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INDUSTRIAL BUILDINGS SHOULD BE WELL LIGHTED.

From the employer's viewpoint, the big difference between men who work out of doors and those who perform tasks inside the building, is the factor of light. Daylight furnishes sufficient illumination outside during the daytime for men to pursue their tasks efficiently and safely. But the proposition of getting enough daylight into the interior of industrial buildings requires some thought.

It is not a difficult problem by any means, and any employer can take advantage of daylight and utilize it for lighting his building during the daytime, if he desires. It is an excellent light, especially suitable for the eyes, reducing eye strain and eye weariness to a minimum, and has the great economic advantage of costing nothing.

To utilize daylight to the utmost, we must first provide means for allowing daylight rays to enter the interior of buildings in sufficient quantity—namely, proper and adequate windows and skylights. Many excellent instances of buildings designed with a due regard to the importance of daylight lighting can now be seen in many of our industrial cities. Such buildings present the appearance of being practically all windows—"window walled," as they are termed—and this type of daylight construction is coming rapidly into favor because it constitutes a more healthy building for large numbers of employees, both from the lighting and ventilation standpoints.


The Larkin Co., Philadelphia, has erected a building almost entirely glass, 85% being windows, and the Loomis Breaker, operated by the D. L. & W. R. Co., Nanticoke, Pa., is literally a glass house, being 93.5% of glass. The new buildings of the Winchester Repeating Arms Co. have an average glass area of 58%.

An investigation covering 18 buildings constructed by the Aberthaw Const. Co., Boston, shows that the average window area is 57.5%.

These figures indicate how important the subject of lighting is now considered by employers of industrial labor, and how well the idea has been carried out by the architects and engineers, in order that all parts of a building may receive sufficient daylight. But, in addition to providing ample window space, there is another factor which is equally important, and that is, equipping the windows with the proper glass.

The bright direct rays of the sun should not be permitted to strike the eye, and we must provide a means for reducing the glare to rays which will not be too bright. This is accomplished by glass especially manufactured for industrial windows, known as Factrolite. This glass possesses the property of breaking up the intense rays of the sun and diffusing the light into the interior of the building in proper portions, solving the problem of sun glare.

If you are interested in the distribution of light through Factrolite, we will send you a copy of Laboratory Report—"Factrolited."

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Eighty thousand workmen with the quarrying tools of antiquity toiled in the subterranean quarries from which King Solomon obtained the pure white stone for his Temple—begun in 983 B.C.

Channels, to mark the dimensions of the blocks, were grooved in the rock wall with picks, crudely fashioned of bronze. The Egyptian method of breaking out the rock was used: into a niche cut in the stone, a dry wooden wedge was pounded and water poured in upon it. The swelling of the wood forced out the block.

The rough and smooth ashlar of which the temple was built was worked down to the desired size in these caverns. Seven years were consumed in building the temple.

At a modern copper mine, 47,000 tons of ore have been produced in one day with the aid of Hercules Explosives. And more than 25 million pounds of Hercules dynamite have been used at this mine without a single accident due to the explosives.

King Solomon's craftsmen labored for many days to accomplish as much as one pound of Hercules dynamite will now do for you in a moment.

Write to our Advertising Department, King Street, Wilmington, Delaware, for a book on Hercules Products.
A Record Still Unbroken

At 5:20 P. M., March 8th, 1920, Westinghouse Turbine Established World's Record for Continuous Running.

What Engineering Owes to Good Workmanship

WHEN Westinghouse installed a 45,000 K.W. Turbine in the power house of the Narragansett Electric Light Company, Providence, R. I., early in December, 1919, there was no thought of more than the average weekly power house run. Abnormal weather conditions, however, brought so steady a demand for power, that the unit was not shut down until March 8th, 1920, after a continuous run of 84 days, 11 hours, and 36 minutes.

This was especially remarkable in that the unit consists of two turbine generator sets, each of which operates independently of the other, so that the result was the mechanical equivalent of operating a single machine continuously for 169 days.

If space permitted, many astounding figures could be cited—about the K. W. H. generated during this period, the water and coal used, the cooling system, the oiling system, etc.

For example, to keep the generators cool, over 18,000,000,000 cubic feet of air passed through them, which equals 2,000 times the total weight of the generators and their bed plates.

Equally impressive, oil was pumped through the self-contained lubricating system to the bearings at the rate of 600 gallons a minute. Had the oiling system failed for only 30 seconds, the bearings would have been wrecked, and other parts of the unit harmed!

There is interesting history back of the operation of Westinghouse Turbine Units of 3,000 K. W. and higher. Notable records have been made in many of the world's great power plants, performance that is a tribute to remarkable engineering and good workmanship.

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ACHIEVEMENT & OPPORTUNITY
But nobody had thought to do it

By bringing electricity down from the clouds over a kite string, it was a simple thing to prove that lightning was nothing more than a tremendous electrical flash.

For centuries before Franklin flew his kite in 1751 philosophers had been speculating about the nature of lightning. With electrified globes and charged bottles, others had evolved the theory that the puny sparks of the laboratory and the stupendous phenomenon of the heavens were related; but Franklin substituted fact for theory — by scientific experiment.

Roaring electrical discharges, man-made lightning as deadly as that from the clouds, are now produced by scientists in the Research Laboratories of the General Electric Company. They are part of experiments which are making it possible to use the power of mountain torrents farther and farther from the great industrial centers.