663
METKEM
STABLE BLEACHING POWDER
NUMBER

METKEM Journal

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Office of the Managing Editor :
P. O. Box 67, TIRUCHIRAPALLI.

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In this Issue

STABLE BLEACHING POWDER

INDIAN INDUSTRIES FAIR

AND

OTHER USUAL FEATURES.

STABLE BLEACHING POWDER

by C. S. SRINIVASAN

BLEACHING powder is a well-known industrial chemical made from lime and chlorine, and is often referred to as ' chloride of lime '. Discovered in 1798 by Paul Kilaiber, it was first made by Charles Tennant at St. Rollox works in Glasgow in 1799. Bleaching powder was the most important bleaching chemical until the first quarter of this century, but with the development of transport facilities for, and the increasing use of chlorine, world production of bleaching powder started declining steadily. In India, however, as industrial development is only of recent origin, the requirements of textile and paper units and small-scale users like handloom establishments were met, for the most part, by imports as late as 1945. Indigenous production of bleaching powder started around this period, but due to technical difficulties and for the reason that the product was unstable in tropical conditions, the few units engaged in making it did not work their plants to full capacity ; so imports of the chemical continued though on a reduced scale. At the same time the chemical industry of the country had been putting forth its best efforts for improving the quality of the indigenous product to the standard of the imported product.

The Mettur Chemical & Industrial Corporation Limited, pioneer producers of electrolytic caustic soda chlorine, have now succeeded in making for the first time in the industrial history of the country STABLE BLEACHING POWDER, containing 33 to 37 per cent available chlorine.

What is Bleaching Powder ?

Bleaching powder is chlorinated lime powder prepared under regulated conditions of temperature and pressure. The activity of the chemical is measured and expressed in terms of available chlorine—that is, the percentage of chlorine in it available for bleaching

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purposes. At the time of manufacture, bleaching powder contains anything from 25 to 37 per cent available chlorine. Ordinary bleaching powder is unstable due to various factors like the presence of impurities like iron and manganese, moisture, and the temperature of storage.

The chemical composition of bleaching powder is still a vexed issue. Odling (1861) gave it the simple formula Ca. Cl. OCl. but Bunn, Clark and Clifford (1935) suggested as a result of microscope and X-ray studies, a system consisting of $CaCl_2$. $Ca(OCl)_2$. $Ca(OH)_2$. H_2O. "Bleaching Powder," to quote E. Von Meyer (1892), "has been the subject of numberless researches made with the object of arriving at its constitution, and it may be said that in spite of these efforts there is no other substance of equally simple composition regarding whose nature and composition so much doubt prevails."

How it is made

Bleaching powder is made by reacting hydrated lime with chlorine gas. The lime should be high-grade with as low a silica content as possible, and without iron or manganese. The chlorine gas is usually dried and diluted with air. Before World War I, bleaching powder was made in manually-operated chambers.

In 1925, Nils Backman introduced the first mechanised plant in which hydrated lime and chlorine-bearing gas were passed in a counter-current manner inside brick-lined or concreted circular chambers, called Backman chambers, and constructed one over the other. The lime is raked across the circular floors and discharged downwards from chamber to chamber. Chlorine is admitted to the second and/or third chamber from the bottom and drawn up. The absorption of chlorine is maximum in the second and third chambers, and the residual chlorine is absorbed in fresh lime coming from the top chambers. The temperatures in the chambers are controlled by pipes, embedded in the concrete or by circulation of cold air in the jackets surrounding the chambers. Bleaching powder is discharged from the bottom chamber into drums or filling bunkers.

Other principal types are the Hasenclaver and Rudge tube apparatus. These also operate on the principle of counter-current flow of lime and chlorine gas.

The bleaching powder produced by the above methods is not stable and has been known to decompose slowly with loss in available chlorine content. To bring down the rate of such decomposition, drying of the bleaching powder or the addition of powdered quicklime to fix the moisture in the powder was done in some cases. But these methods had certain disadvantages.

Stable Bleaching Powder

A process for the manufacture of stable bleaching powder was evolved at Werke Rheinfelden in 1931. In this process slaked lime is reacted under vacuum with chlorine inside a horizontal cylinder provided with stirring paddles. The reaction product is dried under vacuum. A dry bleaching powder containing 35 to 37 per cent available chlorine is produced. The powder is white, colourless and free-flowing, unlike the unstabilised variety. A typical analysis of the powder is as follows:

Available chlorine	35 to 37 per cent.
Water	0·5 to 1·0 ,,
Lime	26 to 27 ,,

The powder is quite stable at the temperature range of 80 to 100 deg. C. and keeps well over extended periods of storage under all climatic conditions.

Advantages of Stable Bleaching Powder

Ordinary bleaching powder, it is well-known, is highly unstable and its strength goes on deteriorating on storage. As the chlorine content gets low and the lime content high two or three months after manufacture, larger quantities of the powder have to be used than would otherwise be necessary, and thick deposits of lime are left on the bleached material. Manufacturers could, therefore, guarantee a reasonable quality for the powder only for a short period, say, two months. In such a short period as this, it is obviously difficult to despatch and distribute the product and arrange for its consumption. Stable bleaching powder eliminates such disadvantages.

Applications

Bleaching powder is employed principally in the bleaching or whitening of yarn, textiles, wood pulp, paper, etc. While large textile mills and paper plants can use liquid chlorine for bleaching, small units have necessarily to depend on bleaching powder.

Bleaching powder is besides a good disinfectant—it is in wide demand by public health departments and local bodies for purposes of preventive hygiene and sanitation and for the sterilization of water.

