

To be successful, a product design must first be simple
...inexpensive to produce.

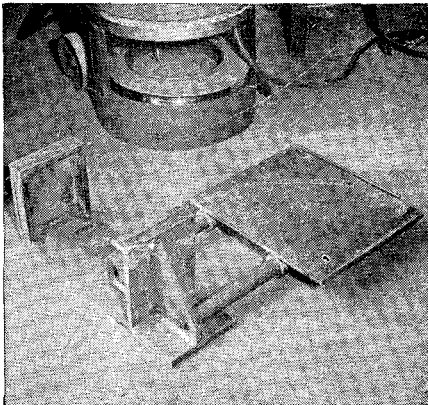
HOW TO ELIMINATE COSTLY OPERATIONS IN DESIGN

BEFORE any design is acceptable, methods and costs of production are carefully studied. Every needless expense in material and machinery is eliminated to meet price demands of competition.

By using steel instead of cast iron, substantial savings in material can be realized. Steel is three times stronger, 2½ times as rigid as iron. As a result, only one-half to one-third the amount of metal is needed with steel. Also, steel costs only one-third the price of iron, pound for pound.

In manufacture, welded steel components can be produced today at an average of 50% less cost. Production methods are simpler . . . fewer man-hours are involved with arc welding.

With welded steel construction, ultimate savings are limited only by the ingenuity of the designer. For this reason, every product engineer needs to keep in step with the rapid progress in low cost manufacturing with arc welding.



Motor Swing Base is fabricated at low cost from tubing and steel plate. Welds are made with "hidden-arc" process in agglomerated flux, using Manual Lincolnweld.

DESIGN AIDS FOR LOW COST

Principles of designing or converting existing products in welded steel are presented in Lincoln Weldesign Manual available at nominal cost for hours of study. Write for free design bulletins to

THE LINCOLN ELECTRIC COMPANY

Cleveland 17, Ohio

THE WORLD'S LARGEST MANUFACTURER OF
ARC WELDING EQUIPMENT

PERSONALS

1918

Gene Heywood writes from Chicago that his old firm, Harris, Hall & Co., recently merged with Dean Witter & Co., investment bankers, with headquarters in San Francisco. Gene will continue to be in charge of the corporate buying department of the new organization in the Middle West.

1922

Harold S. Ogden is serving on the Gannon College Engineering Advisory Committee, directing vocational guidance activities for engineering in the Erie, Pa., City Schools. As Supervising Engineer of Electric Locomotive Control at General Electric, Harold has a hand in the design of some rectifier-equipped locomotives for the New Haven Railroad. Back in 1952 he won a Modern Designs Award from *Design News* Magazine.

Jochim F. Voelker has been superintendent of Plant 4 at the Penn-Dixie Cement Corporation in Nazareth, Pa., since May, 1951. Previous to this he was at the Portland Cement Company plant in Riverside, California.

1927

Bill Minkler reports that he is still actively engaged in atomic energy research at Westinghouse in Pittsburgh, Pa.

1928

Tomizo Suzuki has been transferred from Okinawa to Tokyo, where he is now working for the Japan Construction Agency with the title of Civil Engineer in Construction Branch of Construction Division.

Charles F. Lewis writes from Houston: "Same old job, same old grind—too old for family additions—too young to die a millionaire with the other Texans."

1931

L. D. Huff, PhD, has been head of the physics department at Clemson College, South Carolina, since 1946. The Huffs have two sons—Charles, 3, and Edward, 1.

1932

James E. Bradburn has been named as executive vice-president of the newly formed ElectroData Corporation, a subsidiary of Consolidated Engineering in Pasadena. He will direct operations of the new corporation, which will continue the engineering, manufacturing and sales activities formerly conducted by Consolidated's Computer Division.

Jim served in a variety of engineering and administrative posts with General Electric and the Eastman Kodak Company before joining Consolidated Engineering in 1945 as treasurer and assistant to the president. During World War II he was in the U. S. Army Ordnance Department, attaining the rank of major. In 1946, he was named director of sales and vice president in charge of commercial engineering at Consolidated, and subsequently served

as vice president and director of engineering. In December, 1953, he was made vice president and director of Consolidated's Computer Division.

1934

A. A. Fomilyant is now general manager of the Tulsa, Oklahoma, plant of the Rockwell Register Corporation.

Robert A. Howard, MS, writes from Norman, Oklahoma, that he became chairman of the School of Engineering Physics at the University of Oklahoma last September. This is in addition to his job as chairman of the department of physics, which he has held since 1952.

1935

Charles M. Blair, PhD, is now president of the Petrolite Corporation of St. Louis, Mo.—where he has worked since graduation, first as research chemist and later as director of research. Petrolite manufactures chemicals, electrical equipment and waxes. Its chemical division, the Tetrolite Co., maintains plants and laboratories in St. Louis and Los Angeles, and other divisions operate plants and labs in Long Beach, Calif., Houston and Kilgore, Texas.

1936

Leo J. Milan is still in Tulsa with the Douglas Aircraft Company, as plant engineer. The Milans have a daughter, 16, and a son 12 years old.

