ETcetera

THE FOLLOWING IS A BRIEF REVIEW OF THE HISTORY OF *EXPERIMENTAL TECHNIQUES*. For additional information on **ET**, please see the President's Corner Column in this issue.

ET began in 1975 as a special project of the SEM Applications Committee (SEM-AC). The members of the SEM-AC recognized the need for a practice-oriented Society publication which would feature relatively brief articles devoted to the day-to-day problems faced by the experimental mechanician. It was envisioned that the new publication would allow members of the technical community to relate "tricks of the trade" at a relatively informal level.

From 1976 to 1979 **ET** appeared as a 4- to 6-page quarterly newsletter, and members of the SEM-AC were responsible for authoring and/or soliciting relatively brief "how-to-do-it" (or "how-not-to-do-it") articles to support the newsletter. During these first few years, activities were coordinated by the officers and members of the SEM-AC, notably Robert Johnson, John Ligon, George Warren, John Kelly and Susan Foss.

The decision to expand **ET** into a more formal "magazine" format was made in 1979, and the first "new look" **ET** issue appeared in February, 1980. An **ET** Editorial Committee was formally established and included Susan Foss (chair), Stu Swartz, Jan Cernosek, T.P. Keiffer, Dick Marloff, Burke Dykes, D.R. Hartdegen, Dave Willis, and John Kelly. Lloyd Lazarus, Darrell Harting, and Art Lawrence were added to the Editorial Committee shortly thereafter. A succession of senior and associate technical editors have guided the evolution of **ET** since 1980, and have included Susan Foss (1980-87), Dick Marloff (1980-85), Stu Swartz (1982-83), Burke Dykes (1983-87), Mark Tuttle (1985-89), Dave Windstein (1987-91), Robert Schwarz (1987-93), Lloyd Lazarus (1989-95), Ibrahim Miskioglu (1991-present), Elizabeth Fuchs (1993), Jon Rogers (1993-present) and Henry Busby (1994-present).

The Society owes a debt of gratitude to these individuals for their foresight and for making ***EXPERIMENTAL TECHNIQUES*** into the publication it is today.

AS SEM MEMBERS INVOLVE THEMSELVES IN CONTEMPORARY TOPICS such as "Rapid Pototyping" and "Micro-integrated Smart Materials and Structures," it is prudent to reflect how technologies and the Society evolved and give credit to the "unsung" heroes of their day. One such person is Peter G. Scott Jackson, inventor of the electric resistance foil gage. (Note: the following comments were transcribed by Peter Stein).

"In 1952 Saunders-Roe (England) bought a helicopter company and acquired two developmental programs with it. The smaller one of which was the stimulus for the invention of the foil gage. This program, called the Skeeter, was to develop a very small and agile machine. The Electronics Division, which I had founded and of which I was then Chief Engineer, was called in to execute the strain measurements. I had become convinced that the wire strain gage was a total waste of time and funds for that particular project.

"I also discovered that necessity is not the mother of invention. Invention needs two parents: one, anger; the other, frustration. A certain amount of "screwing around" is also required. The foil gage was born on the Southampton - Isle of Wight ferry, returning home from yet another series of disasters. There HAD to be a better way! . . .

"I shall never forget the first day we put a bridge on an aluminum bar, clamped it in a vice, connected the battery power very cautiously, and the current burst sent the galvanometer off scale when we pushed on the bar. We were able to drive a 0-1 ma meter very easily." The higher output from foil gages made it possible to get clean signals from the sliprings on the helicopter and solved their immediate problem. "Technograph made such foil strain gages for Saunders-Roe and Tinsley under a Saunders-Roe license."

After Peter left England, Saunders-Roe filed their own patents, especially in the U.S. and Peter's name as the real inventor was almost lost to history until the 1988 Strain Gage Jubilee in Portland, Oregon, where Peter, in the audience, heard his invention attributed to someone else. The matter has been set right since then. Peter now lives in Del Mar, California and will celebrate his 80th birthday this year.

In February 1996 the Western Regional Strain Gage Committee will celebrate its 40th Anniversary. At the conference they will also pay tribute to the 60th anniversary of the invention of the bonded electrical resistance strain gage. Thanks to the tireless efforts of the "venerable" Peter Stein, from now through February 1996 we will publish historical excerpts from the planned celebration.

STRAIN GAGE TRANSDUCER DESIGN IS THE TOPIC OF A 1-DAY SEMINAR that will be sponsored by SEM on October 31,1995 in Dearborn, MI. This is an excellent opportunity for engineers working with transducers or sensors to benefit from time-proven and ingenious techniques involving the design of a device that will meet performance requirements. Emphasis is placed on proven conceptual approaches for mechanical and electrical design, thermal effects, understanding the dynamic overtones and how they are handled.

The seminar leader is David Fussey, who previously held senior engineering positions with Revere Transducers, Schaevitz Engineering and Boeing Helicopter. Mr. Fussey brings a wealth of on-the-job experience to this course. The cost for SEM members is $195, and $248 for nonmembers. For a complete course description, contact SEM: Phone 203-790-6373, Fax 203-790-4472 or E-mail sem@pcnet.com