India's annual requirements of bleaching powder are estimated at 8,000 tons. Demand is likely to go up to 15,000 tons by 1960-61—that is, by the end of the Second Five-Year Plan period. With the change-over to the manufacture of stable bleaching powder and with an annual production capacity of 6,000 tons, the Mettur Chemical & Industrial Corporation Limited, can well look forward to making a significant contribution to the country's requirements of this important, basic chemical.

K. Rajagopal, Engineering Superintendent, and Dr. Mellhorn, the German Expert, who helped in the start-up operations of the new plant.

Du lieber Gott, how much more expressive a hand can be than inadequate English!

STABLE B. P. CREDITS

THE suggestion that MCIC should change over to the manufacture of a stable variety of bleaching powder came from Mr. V. Seshasayee and Mr. K. K. Raman. It was heartily endorsed and blessed by Mr. S. Vaidyanatha Iyer, Chairman, Board of Directors.

Mr. S. Ramaswamy, Production Superintendent, was deputed to Europe early in 1954 to study and recommend a suitable process for the manufacture of stable bleaching powder. Mr. Ramaswamy accordingly got in touch with several chemical engineering firms and industries in Germany, France and Switzerland and discussed with a number of foreign technicians the possibility of making a bleaching powder that will remain stable in Indian conditions. When these firms undertook a practical study of the possibilities of making the powder, starting with limestone

ENGINEERING DEPT.

(Sitting): N. Parthasarathy, K.R. Venkataraman, K. Rajagopal, R. Natarajan, D. Rethinam.

(Standing): K. Devanathan, M. A. Arokiasami, L. S. Balasubramanian, S. Kalyanaramaier, N. Rathnam.

available in this country, Mr. Ramaswamy also worked with their chemists and verified for himself the extent to which the proposals made by the firms would work. Based on his studies and the recommendation that he made, it was decided to adopt the Rheinfelden process of manufacture. An order was placed with a well-known German firm of chemical engineers for the fabrication and supply of the plant and machinery.

Towards the end of 1954, Mr. K. Ramanathan, Works Manager, was deputed to undergo practical training in the Rheinfelden plant, to study the plant and machinery under fabrication with various manufacturers and to discuss and work out a list of instruments and spare parts necessary for running the plant.

The new machinery started arriving from May 1955 onwards. The steel work for the plant was designed and fabricated from then onwards, and erection commenced early in September 1955. Mr. K. Rajagopal, Engineering Superintendent, was in charge of the erection—assisted by Mr. N. Parthasarathy and Mr. K. R. Venkataraman. Assistant Engineers, by Mr. S. Ramamurthi, Electrical Engineer in water line and electrical work, and by Mr. R. Natarajan, Civil Engineer in civil jobs. Draughtsmen D. Rethinam and K Devanathan prepared the drawings.

The transport and positioning of the heavy stanchions and machinery were done by the *Serang* men, led by Mr. Angamuthu, Maistry, and

S. Ramaswamy, Production Superintendent

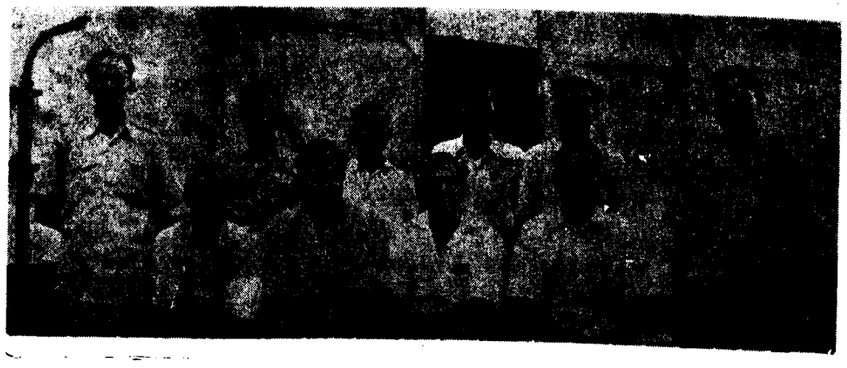
Mr. K. Ramanathan, Works Manager and Dr. Mehlhorn

SERANG (HEAVY WORK) GROUP

First Row: K. Angamuthu (Maistry), K. Marimuthu, C. Aiyannan, A. Ammasi, S. Kuppan, K. Chinnarayan, Mohd. Hussain, Kunju Ahmed.
Second Row: C. Raman, C. Kali K. Kuppan, V. Veerappan, S. Perumal, N. Muthu, Ardhanari, V. Chemban and Chellappan.

MECHANICS (FITTERS) GROUP

First row: A. Abdul Aziz, T. Guruswami, P. Rengaswami, K. Kalimuthu Arumugham.
Back row: C. Kandaswamy, Aiyaswamy, L. James, C. Krishnan Nair.



ELECTRICAL SECTION

Sitting L. to R.: K. Gopalan, N. Parthasarathy, S. Ramamurthi, A. Kannan.
Standing: M. Victor, S. Rajamanikkam, J. D George, M. Rajagopal, M. Chinnappan, A. Krishnan.

