February 1948 TECHNOLOGY REVIEW Title Reg. in U. S. Pat. Office

FOR MAXIMUM STRENGTH

VALVE BODIES-FITTINGS OF NON-FERROUS METALS

FORGED

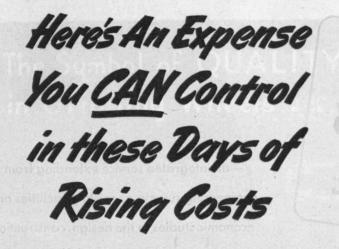
ARVEY METAL CORPORATION

HAROLD B. HARVEY '05 . Engineers & Manufacturers . SHERRY O'BRIEN '17

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FORGINGS IN ALUMINUM . BRASS . BRONZE . COPPER . MAGNESIUM . MONEL . ALLOYS

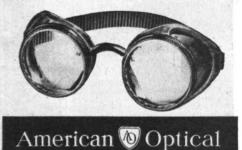
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EYE ACCIDENT COSTS UP 78%

The tragic and unnecessary high costs of eye accidents can be cut by a simple, effective eye protection program. One manufacturer of electrical equipment saved \$14,000 in two years by installing an eye accident prevention program. Why not stack your eye injury costs (obvious and hidden) against the modest cost of such a program—and see how far ahead you'll be! Your nearest AO Safety Representative can help you.



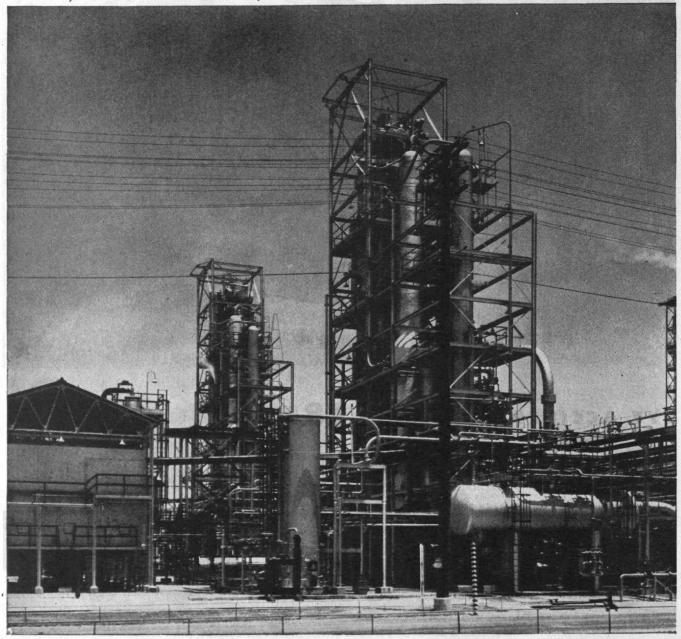
Safety Division SOUTHBRIDGE, MASSACHUSETTS BRANCHES IN PRINCIPAL INDUSTRIAL CITIES

THE TECHNOLOGY REVIEW, February, 1948. Vol. L, No. 4. Published monthly from November to July inclusive at 10 Ferry Street, Concord, N. H. Publication date: twenty-seventh of the month preceding date of issue. Annual subscription \$3.50; Canadian and Foreign subscription \$4.00. Entered as secondclass matter at the Post Office at Concord, N. H., under the Act of March 3, 1879.



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ANDEE chose "POLYSTYRENE" for the production of its "POLY-LITE" Fluorescent Light Sections because of its outstanding properties for this application. Study the properties listed here and you will agree that these features, plus Sandee technology, create a combination unequaled for the development of your new fixtures to give the maximum in aesthetic and functional lighting.

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1. Specific Gravity		-1.05
2 Tensile Strength	- 5500	to 7000 P.S.I.
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6. Dimensional Stability		- Excellent
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9. Electrical properties		- Excellent
10. Odor		- None
11. Color		- Unlimited
12. Finish	- High G	loss if Desired



HELIUM ISOTHERM ON CABOT SPHERON 6

CC'S OF HELIUM ADSORBED PER GRAM OF CARBON BLACK

200

160

120

80

40

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Cabot research on carbon black ranges from flame studies at 1800°C to adsorption properties at -269°C. Adsorption isotherms such as this are the first complete Helium isotherms ever obtained on carbon black at liquid Helium temperatures. They aid in understanding the structure of carbon black surfaces, and contribute at the same time to the world's fundamental knowledge of adsorption. They are an example of achievement in pure research at Cabot laboratories.

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190

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The following features typify the advanced engineering design of this new grinding machine . . . an ingenious, roller-bearing table and a double-ended ball bearing wheel spindle with super-precision, permanently-sealed, grease-lubricated bearings. Brown & Sharpe Mfg. Co., Providence 1, R. I., U. S. A.

