

# The People's Republic of China

## Addendum to the Progress Committee Report

*Ed. Note: This Report (prepared by Ti Shih-Chieh, Film Bureau of the Ministry of Culture, Peking, China) was received on 29 March — too late for publication in the May 1979 Journal. We are pleased to present it here as an addendum to the Progress Committee Report.*

China's cinema industry was established after the founding of the People's Republic of China in 1949 and has developed progressively ever since. At the present time there are film studios making feature films to serve the following areas: Peking, Changchun, Shanghai, Chukiang, Sian, Ehmei, Hunan, Inner Mongolia, Kwangsi, and Sinkiang. The P.L.A. Film Studio, which is headed by the military department, also is engaged in making feature films. The Central Newsreel and Documentary Film Studio produces newsfilms and documentaries (Figs. 1 and 2). The Peking Science and Educational Film Studio, the Shanghai Science and Educational Film Studio, and the Agriculture Film Studio all make scientific and educational films; the Shanghai Animation Film Studio makes animation films.

Most of the studios noted above have their own laboratories for processing and printing as well as making their release prints. In addition, two motion-picture laboratories located in Peking and Shanghai reduce 35mm negative to 16mm and 8.75mm and then produce the release prints.

Many hundreds of feature films, animated cartoons, scientific, educational, and short newsreels have been produced during the 29 years since the People's Republic of China was founded.

Manufacture of motion-picture equipment began in the early 1950s and today recorders, lighting equipment, cameras, processing and printing equipment, and camera lenses are manufactured. All mo-

tion-picture projectors used in the People's Republic of China are manufactured in that country. The projectors include 35mm, 16mm, and 8.75mm formats. For certain purposes in a new project, super-8 projectors will be designed and produced in the near future.

Photographic material has been produced during the last 20 years, and today black-and-white negative, duplicating negative and positive, and release print black-and-white material, as well as sound negative stock, are being manufactured. Color negative film compatible to ECN-1 and color positive compatible with ECP-1 are being manufactured, as well as polyester base positive in 3 mil and 4 mil thickness.

There is not sufficient manufacturing capacity to meet domestic demands nor do we yet have the competence to match the quality of the leading film manufacturers throughout the world; as a result we must still import film from abroad to meet the needs of the growing industry.

### Studies and Research in Film

Prior to 1949 (the year of the founding of the People's Republic) the country had a substantial number of experienced technicians who worked with film; using these people as a nucleus, the new Peking Film College was established in the early fifties. Courses are taught in film direction, screen writing, acting, art design, cinematography, sound recording, laboratory technologies including timing, printing processing, and maintenance mechanics.

In 1958 the China Research Institute of Cinematographic Science and Technology was established. Since then scientists have studied processing and printing of imbibition color prints, sensitometry (Fig. 3), technical standards of photographic chemicals, and design of film studios and cinema

theaters. They have gathered information on cinematographic science and techniques, and have done adaptations and caused improvements to be made in the fields of sound recording and acoustic equipment. They also have created the design and provided the impetus for motion-picture projectors to be manufactured in this country (Fig. 4) and have made more substantial contributions to the film industry.

Generally, motion-picture films originate in 35mm and are screened in the 1.33:1 standard format, a small number of films are shown in the 2.35:1 format. Most color negative is developed in the ECN-1 chemistry. A number of the larger film studios are equipped with Hazeltine color analyzers and Bell & Howell, Hollywood Film Co., and Peterson additive color printers, as well as printers of indigenous manufacture in both subtractive and additive modes (Fig. 5).

In 1978 studies were conducted of scientific and technological advances made in other countries including exchange of information on academic activities and experiences in the motion-picture industry. Filmmakers and technicians were sent to Italy, Japan, and Korea to look at their facilities and attend film festivals. In response to an invitation by SMPTE we sent our first technical delegation to attend the 120th SMPTE Technical Conference held in New York City. Our delegation was a well-rounded one and consisted of Mr. Su Yun, the head of Changchun Film Studio; Mr. Ti Shih-Chieh, the head of Technical Division of the Film Bureau of the Ministry of Culture; Mr. Lin Sheng-Ching, a sound specialist; Mr. Chang Hsai-Yang, videotape technician; Miss Lin Tze, a film director; and Miss Lin Wan-Chun, a specialist in technical translations. They attended technical paper sessions and visited the exhibit



Fig. 1. Sound mixing console in the sound recording room of the Central Newsreel and Documentary Film Studio in Peking.



Fig. 2. Sound recording hall for music in the Central Newsreel and Documentary Film Studio



Fig. 3. Ching-Gong-Shan sensitometer (made in Shanghai).

area. In addition, they asked to see an optical house, CBS Broadcast Center and Du Art Film Laboratory in New York City and were taken to visit all the areas. On Friday after the Conference was over, the delegation visited the Eastman Kodak facility in Rochester, and the following week went to Hollywood where they visited Consolidated Film Industries' Laboratory and Video Tape Division, Image Transform, De Luxe Laboratories, Todd A-O, the Burbank Studios and Sound Department, Cinema Products, Hollywood Film Co., Universal Studio Special Effects Department, Paramount Studio Special Effects Department, and the Cinema Department of the University of Southern California.