1937

Robert C. Jones has been promoted from engineer to research engineer, at the Shell Development Company's California Research Center, in Emeryville.

Jack Kinley announces the arrival of Laura Louise on November 17th. The Kinleys are living in Houston, Texas. Jack also reports that his first patent was finally issued last spring, after five years in the Patent Office. For the record, it is No. 2,638,681 on a "Tubing and Casing Caliper".

1938

Robert S. Custer is now with the Refinery Engineering Company, in Tulsa, Oklahoma, as chief process engineer. Prior to this, he spent five years with the Bechtel Corporation—four years in San Francisco and one year in New York. The Custer family now includes four children—one boy and three girls, ages 9 to 4.

Franklin Page, Jr., PhD, recently left the Sierra Engineering Co. to join in the formation of Conzelman and Page Inc., in Arcadia, Calif. He specializes in human engineering, with activities both in the aero-medical and prosthetic branches of this field. Frank has retained his close interest in the Caltech YMCA and for the past two years has been treasurer of the Y Board of Directors.

1943

DeWitt A. Gayle, Jr., MS, is consulting meteorologist with A. H. Glenn and Asso-

PERSONALS . . . CONTINUED

ciates in Houston, Texas. He now has three children: Carolyn, 5, DeWitt III, 3, and Betsy, 1.

1945

Charles E. Neyland, MS, is a Project Aerodynamics Engineer with Convair in Fort Worth, Texas. He is married and has a six-year-old daughter and a 14-month-old son.

1946

Frank H. Lamson-Scribner is now a sales representative in Chicago for DuPont's Petroleum Chemicals Division. He was called back in the Navy in 1950 (where *Harry Brough '45*, served on one of the ships with him), and went back with DuPont on his release from the Navy in 1952.

Herbert W. Strong, Jr. joined the Colton Chemical Co. in Cleveland, Ohio, last summer as manager of New Products. His two boys are now six and three years old, and Herb says he notices a few grey hairs already—"on me, that is."

William F. Horton is working for Westinghouse in Pittsburgh, on magnetic amplifier development. He has two daughters: Theresa, 2, and Katherine, 2 months old.

1947

Paul B. Johnson PhD, writes: "The Johnson family is spending the year at

Haverford, Pennsylvania. Outside of the usual Pennsylvania colds, no deaths, births or levitations." He is visiting professor of mathematics at Haverford College and plans to return to Occidental College in the fall, where he is chairman of the mathematics department.

Robert L. Walker, after finishing the V-12 program here in 1945, was commissioned as an ensign in the USNR, went to Pearl Harbor and was assigned to a Navy oiler at Sasebo, Japan. He was later assigned to the task force at Bikini and witnessed the first atom bomb test in 1946. Then he "returned, retired and finished at Tech", and married Jean Butcher of Long Beach. They have three boys and a girl now. Bob went to work for the Fluor Corp. of Los Angeles and was transferred recently to Tulsa, Oklahoma, as District Sales Engineer.

Lt. Commander A. E. Rice writes from Goat Island, Newport, Rhode Island: "My present duty gives me an opportunity to apply some of the technical knowledge I was able to assimilate at Caltech." He is Research and Development Officer at the H. S. Naval Underwater Ordnance Station, engaged in applied research and development of torpedoes.

Lucien Pascoe is finishing his G. E. Sales Training Program at the Philadelphia plant, and is eagerly waiting for an assignment on the West Coast as a switch-gear specialist. Familywise, Lu "became a father for the second time, about 17 months ago, to a very active boy—and am about 7 months short of becoming a father for the third time." His oldest, daughter Diane, has had a rough year as far as health is concerned but is on the mend.

1948

Paul Rogell, MS, writes that he has just taken a new position with the Westinghouse Electronic Tube Division in Elmira, N. Y. He is joining a newly formed headquarters sales group to handle sales and to investigate customer requirements of tubes for special applications, and new products such as transistors.

Conway W. Snyder, PhD, is still doing nuclear research at the Oak Ridge National Laboratory, Tennessee. He has recently "added a little variety to life by traveling around lecturing at several southern universities on Atomic Energy and Space Travel, a subject which seems to have a peculiar appeal." He's already been to Florida, Alabama, Louisiana and Kentucky, and has lectures scheduled in Texas and Maryland.

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* COLLEGIATE

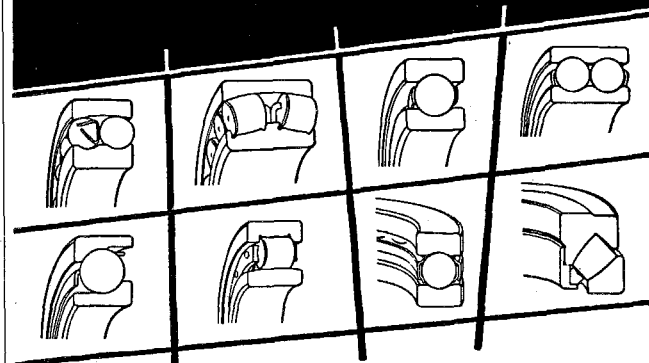
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