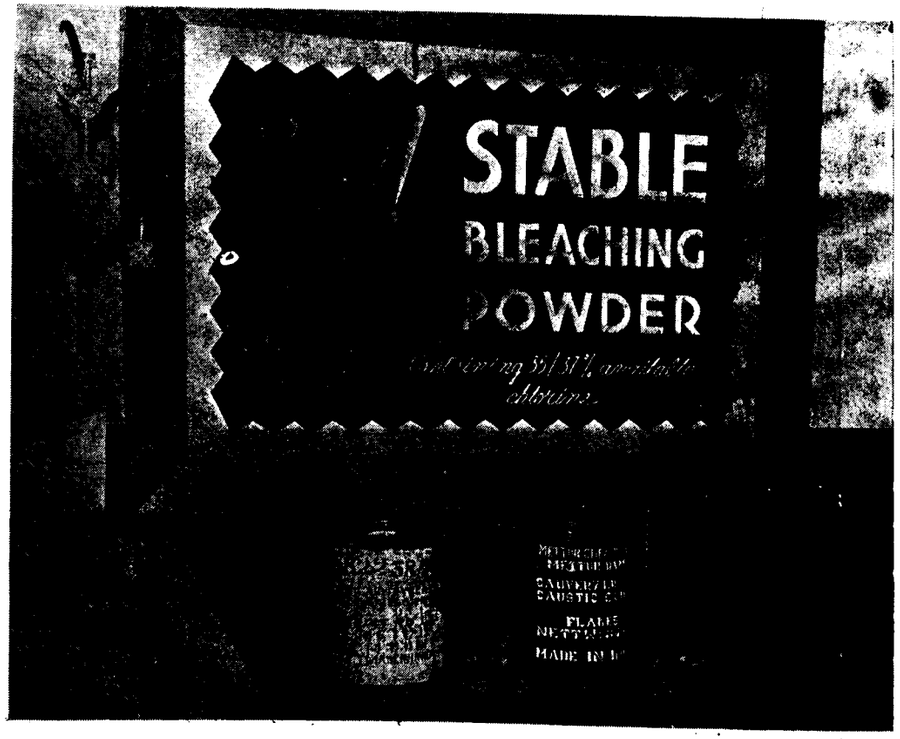
TRANSPORT WORKERS

Bottom row: Thambiyannan, D. Michael, Palaniyappan, V. Swaminathan (Supervisor), Marimuthu, Kolandan, Kannupaiyan.
Second row: Subramanian, Perumal, Chokken, Pachaiyannan, Chemban Muthu, Ponnappan Kandaswamy Ramaswamy.
Third row: Muthu, Marimuthu, Chinnadurai, Cauvery, Chelamban, Chinnappan, Komaraswamy.
Top row: Palani Kandan, Arumugham, Alagappan, Muthu, Aiyannan.

the transport section. Fitters A. Abdul Aziz, T. Guruswamy, P. Rengaswamy and K. Kalimuthu, among others, did the fitting jobs. Electrical lines and water lines were laid by the electrical section, in charge of Mr. A. Kannan, Foreman. Welding jobs were the responsibility of Mr. K. S. S. Mani and his assistants Mr. K. Subramanian and Mr. A. Subramanian. Mr. S. Rajan, Assistant Foreman, Workshop, followed up the erection from the beginning, ordering and obtaining the materials required from time to time.

Work on the main plant was completed in mid-November.

On November 12, Dr. Mehlhorn, German expert from Rheinfelden, came to Mettur to assist in the "start-up." Trials were taken from November 21 onwards. Modifications in the plant found necessary to achieve smoothness and ease of operation were incorporated as and when necessary.



The pivotal piece in the MCIC *stand at the Industries Fair, New Delhi.*

INDIAN INDUSTRIES FAIR, NEW DELHI.

by R. PARTHASARATHY

THE Indian Industries Fair which was inaugurated by Prime Minister Jawaharlal Nehru on October 29 and which closed on January 1 constituted as Mr. B. M. Birla, Chairman of the Fair Committee, put it, "a significant landmark in the economic advance of not only India but also of Asia." Covering an area of 73 acres and an exhibition space of about a million square feet, the Fair was the biggest ever to be held in the country. Not only were all sections of industry represented, but there were as many as twenty-one foreign participants. Held on the eve of the Second Five-Year Plan, the Fair afforded striking testimony to the industrial progress that the country had made since Independence and, also, reflected India's growing international importance.

AIMS

The avowed objects of the Fair were :

(i) To present a comprehensive picture of the economic progress achieved by India ;

(ii) To establish and promote contacts between consumers, manufacturers and traders ;

(iii) To promote economic relations between India and foreign countries by interchange of ideas in industrial and commercial fields ; and

(iv) To afford an opportunity to Indian manufacturers to organise a show window for Indian industry and at the same time to make a first-hand

study of design, quality and performance of foreign capital equipment.

The Fair consisted of three main sections, rather four sections, should one take into account retail establishments who, with a minimum of outlay, really did roaring business.

FOREIGN SECTION

First, there was the foreign section, consisting of—as stated already—twenty-one countries. As was only to be expected, the accent here was on what other nations could offer India by way of capital goods and equipment.

Now, let us briefly consider some of the foreign pavilions.

United kingdom : The United Kingdom Government Pavilion had six main sections dealing with broadcasting, electronics, artificial fibres, mining, railways and steel. The British Iron and Steel Federation had a large stand devoted all to themselves,

