CHAPTER 5

CONCLUSION

Landscape Infrared Photography.

The result shows the striking contrast and the clear rendering of the detail of distant objects. The chief characteristics of infrared landscape photographs are as follows:-

Haze is penetrated so that hills and distant details are rendered sharply.

Grass and the leaves of deciduous trees are generally rendered very light, looking like being covered with snow. Coniferous trees are usually reproduced darker.

The sky is very dark, particularly from the horizon when the camera is pointed away from the sun.

Clouds appear white, heavy clouds stand out strikingly against the dark sky.

Shadows are very dark.

Water generally are reproduced as black.

Infrared landscape photography is popular for haze and fog penetrations, moon light scenes on day light,etc.

Haze and Fog Penetrations

The result shows the infrared photographs of distant scenes clearly without atmosheric haze effect, mountain and distant details are rendered sharply. When there are bigger particles in the atmosphere, for example, the dust infrared photographs taken through a dust scene caused by a running car or even in smoke caused by fire show no penetration of infrared radiation. That is because the penetration of infrared depends on the size of particles. For small particles the transmission is higher but it decreases

when the particles size is increased. The results agree with other investigator.

The infrared photographs taken through natural fogs show that for a light fog the infrared photographs increase the visibility.

For a heavy fog, infrared photographs fail to increase visibility. The results agree with the results of other investigators.

Moon light scene in daylight.

When the outdoor scenes in dayli ht of infrared photographs are printed slightly darker than normal, these photographs look like being taken in moon light. This effect can be used in professional motion pictures for moon light and night scenes.

Infrared in Architectural Photography.

The Architectural infrared photographs show that structural lines are sharply defined and the various planes are well separated against the dark sky. They show more details than ordinary photographs.

High Altitude Aerial Photography.

From the results obtained we can apply in mapping purposes and the surveys of the features of the ground such as aerial forest survey and aerial geological survey together with military use in wartime for camouflage detection.

In this field a special camera and aerial films are required in order to get the best aerial photographs. However in this study the ordinary cameras can be used for taking aerial photographs.

Infrared in the study of Heat distribution of hot bodies.

The result shows that hoter parts of a hot bodies are over exposed but the cooler parts are under exposed in the same photographs.

This is the basic of design engineering, which can be applied in

the investigation of stoves, engine parts, high - pressure boilers, electrically heated appliances, cooling ingots and castings and other objects similar in temperature; etc.

Documentary and Criminology.

The results show the infrared photography is applicable in the field of criminology such as the examination of sealed envelopes, revealing the censorial passage, detection and demonstration of bloodstains or cloth detection of stains and irregularities on cloth and examination of cloth fibers and photography in the dark, etc.

The other applications which are not done in this study because special equipments are required, are such as the detection and deciphering of erasures and forgeries and deciphering of altered or charred documents.

Infrared Photography in Medical Diagnosis

The results show the revealing of veneous system underlying beneath the skin. This should be considered as a potential aid to the clinical diagnosis, e.g., the carcinoma of the breast, engorged veins, varicose veins, and partial occlusion of a deep vessel, etc.

Other applications have been used in medicine are Ophthalmology, Pupillography and Dentistry, etc.

Infrared Photography by Flash.

The results show that infrared photography by flash is useful in many applications, for example, in the situations where a bright flash would be disturbing or a bright flash is forbidden e.g. press photography, candid photography, photography in darkness, detection of criminals in the dark, cinema audience - reaction studies, dark adaptation of the eye and other studies photography of industrial operations in the dark, and photography of the important ceremonies, etc.

Infrared Photomicrography.

From the results show that infrared photomicrographs can penetrate the thicker microscopic sections in which the panchromatic photomicrographs cannot do.

This is applicable in Entomology, Cytology, Histology, Embryology Botany, Criminology for detection of carbon monoxide poisoning, Geology and Palaeontology, etc.

Infrared Photography as compared to Ultraviolet Photography.

Infrared photography is the recording of infrared radiation on special film, but ultraviolet photography is the recording of ultraviolet radiation on ordinary panchromatic film. Their applications are only different in nature of the subject. When the subject is transparent to infrared, the ultraviolet photography is employed. When the subject is not fluoresced but opaque to infrared, the infrared photography is chosen. There are two methods of ultraviolet photography, they are reflected method and fluoresced method.

The ultraviolet photographs shown in Chapter 4 are reflected photographs, there is no fluoresced photographs because fluoresced filter is not available.

The most frequent uses of ultraviolet photography are in the examination of altered documents, engravings, tapestries and other textiles, paintings, sculptures, and porcelain detection of invisible inks, fingerprints on a multicolored surface, etc.