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Write for Bulletin S-4611

HAROLD E. KOCH '22, President ELTON E. STAPLES '26, District Manager, Cleveland

HEVI DUTY ELECTRIC COMPANY NEAT TREATING SUBMACES HEVE BUTY ELECTRIC EXCLUSIVELY MIEWAUKEE 1, WISCONSIN

THE TABULAR VIEW

About Physics. — The Review takes pleasure in presenting (page 201) the second of the lectures in memory of Arthur D. Little, '85, entitled "Physics in the Contemporary World" by J. ROBERT OPPENHEIMER, Director of the Institute for Advanced Study, Princeton, N. J. After receiving the A.B. degree from Harvard University in 1925, Dr. Oppenheimer studied at Cambridge University and Göttingen University, the latter of which conferred upon him the Ph.D. degree in 1927; he was National Research Fellow in 1927–1928 and International Education Board Fellow in 1928– 1929. From 1929 until he became director of the Los Alamos Laboratory of the Manhattan Project, Dr. Oppenheimer was professor of physics at the University of California and the California Institute of Technology.

Conservation for Engineers. — In the January issue of The Review, the basic concepts of conservation were developed by DR. IRA N. GABRIELSON, President of the Wildlife Management Institute. Already the ripple of last month's message is widening, as is indicated in Mail Returns, page 192. In his second article Dr. Gabrielson points out (page 205) the relationship between engineering and conservation. Dr. Gabrielson has spent his entire professional life in studying and directing research on wild life, game management, and in furthering this nation's efforts in the conservation of natural resources. His article "Relation of Conservation to Engineering Projects" is one of two lectures delivered to students in the Department of Civil Engineering last spring.

Student Prize Papers. — M.I.T. is universally known as providing outstanding training in scientific and engineering subjects; it is not so widely known for its program of humanities, intermural and intramural athletics, and self-governed student activities — all of which are aimed to make well-rounded individuals of its students. As an indication of ability of first- and second-year students to wield a pen, or typewriter as well as a slide rule — The Review publishes, without editorial changes, two papers from last year's winners of the Robert A. Boit Prize for the "most effective use of English" in written papers. The Boit papers are "Evitability of World War III" by FREDERIC B. KRAFFT, '49, (page 210) and "The Limitations of Technique" by WILLIAM S. EDGERLY, '49, (page 211).

Professional Aid. — In "Bridges or Stepping Stones?" (page 212) DUGALD C. JACKSON, '21, examines the problem of help offered to younger men by engineers of established reputation and maturity. In so doing he is guided not alone by the fine example set by the elder Dugald C. Jackson who was for almost 30 years head of the Department of Electrical Engineering; he also draws upon his career as successful educator and administrator in several engineering institutions and upon more recent background as Army colonel in World War II. To a considerable extent, at present, Colonel Jackson's activities are taken up in directing (Concluded on page 192)

PEOPLE DON'T STANDARDIZE ON "SUBSTITUTES"

For nearly 15 years, molybdenum high speed steels have proved on their own merits that they are superior steels. Long before World War II, during the war, and up to the present moment, these steels have done more work for less money.

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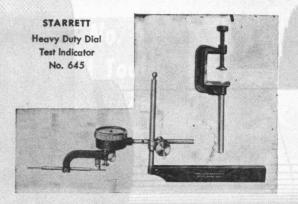
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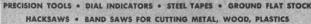
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MAIL RETURNS

Specialization — and Delay

FROM GEORGE R. WADLEIGH, '97:

Your cover on the December, 1947, issue of The Review interested me greatly, first because it is an interesting composition and second because of the sea wall design.

The location is not given but presumably is somewhere along one of the coasts of this country. The design is of a "new" type here, perhaps not over 20 years old. The very interesting point is that in Herculaneum 2,000 years ago this same design is to be found on a sea wall, the Bay of Naples then abutting the city. Now this wall is a quarter to a half mile from any water.

Two thousand years is no doubt longer than the time required at present for a good feature developed in one industry to spread into another, but our present intensive development of specialists is making for much delay in this respect.

It is apparent from Dr. Compton's talk here on December 9 that he and the Faculty are much alive to the question of overspecialization. New York 18, N.Y.

Spreading the Word

FROM BENJAMIN P. RICHARDSON, JR., '26:

Dr. Ira N. Gabrielson's article "Concepts in Conservation of Land, Water, and Wild Life" in the January, 1948, Review was very interesting. If it is possible to obtain 200 copies of pages 149-153 I should be glad to spread the word to our junior club members. It might be another drop-on-the rock and prove productive to the cause. Old Greenwich, Conn.

Pleasant Words

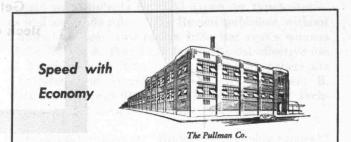
FROM JOHN A. ZUBLIN:

I am subscribing herewith to The Technology Review and enclosing my check. There is no need for you to send me this magazine on approval because if it is as good as M.I.T., then I want it and shall be anxious to read it. Los Angeles 28, Calif.

THE TABULAR VIEW

(Concluded from page 190)

the Boston campaign of the American Red Cross, but he looks forward to early resumption of his work in engineering, industry, and education.



If you have a *difficult* building problem, talk it over with us. In our 30 years of industrial construction, we have overcome many unusual conditions - both on new building and alteration work.

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Alfred T. Glassett, '20, Vice President