

arc, particles of the electrodes which are composed of tungsten evaporate onto the bulb wall. The halogen gas combines with the evaporated tungsten and redeposits it on the electrode. Without this process, the bulb walls would quickly become blackened with deposited tungsten.

There is a complete line of HMIs ranging from 200 watts up to 12,000 watts. The range includes 200, 575, 1200, 2500, 4000, 6000, and 12,000 watt. These fixtures are available as opened faced, with a fresnel lens, or as a softlight. Of course, each source has an application similar to its incandescent cousin. The only significant difference for the purposes of this discussion is that these sources are daylight balanced for 5600 K. These fixtures can also be tungsten balanced for 3200 K by using a Daymax bulb balanced for 3200 K. (Daymax is a proprietary name of ILC Technology Inc. and refers to their line of HMI bulbs.) HMI technology was extended beyond the range of fresnel, opened face, and the softlight fixtures with the introduction of the PAR HMI. It has characteristics similar to the incandescent PAR, high light output, interchangeable lens, intense point source lighting suitable for long throws.

There are three other types of light source in the discharge category that you may have heard mentioned, the CSI, the CID and the HTI. These fixtures are seal-

ed beam units, with performance similar to that of other sealed beam units. CSI refers to Compact Source Iodide and CID to Compact Indium Discharge.

The HTI is a light source which is related to the HMI family of light sources. The HTI is a 250 watt compact, high intensity light source sealed into a dichroic housing which forms the bulb assembly. A light box assembly concentrates the light source on a bundle of fibre optics. This bundle is available in a number of configurations such as a light bar which terminates 6 lights, a 2.5" diameter fresnel lens, and a multiple strand array. This light source is ideal for models/miniatures or products that can't have heat applied to them. Since all of the heat is contained at the light box, none passes down the fibre optic cable.

Before we finish the discussion on light sources themselves, I think that it is important to mention the carbon arc. Through the infancy of film and television, the carbon arc has done yeoman's service. Before the advent of HMI technology, the carbon arc or "Brute" was the only light source to use for location exterior shooting. The Brute was favored because of light characteristics. Since the light emitted by a carbon arc is produced by an arc between a positive and negative rod, the light source is a very concentrated point source. This produces sharp,

crisp light with good modelling characteristics which lend themselves to excellent shadow detailing. The Brute provides excellent source or fill light as an adjunct to sunlight or as a moon substitute for night shooting. The carbon arc produces an extremely high level of illumination which is delivered by a large 24" lens.

Brutes are seldomly used today because HMIs and CIDs are smaller, lighter and easier to use. With the introduction of the 12K HMI, the Brute no longer reigns supreme in terms of light output. Nonetheless, there are still some who prefer to use the Brute for its light characteristics.

A few years ago, an American company called Muscolight introduced what is perhaps the world's largest and brightest light source. This source is an array of six 6000 watt HMI fixtures mounted on an aerial boom arm fixed to a semi-tractor with its own on board generator. Each fixture is independently adjustable and focussable with a total light output in excess of 1,000,000 candlepower. This is a huge light source, but it is controllable and can be used as artistically as a 1K to light an entire city block.

In the next edition, we will discuss some of the accessories and auxiliary equipment used in the practice of creative lighting.

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