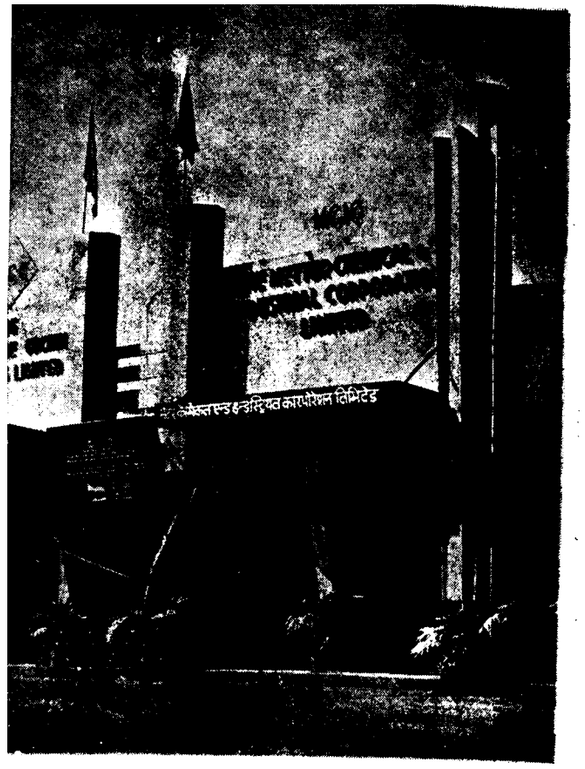
Another display piece at the MCIC *stall.*

their exhibits ranging from razor blades to refrigerators.

United States : The U. S. had three main sections : (1) Industry Serves Man—in Atomics ; (2) Industry Serves Man—in Electronics ; and (3) Industry Serves Man—in Technology. In the Atomic Section, developments in the harnessing of atomic energy for peaceful uses were seen. But the Electronics Section which contained television attracted larger crowds. There were features, interviews, student discussions, music recitals, puppet shows, audience participation, etc. Miss Pushpa Hans, the TV hostess (a former film actress) did her job as one to the manner born. Mr. A. Vance Hallack of the National Broadcasting Company (NBC) television network was the Station Director.

East Germany : What principally drew crowds to the pavilion of the German Democratic Republic was its "man of glass". Made not actually of glass, but a transparent material called cellon, this piece showed the wonders of the human body. A commentary was also reeled off a tape recorder describing the various parts of the human body. This ten-minute talk concluded with the memorable words : "The harmonious co-operation of all organs serves to contribute to the development and maintenance of body, health and to support its fight against disease. May the people of all countries take this ideal of co-operation as a model for their own personal and social lives. In that case, the future lot of mankind can only be peace, friendship, health and happiness.

China : The People's Republic of China had booked an area of 58,000



A Front view of the MCIC *Stall.*

square feet. Built in traditional Chinese style, their pavilion contained as many as 4000 exhibits, and reflected the progress that the country had made in its Five-Year Plan. The main hall had been designed as a sort of prelude to the whole pavilion, and carried on the walls large-size portraits of Chairman Mao-Tse-tung, Premier Chou En-lai, India's Prime Minister Nehru and also quotations in Chinese, Hindi and English from the speeches of these statesmen.

Russia: In the U. S. S. R. pavilion were on display different samples of goods produced by various branches of industry in the Soviet Union. The exhibits included: Textile machinery, television apparatus, machine tools, cars, trucks and tractors. Models of power and hydro-electric stations were also on view.

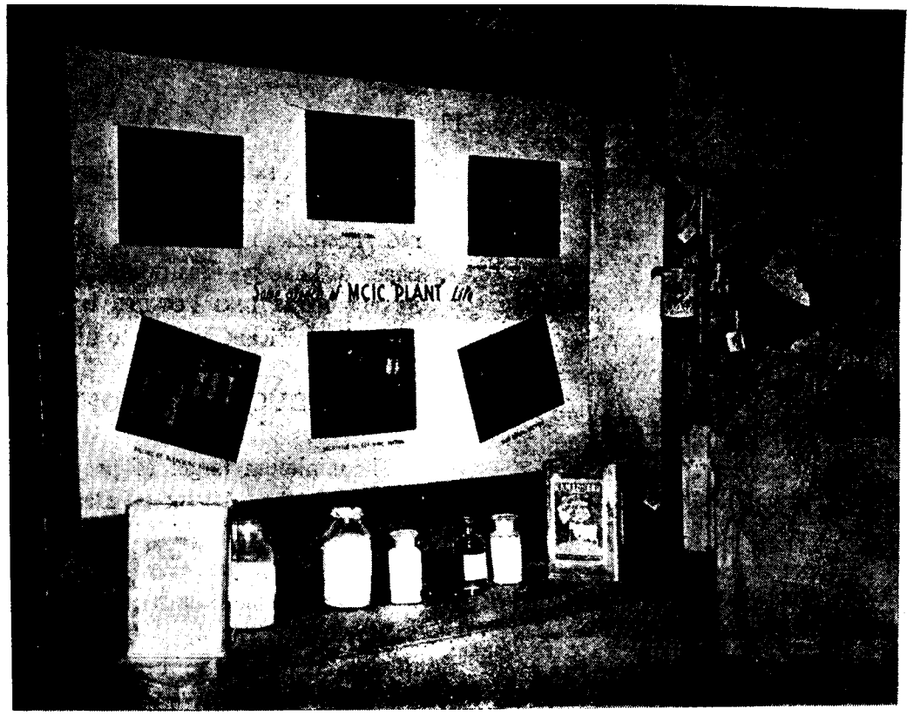
West Germany: Such well-known firms as Siemens, AEG, Hartman and Bruan Bosch, were represented in this pavilion. The KRUPP/DEMAG combine had put on display models of the new industrial centre to be erected at Rourkela in co-operation with the Indian Government.

LARGE-SCALE INDUSTRY

The second section was devoted to large-scale industry. This section gave the visitor an idea of the great industrial developments now taking place in the country, the tools, machinery and products being MADE IN INDIA to-day. Participants included both sectors, private and public. Some of those in the first were : Addisons Paints and Chemicals, Aluminium Industries, Atul Products, Assam Oil Company, Birla Industries, Bombay Millowners' Association, Burmah-Shell, Calico Mills, Delhi Cloth Mills, Dunlop, Firestone, Imperial Tobacco Company, Indian Non-ferrous Metal Manufacturers' Association, Jute Mills Association, Mettur Chemicals, National Carbon Company, National Rayon, Standard Motor Products, Royal Enfield, Tatas, and Travancore-Cochin Chemicals.

