

Engine operating conditions are monitored through sensors, while transducers and signal conditioners feed data to a computer containing all necessary hardware and software for on screen data display and replay. The computer system allows students to save engine run data to portable memory and then ''virtually'' rerun the engine to complete offsite laboratory assignments. Also included in the purchase of this equipment is a cutaway of the SR-30 gas turbine engine, which allows for clear and tactile demonstrations of the turbo machinery dynamics in a classroom environment.

This new addition to the academy's engineering program integrates with our current combined cycle power plant simulator, marine diesel power plants, steam power plant,

and refrigeration cycle training system. The new jet propulsion laboratory will provide our undergraduate engineering students the advantage of familiarity with an advanced technology tool, which will allow them to perform their future jobs with greater efficiency ,resulting in benefits to employers.

The new jet propulsion laboratory will be utilized primarily for undergraduate demonstrations, instruction, and experimentation. The new purchase promises to enhance Maine Maritime Academy's extensive hands-on engineering programs. If it is true that a picture is worth a thousand words, then this new addition will prove to be an invaluable tool for future students attending Maine Maritime Academy.

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