
LIGHT FOR THE COLORIST*

In the October issue of this magazine, in discussing Light for the Colorist, I made the following statement:

"Nothing is easier in glass manufacture than to make blue glass, of any degree of density. Cobalt gives a clear ultramarine blue, and cupric oxide a fine turquoise; while amethyst hues are produced by manganese. The cheapest forms of glass can thus be colored without adding sensibly to the cost of production."

My attention has been called to the fact that these statements, while strictly true, may lead to some misunderstanding on the part of the technical colorist, who might naturally inquire why such apparently high prices are asked for apparatus in which only a small plaque of colored glass is the essential element. The answer is akin to the statement of one of the great masters of etching, that "nothing is so easy to make as an etching, and nothing so difficult to make as a good one."

None of the three glasses mentioned, colored by a single element, will modify the light of an electric lamp in such a way as to raise its color temperature without color distortion. It is only by using at least two, and preferably three elements, that a glass of the right color can be produced. Now, while nothing is easier

to produce than blue glass, nothing is more difficult to produce than a blue of an exact shade and density, by the composition of two or more coloring matters; and to produce two melts of such a glass that are exactly alike in color and density is practically impossible: they may approach equality, but never absolutely reach it. The commercial production of such glass is therefore a matter of selection; and the proportion of rejection is very high. If it were not for the fact that the density of color can be varied to a certain extent by varying the thickness, and that colors which do not measure up to the highest standard of selective absorption may be used where the utmost degree of color perception is not necessary, the price would have to be very much higher than is now charged.

The misleading claims for the so-called daylight lamps to which I called attention arise from the use of a blue glass, usually colored with cobalt, which does not give a true color temperature, and which is generally of insufficient density besides. It is this class of light modifiers that the colorist must look out for, if his work is at all exacting. To avoid trouble he would better apply very rigidly the Scriptural injunction: "Prove all things; hold fast that which is good."

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