Special mention deserves to be made here of the strikingly beautiful pavilion put up by the Federation and dedicated to "Free Enterprise". Designated "Nav Jivan" or "New Life", this pavilion reflected India's aspirations for a fuller and richer life for her people. The stall was the work of James Gardiner, an eminent English artist and architect who designed the 1951 British Industries Fair.

Grouped together in the third section were small-scale industries. Apart from several individual firms, bodies like the Handicrafts Board, Handloom Board, Coir Board, etc., had taken up space in this section.



Colour transparencies of sections of the factory were on view on this panel. Samples of the products of the company could also be seen on the table.

There was an Amusement Park complete with merry-go rounds, giant wheels and scooters to provide fun to the young-in-body and the still young-in-mind !

MCIC IN THE FAIR

Facing the stall of the Tea Board, our Company too had put up a modest show in an area of 375 square feet. To its right was the stall of the Travancore-Cochin Chemicals Limited, producers of rayon-grade caustic soda, an associate company. Serving as a common "overture" to both companies was an illuminated text in glass stressing the importance of caustic, as chemical kingpin, and chlorine as queen of chemicals. Inside an attempt had been made to acquaint the visitor with "the company and its place" by means of texts and photographs in translite. The pivotal piece was an illuminated glass panel announcing the manufacture in India for the first time of STABLE BLEACHING POWDER. Samples of products were also on display.

A visitor to the MCIC stall obtained some idea of the range of products made by the Company, and also some faint idea of how it hoped to play even more of an important role in the "adventure of building up a new India" in the exciting years, not very far ahead.

(*Those of our "group" who attended the Fair included: Mr. V Seshasayee, Mr. K. K. Raman Mr. K. A. Varugis, Mr. V. N. Kasturirangan, Mr. R. V. Ramani, Mr. A. R. Narasimhan, Mr. V G.G Nayar, Mr.K. Ramakrishna Nayar, Mr. Radha. K Raman, Mr. P.P.Venkatasubramaniam, Mr. S. Dinakaran, this writer, and his assistant Mr. V. Ramaswamy.*)

THE HANDLOOM WEAVER

Fabulously fine and moor-beamed to your summer nights...
As remote as the Taj Mahal...

THE handloom products of India have been famous throughout the world, through the centuries. In the past, the humble handloom weaver's creations captured the imaginations of queens, princesses and ladies of noble birth. To-day, too, his products loom large in the fashion capitals of the world. But, the creator of the enchantment of a thousand and one Indian nights himself leads an almost forgotten life. His greatest satisfaction—and possibly reward—lies in the making of beautiful things with his own hands.

METKEM salutes the handloom weaver in this special STABLE BLEACHING POWDER number with a cover page, dedicatory illustration, because STABLE BLEACHING POWDER is a product of significant interest to him.

PRODUCTION TARGET

The minimum target of production fixed by the All-India Handloom Board for the Second Five-year Plan is 3,000 million yards per year—that is, more than double the present production. The total requirements of the country have been estimated at 7,000 million yards, *plus* 1000 million yards for export. Out of this, 5000 million yards have been allotted to mills, 3000 to handlooms, and 200 to power looms.

This production target can be taken care of by 2 million looms, working 300 days in a year and producing 5 yards per day per loom. The estimated number of commercial handlooms according to figures furnished by State Governments is 2·2 millions. Assuming that it is only 2 millions, the target can be hit, provided all the looms work.

The rate of production per day per loom can also be increased with improved methods of production.

PORTRAIT Gallery

THIS issue of METKEM is a special, STABLE BLEACHING POWDER number, so we will let ourselves go about some of the personalities who have had a special contribution to make to the erection and commissioning of the plant. Rajagopal, Ramaswamy and Ramanath—the three R's of the Company who had to bear the brunt of this job—have been presented to you in other issues ; nevertheless, on this occasion of occasions, we must hand them orchids. K. Rajagopal, Engineering Superintendent was in charge of erection, ably assisted by N. Parthasarathy, K.R. Venkataraman, S. Ramamurthi and R. Natarajan (Civil Engineer).

S. Ramaswamy, Production Superintendent and K. Ramanathan, Works Manager, did all the work necessary abroad, and since their return to Mettur, have been actively associated with the project.

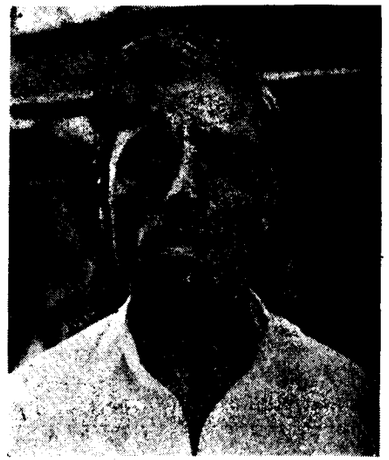
To this trio, we will first convey our appreciation, and through them to all their other men.

