

SEE NATURAL COLORS...

SEE NATURAL COLORS
UNDER NEW LIGHTING

164

To one coming from the bright sunshine outdoors, the color of fur---ooOoo---all assume an objectionable

appearance. High Pressure Mercury Lamps in Combination
With Tungsten Filament Lamps Give
provide the Light Almost Identical to
Daylight in Color

fixtures which also were equipped with tungsten lamps, the

resultant lighting would bring out the color harmonies just

as they are. Good vision is in line for more years of enjoyment

through the medium of new kind of lighting which is almost

identical to daylight in color quality. A new light source,

known as the high pressure mercury lamp, has been developed

by engineers of the Westinghouse Lamp Company. Used in com-

bination with standard tungsten filament lamps, several

hundred of these lamps will supply the illumination in the

main exhibit hall and other areas in the Ford Building at

A Century of Progress this summer. color harmonies. New light-

ing fixture By itself, the high pressure mercury lamp emits a

light distinctly bluish-white in color. Under this illumina-

tion, nature's colors are distorted slightly and do not

appear in their true harmony. The reason for this is that

some of the color rays which make up daylight illumination

are missing in the mercury light. The combined light of

tungsten filament and high pressure mercury lamps, however,

is surprisingly close to that of daylight in color. The

color deficiency of tungsten light is balanced by the

presence of these very colors in mercury light.

SEE NATURAL COLORS...

-2-

To one coming indoors from the bright sunshine outdoors, the color of furnishings would assume an objectionable appearance if high pressure mercury lamps alone were used to provide the lighting. But if these lamps were used in fixtures which also were equipped with tungsten lamps, the resultant lighting would bring out the color harmonies just as they are seen outdoors.

FORDS SEEN IN TRUE COLORS

In the Ford Building at the Chicago Fair this year, the color, more so than the intensity of the illumination, was the primary consideration. Henry Ford wanted his cars on display indoors to appear in the eyes of visitors just as they do along the road. Under the combined lighting of high pressure mercury lamps and tungsten filament lamps, the Ford cars on display will be seen in their true color harmonies. New lighting fixtures, especially constructed for this installation, will be used.

In order for the color of this light to approximate that of daylight, an equal number of lumens of incandescent tungsten light and of high pressure mercury light must be combined. From a series of experiments it was found that best results could be obtained by using the 500 watt tungsten filament lamp. In the Ford Building fixtures, two high pressure mercury lamps are to be operated with three of the 500 watt tungsten filament lamps.

High pressure mercury lamps are expected to carve their own field of application in industrial plants. The peculiar color of this light is particularly advantageous for observing small and fine objects. For that reason these lamps should find increasing use in certain industrial operations where inspection procedure is paramount.

PROMOTES BETTER INSPECTION

In factories such as those of the Ford Motor Company where great accuracy and care is required in the fabrication and inspection of thousands of automobile parts, high pressure mercury lighting may contribute to greater speed, accuracy, and safety. Under the light of high pressure mercury lamps, manufacturers who demand material of only the highest quality, may impose still greater restriction in their material specifications, particularly those applying to the metal parts. This lighting permits ready detection of flaws and general inspection with greater ease and speed.

Where in the factory one color lighting will undoubtedly improve the conditions for accurate seeing, the effect on the color appointments in the room does not present an objection so great as occurs in the home, store, and office. If, by combining these lamps with tungsten filament lamps to produce light approximating daylight in color, people can step indoors and find there the same color harmonies as nature displays outdoors, then such lighting must soon create a

SEE NATURAL COLORS....

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-4-

wide demand. In retail stores, for example, where customers often want to take colored merchandise to the window or to a "daylight" lamp to see how it will appear outdoors, such combination lighting may prove of great value in days to come.

(Fig. #3)
Photo WL-386 - Making voltage readings on the special lighting fixture which will be used to provide "daylight" illumination in the Ford Building at the World's Fair this summer. # # #
The fixture has three 500 watt standard Mazda lamps and two of the new Westinghouse High Pressure Mercury lamps.