#### National Science Conference

In the spring of 1978 our National Science Conference was held, and a schedule of the program for the following year was set up to cover scientific and technical works.

During this conference a number of recent contributions to the field of motion-picture technology were recognized and commended. Among these contributions are the following:

1. A system has been developed for recovery of overflows discharged with some film processing solutions. Recovery is carried out through the treatment of color developers with ion exchange resin. Color developers containing CD-2 developing agent are exchanged with resin 216, and TSS color developers containing developing agent are exchanged with resin 290. Based upon the results obtained from analysis, appropriate amounts of chemicals are added to the treated developer overflow discharged from the color developer. When the

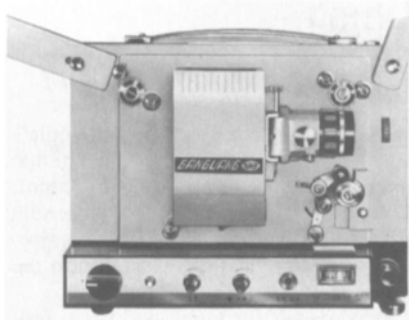


Fig. 4. Gang-Guang 8.75mm film projector (made in Langehow).

analysis is equivalent to that of the original formula, the reconstituted developer may then be reused, its developing power being equal to that of fresh solution. Substantial amounts of chemicals are saved and at the same time environmental contamination due to the discharge of effluents is avoided.

2. Equipment has been designed for stripping and dubbing of release prints for general distribution. China is a country of many nationalities. Some of the minorities have difficulty in understanding the dialog spoken in the standard language recorded on motion pictures. To eliminate this problem, many of the general distribution units providing services in areas heavily populated by minorities have worked out a stripping and dubbing method which is simple and solved the problem. The method used was to lay down a magnetic stripe along the specified film edge of the finished print (35/16mm and 8.75mm) and then do the dubbing through a special double system projector, a sound recorder, and an external control console. This complete system may be used for sound recording, rerecording, and projection.

3. In 1978, The Peking Film Processing Laboratory put into regular production the imbibition color printing system manufactured by the Technicolor Corporation in the UK and installed in a new building constructed for that purpose at an earlier date. The speed of the system is 5400 m/h. The results are excellent, and it is recognized that the system is intended for mass production. Blank and matrix films for this system are being manufactured, and work is going on aimed at improving the grade of the material. This work is being done cooperatively by the research division and the film manufacturing division in Paoting. The average number of 35mm release prints made on a film are 250, and in 16mm and 8.75mm 2000 copies of each format are average.

There are more than 100,000 projection teams providing facilities for 35mm cin-

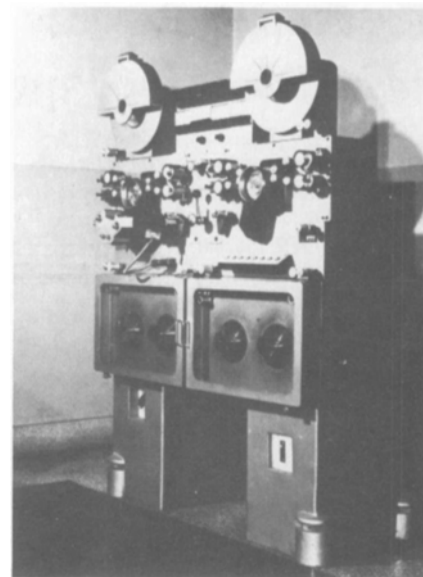


Fig. 5. Panel film printer (made in Shanghai).

emas and for mobile units containing 16mm and 8.75mm facilities. In addition, these teams perform in live entertainment sequences in villages, factories, mines, and mountain districts thus circulating both live shows and motion pictures to remote areas.

#### Inputs of Motion-Picture Information

Three technical motion-picture equipment publications provide assistance to the local engineers and other interested persons — *Film Technique*, *Photographic Materials*, and *Film Mechanics*. In addition, we receive technical books and journals from abroad pertaining to the motion-picture industry and translate them and make them available to our technicians.

We have been gathering information during visits to other countries on the use of videotape for production, and experiments in this area are being conducted. We recently purchased four Ampex 2-in videotape machines and RCA color camera ancillary equipment to carry on this work.

#### Conclusion

There is much for us to learn and do in the matter of bringing our communications industry (motion pictures and television) up-to-date, and we intend to take a more active part in international academic activities such as technical conferences, trade shows, and visits to plants to help us raise our cinematic standards in the People's Republic of China.

We appreciate this opportunity to present the condition of our industry and look forward to showing our growth in technology in future Progress Reports.