They always draw the line: Now, let us turn some belated spotlight on two men who gave us the drawings to build our "dream" on—D. Rethinam, Draughtsman, and K. Devanathan, his colleague. About Devanathan, we have had occasion to write before, but we would like to go on record about him once again with an additional

D. Rethinam.

point. Not only is he very good in the graphic arts, but he is a wonderful choreographer too. In our dramatic presentations, he sets out all the dance ensembles. For one who has not received any formal instruction in the science and art of dancing, he can trip very well, indeed, on the light, fantastic toe. And *Bharata Natyam* is no mere arm-writhing, torso-wriggling chore. Devanathan's terpsichorean talent is true and clear in addition to which he has qualities that make him an asset in a drawing office. Between Rethinam and Devanathan all the drawings necessary for the erection of the new plant were prepared.

Rethinam hails from Trichy. After S. S. L. C. he passed a number of Government technical examinations—freehand outline and model drawing, geometrical drawing, mechanical drawing, building and estimating and so on. For a brief spell, he was with the movie industry working as the representative of a film company, before he found his metier in Mettur. He joined us as



S. Rajan.

a draughtsman back in 1941. Rethinam's work has always been characterised by a sharp and well-defined quality. A man of few words, his comments on men and things are also precise and to the point. Rethinam's off-work interests are volleyball, caroms and cards.

(*Work-*)*Shopwalker*: Meet S. Rajan, Assistant Foreman, Workshop, on whose services we always draw heavily whenever there is some development programme on hand. He helped us vastly during the time of erection of the Hooker cells, and he helped us again now.

Rajan attends to so many jobs and does them so well that he is practically a one-man Board of Works, if you get what we mean. Visiting foreign technicians and our own engineers have always been lavish in their praise of his work.

Starting as an apprentice with the PSG Institute, Coimbatore, he later saw service first with a cotton-ginning factory, then with a firm of engineering contractors and then with a textile mill. He came to us in 1941.

Rajan comes of a family of stern police officers; that probably explains his control over men, but his control over materials and tools seems to be an acquired gift.

"*The conscious stone to beauty grows*" *in his hands*: An event of as great significance to residents in the colony as the opening of the stable bleaching powder plant is the opening of the new club-house of the Staff Association. In building it, as in several other construction jobs, M. A. Arokiaswamy, Maistry, has played a notable part. His men cannot pull a fast one on him, because he knows his ropes, and what is more, his men know he knows!

M. A. Arokiaswamy.

? ? ?

Arokiaswamy had his early schooling in Coimbatore, then he learnt his trade at the St. Joseph's Industrial School, Trichy. For some years, he served as a mechanic in the Railway Workshops, Podanur, then went over to a textile mill in Coimbatore and later to the P.W.D. around the time the Stanley Dam and the Power House at Mettur were being constructed. He joined MCIC in 1937.

In his younger days, Arokiaswamy was a keen sportsman, playing football, cricket and hockey, but an unfortunate accident in 1931 put an untimely end to his sporting career. He still retains his interest in all games—his two sons Rajamanickam and Kolandaiswamy are promising cricketers. Arokiaswamy is now a good cards player.

A philosopher in chemist's clothing: For a change, let us now do the sketch of a non-S.B.P. personality — Mister R. V. Ramani, Senior Chemist, Electrolytic Department. The picture published alongside would keep even close friends guessing as to who or whose it is, but Ramani had to wear these impressive habiliments to attend a ceremonial function at the Mysore palace. The dress is, therefore, neither fancy, nor the picture, one of those "six for a rupee"!

Ramani did his Inter at the Loyola College and his B.Sc. at the St. Joseph's College, Trichy. After joining MCIC in 1942, he obtained a diploma in chemical engineering from a British Institute. Until recently he was an active member of the Electro-Chemical Society of America and an Associate Member of the American Institute of Chemical Engineers; he is now an associate member of the Indian Institute of Chemical Engineers.

While in Bangalore recently, Ramani addressed the Chemical Engineering Association of the Indian Institute of Science on the role of a chemical engineer in a chemical plant. His talk elicited much warm praise from Dr. Weingaertner who presided.

Ramani will shortly be completing his fourth term as the Secretary of the Staff Association—he might have to continue to hold on to the sweets of this office for some more years to come. With the funds of the Association Ramani has been known to be as generous as one would be with a tumblerful of one's heart's blood! And he will not have any of your new-fangled deficit financing, whatever the phrase might connote. Ramani plays tennis, rather has a shot at the game now and then.. and with photography. He is also an avid reader with a penchant for philosophical books.

CHEMICAL Briefs

D.D.T. factory in Delhi.

India's DDT factory in Delhi, which commenced production this year, is now turning out formulated DDT, ready for use. The factory has produced over 80 tons of DDT since March, of which nearly 40 tons have been formulated.

The formulated DDT will shortly be despatched to different parts of the country.

Fertilizer Plant for Bhadravati.

The Mysore Government have proposed to establish a fertilizer factory at Bhadravati. To begin with, 30,000 tons of ammonium nitrate per year would be produced. Production will be expanded later to meet the entire demand of South India for this fertilizer.

The suggestion has been made that it would be possible to produce nitrochalk at the factory by utilizing the large deposits of limestone near Bhadravati. Power supply is expected to be obtained from the Honnemaradu hydro-electric power generation scheme.

Soda Ash-Caustic Soda Factory in Tirünelveli.

The Dhrangadara Chemical Works Limited has been granted a licence for starting a new industrial undertaking in Tirunelveli to manufacture soda ash and caustic soda with the aid of the Madras Government.

The new factory is estimated to cost Rs. 3 crores. The Madras Government will participate in the capital issue by subscribing for Rs. 10 lakhs worth of preference shares as a token of their goodwill and co-operation in the project. A representative of Government will be nominated to the directorate of the Company.