(Fig. #4)
Photo WL-387 - Each of the new Westinghouse units, several hundred of which will be used to illuminate the main exhibit hall of the Ford Building at the Chicago Fair this year, is equipped with three 100-watt Mazda incandescent lamps and two of the new Westinghouse high pressure mercury lamps. Light from these units is similar to sunlight in quality and makes objects appear as they do outdoors.

(Fig. #5)
Diagram - Line drawing of the new Westinghouse High Pressure Mercury Lamp shows complete construction.

(Fig. #6)
Curve - Curve showing rapid increase in lumen output of new Westinghouse High Pressure Mercury lamp during first few degrees of operation.

(Fig. #7)
Chart - Chart showing color quality of tungsten lamps alone; High Pressure Mercury lamps alone; these two together, and how they compare with the color quality of daylight (sunlight).

Note to Editor: Photographs or electrotypes of Fig. 1, 2, 3, and 4 will be supplied upon request. Photoprint copies of figures 5, 6, and 7 are available on request.

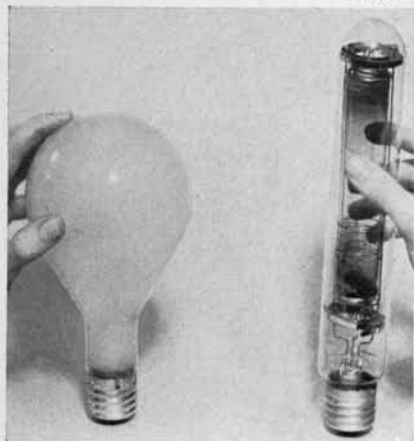
CAPTIONS FOR ILLUSTRATIONS

- (Fig. #1)
Photo WL-906 - Standard 500 watt Mazda lamp and new Westinghouse High Pressure Mercury lamp which will be used together to provide special illumination in the Ford Building at the World's Fair this summer.
- (Fig. #2)
Photo WL-903 - To clean impurities out of the innertubes of the new Westinghouse High Pressure Mercury lamps, rare gases are injected into them and high temperature produced by heating the electrodes.
- (Fig. #3)
Photo WL-886 - Making voltage readings on the special lighting fixture which will be used to provide "daylight" illumination in the Ford Building at the World's Fair this summer. Each fixture has three 500 watt standard Mazda lamps and two of the new Westinghouse High Pressure Mercury lamps.
- (Fig. #4)
Photo WL-887 - Each of the new Westinghouse units, several hundred of which will be used to illuminate the main exhibit hall of the Ford Building at the Chicago Fair this year, is equipped with three 500-watt Mazda incandescent lamps and two of the new Westinghouse high pressure mercury lamps. Light from these units is similar to sunlight in quality and makes objects appear as they do outdoors.
- (Fig. #5)
Diagram - Line drawing of the new Westinghouse High Pressure Mercury Lamp shows complex construction.
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Curve - Curve showing rapid increase in lumen output of new Westinghouse High Pressure Mercury lamp during first few minutes of operation.
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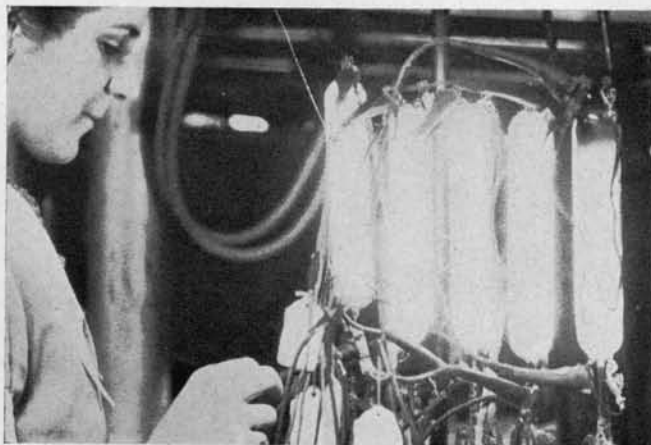
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WL906



WL903



WL886



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