

TECH MEN WIN ARC WELDING AWARDS

By *William H. Pickering*, '32

The James F. Lincoln Arc Welding Foundation of Cleveland, Ohio, recently announced an award of \$200,000 for papers dealing with the applications of arc welding to industry. Needless to say, the program attracted a great deal of interest throughout the world, and a number of Tech men submitted their best efforts. When the list of prize winners was announced in September, three Alumni were among them. Edmund G. Grant, '30, was highest on the list with an award of \$1526.33 for his paper on the use of arc welding in connection with the 200 inch telescope project; then came C. R. de Laubenfels, M.S., '33, and Fred C. King, Jr., '35. An award was also won by Frank Fredricks who, though not an Alumnus, is at the Westinghouse plant as resident engineer of the Astrophysical Observatory. He wrote his paper on the construction of the telescope tube, horseshoe and yoke.

Ed Grant has been with the Astrophysics department for some eight years, and thus he is thoroughly familiar with the telescope project, at least from the engineering end. His paper gave a brief description of the 200 inch telescope, its location, and the problems encountered in its construction. He described the dome with its two million pounds of steel, 137 feet in diameter, welded throughout. The main part of the paper discussed the construction of the supporting trucks and the drive for the dome. *There are 32 of these trucks to carry the dome, and, by using arc welding in their construction a saving of some \$2300 was effected. Similar large savings were made in the other dome machinery by using welded construction. The paper concluded with a discussion of the importance of welding to design, and to industry in general.

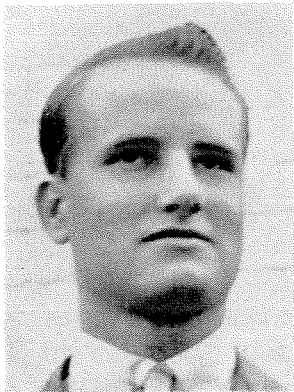
Ed Grant will be remembered by his classmates as an enthusiastic yachtsman. Since his graduation he has built a 48-foot boat which he has sailed to victory in many Southern California regattas. Probably a good fraction of Ed's prize money will go towards making his "Flyaway II" an even speedier craft.

G. R. de Laubenfels is employed at the Lockheed Aircraft factory at Burbank as a research engineer. His paper accordingly dealt with an adaptation of arc welding to an aeroplane problem. A certain oxy-acetylene welded landing gear fork was found to unsatisfactory. Substitution of arc welding proved completely satisfactory, and, in addition saved \$40 per aeroplane.

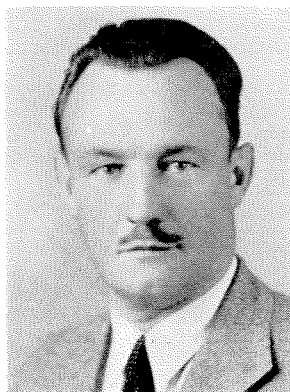
Fred King is with the National Supply Co. at Torrance. He discussed a problem in which a cast iron design had been changed to a welded design with a saving of 900 pounds in weight and 40% in cost.

Many of the prize winning papers of this contest will be published in the various trade journals. In most cases the authors estimated the savings to be made by the use of arc welding in their particular problems. After discounting the most enthusiastic claims, the award committee, which included men such as Professors Ott and Marquis, arrived at an estimated total saving to industry of \$1,600,000,000. It is a startling indication of the present and future significance of arc welding.

*NOTE: An illustration of the dome driving mechanism was shown on page 6 of the September 1938 Alumni Review. This, together with data contained in the pertinent article, was furnished by Ed Grant. James Fassero was photographer.



KING



DE LAUBENFELS



GRANT