Synthetic Oil Plant

The Government of India has accepted in principle the report of the Synthetic Oil Committee recommending the establishment of a synthetic oil plant in India at an estimated cost of Rs. 52 to 57 crores. In the initial stage there would be an annual production of 3,00,000 tons of synthetic fuel consisting of 85,000 tons of aviation spirit and 2,15,000 tons of motor spirit, diesel oil and lubricants.

Government have decided that a project report should be prepared by the consultants before any capital investment is made.

Tariff protection to Caustic Soda and Bleaching Powder.

On the recommendation of the Tariff Commission the Government of India have granted tariff protection to the caustic soda and bleaching powder industry.

The existing preferential rate of duty of 27·3 percent *ad valorem* on caustic soda of U. K. origin would be converted into protective duty. In regard to bleaching powder and bleaching paste, a protective duty of 15 percent *ad valorem* is to be levied. These protective duties will be in force up to the end of 1958.

METKEM Miscellany

Society of Technologists: Dr. S. S. Ghosh, Ph. D. A. M. I. (Chem.) E., Assistant Professor, Department of Chemical Technology, the Indian Institute of Science, Bangalore, addressed, the Society on October 31. Mr. K. Ramanathan, President of the Society, extended a warm welcome to Dr. and Mrs. Ghose, and the student-excursionists from the Institute, and referred to the notable work of Dr. Ghosh in the field of fuel technology.

In his address, Dr. Ghosh referred to the growth of chemical engineering and technology as distinct courses of study, and to the several specialised fields in these departments. He also referred to some of the problems presently under his study, the application of the principle of phase exchange to achieve enrichment of graphite or of coal by eliminating mineral matter, of the fluidised solids technique to the reduction of iron ores to spongy iron, etc.

Weddings: To the following newlyweds we offer hearty congratulations:

Mr. M. Kalyanasundaram (Attender, Soap Plant) and Miss Santanalakshmi.

Mr. K. Gopal (Helper, Power House) and Miss Kamalam.

K. Gopal and his bride Miss Kamalam.

Mr. J. Dakshinamurthy (Attender, Salt Room) and Miss Anantalakshmi.

Mr. D. Rajam (Accounts Section) and Miss Rajalakshmi.

Mr. R. Parthasarathy, Editor, METKEM, celebrated the marriage of his daughter, Miss Padmini, with Mr. N. R Ramanujam and the Upanayanam

Miss Janaki, (daughter of Mr. Thiruvenkataswamy) and Mr. S. Parthasarathy.

Miss Rajeswari, (daughter of Mr. N. Srinivasan) and Mr. S. Vaidyanathan.

of his son, Srinivasan, at Trichy on September 12.

Mr. K. Thiruvenkataswamy, Assistant Accountant, celebrated the marriage of his daughter, Miss Janaki, with Mr. S. Parthasarathy and the Upanayanam of his son, Kannan, at Mettur on October 21.

Mr. N. Srinivasan, Security Officer, celebrated the marriage of his daughter Miss Rajeswari with Mr. S. Vaidyanathan and the Upanayanam of his son, Venkataraman, at Thambikottai on November 2.

Mr. V. S. Venkataraman, Stores Clerk, celebrated the marriage of his daughter, Miss Mangalambal, with Mr. L. Jayaraman at Trichy on November 18.

Provident Fund Committee: At the annual general meeting of the employees of MCIC held on August 27, Mr. V. Ramachandra Rao, Mr. C. S. Srinivasan and Mr. C. Govindaswamy, were re-elected to the Provident Fund Committee for the fifth year in succession.

Films: Among films screened in recent months were:

Angel in exile, A song to remember, Mr. Imperium, Sequoia, Song of India, Girl who had everything, Royal Wedding, Secret Land, All the King's men, Queen's Navy, Royal Destiny, The way to Wimbledon.

Obituary: It is with deep regret we record, in these columns, the premature demise of Mr. K. Srinivasan, Assistant, temporarily in charge of the Mettur Chemicals Elementary School. He was only twenty years old. An industrious, cheerful and capable young man, we will all miss him very much, indeed. To his father Mr. S. Krishnaswamy Iyer, Assistant, Mettur Chemicals High School, his other relatives, and all the friends of the deceased, we offer sincere sympathy.

K. Srinivasan.

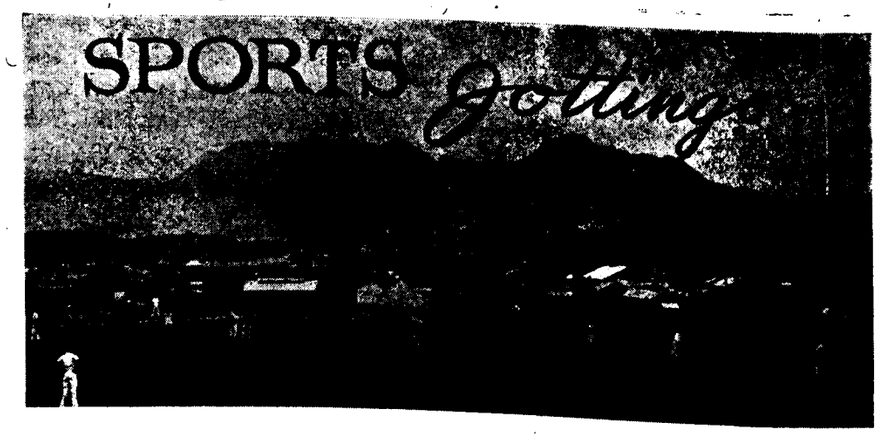
THEY WERE Welcome!

Engineers from the Southern Railway

To all those who took time off for a visit to our factory, we say: "Thank you, come again." Presented in this page are pictures of some recent visitors.

Fourth from left is Mr. R. Chakravarthy of our Delhi Office. By his side is Dr. Mehlhorn. Others in the group are (L. to R.) K. Rajagopal, R. Parthasarathy, S. Ramaswamy and R. Natarajan.

Dr. S. S. Ghosh, Assistant Professor, Department of Chemical Technology, Indian Institute of Science, Bangalore (third from left) and Mrs. Ghosh. Standing at the rear are some student excursionists from Bangalore. S. Ramaswamy (first from left), R. Natarajan (second) and K. Ramanathan (second in the rear row) are also in the picture.



INDEPENDENCE DAY TOURNAMENTS

The Mettur Chemicals Staff Association inaugurated this year a new Annual Open Tournament to mark the Independence Day. Tournaments were staged in Tennis and Contract Bridge. As many as 20 teams participated in the Tennis event and 12 in bridge.

Tennis Singles : P. B. Srirangan of our Club confirmed his Republic Day success earlier in the year by winning the singles title easily in the finals against T. A. Balu of the Mettur Recreation Club in straight sets.

Doubles : Partnering S. Ramaswamy, Srirangan annexed the doubles title also, beating Prager and Sampathkumar (M.R.C.) in the finals.

Bridge : Dr. Ranganathan and Shanmugham of M. R. C. beat Dr. Krishnan and Rao of Mettur Industries in the finals.

At a pleasant function got up in our School premises on August 15, Mr. K. K. Raman, Director, Managing Agents, distributed handsome silver cups to the prize-winners. A special prize, was awarded by Mr. K. Ramanathan to Mr. C.E. Prager, Superintending Engineer, Mettur Electricity System for his neat and intelligent play.

Cricket : The season started off auspiciously enough for us in the sense that our team won their first match against the strong Sowrashtra Cricket Club played on our grounds on October 9.

Our team, batting first, piled up the sizeable total of 144 runs, thanks to a great innings of 64 by Narayan Rao and his useful stand with Kalyanam. Batting next, the visitors' opening batsmen put on 65 runs for the first wicket. T. M. S. Vasan, played a fine

game for his 60 and K. N. Ramgopal (35) gave him able support. But, as soon as we put our spin-expert, T. D. K. Sami on the field, things began to happen ! Flighting his leg-breaks to a teasing length, he had the batsmen constantly in trouble and ran through the side to capture 7 wickets for 34 runs in 9·4 overs and to dismiss the side for 143, one run short of our total. The excitement that followed was wild ; even the ranks of Sowrashtra could scarce forbear to cheer !

MCCC : 144 (Narayan Rao 64, Kalyanam 17, Balusamy 4 for 12, Srinivasan 3 for 27).

S. C. C. 143 (T. M. S. Vasan 60, K. N. Ramgopal 35, T. D. K. Sami 7 for 34).

The elation brought about by this success was not destined to last long, for the very next week we tasted defeat in our match against the Tamil Nad Cricket Club, played on our grounds on Oct. 16.

MCCC *vs* SALEM CRICKET CLUB : *Second Row (Seated) From Left to Right : (second) R.T. Parthasarathy, (fourth) J.R. Mehta, (President, Salem Cricket Club), (fifth) R. Balasubramanian (Skipper, SCC team) and (sixth) K. S. Venkataraman.*

It was a low-scoring match. Batting first, the visitors could get only 74, T. D. K. Sami again bowling magnificently to return a final analysis of 8·4 overs, 5 maidens, 9 runs for 6 wickets. The total appeared to be well within our batsmen's reach, but Arumugam, the visitors' medium-pace bowler, who had altogether different ideas, shattered both our hopes and wickets. In a deadly spell of bowling, he dismissed seven of our batsmen for 30 runs, four wickets falling for a total of 49 at one stage. Narayan Rao and T. G. Rangan put up some resistance, but even then, the score could not be pushed beyond 62 runs, and so we lost the match by 12 runs.

T. N. C. C.—74 (Alexander 29, Palani 12, T D. K. Sami 6 for 9).

M. C. C. C.—62 (Narayan Rao. 15, T. G. Rangan 14, Arumugam 7 for 30, Alexander 2 for 11).

The Salem Cricket Club, ably led by Mr. R. Balasubramanian, I. A S., Collector of Salem, trounced us completely in the next match played again on our grounds on Oct. 30, beating us by 207 runs.

It was a great match for young Iqbal of the Salem Club. Giving an all-round display of strokes, he hit up a glorious century which included 15 fours. The visitors ran up a big total of 270 runs.

It is not for a moment pretended that replying to this total was an easy task, but still our players were certainly capable of giving a better account of themselves than they did that day. Narayan Rao was our only player to reach double figures in a low total of 63. R. T. Parthasarathy and N. Jayaraman were the main destroyers on the visitors' side.

In passing, it must be mentioned that Mr. K. S. Venkataraman, District Superintendent of Police, Salem, also played in this match for the Salem Cricket Club.

* * *

Our youngsters N. Narayan Rao and T. Anthony took part in the trials held at Salem in October, in connection with the annual City *vs.* Districts match.

Kalyanam and Narayan Rao of our club were selected to play for the Districts in the return fixture against the City played at Madras early in December. The Districts team could score only 70 and 61 in the two innings against those formidable state bowlers Murugesh, Vaidyanathan and Ramachandran. Our club batsmen were sent in as Nos. 10 and 11 and there was, therefore, not much scope for them to show their skill. In the second innings however, Kalyanam entering at the fall of the ninth wicket played defensive cricket for 45 minutes with

Narayan Rao with a view to playing out time, and finishing the match in a draw, but V. V. Kumar of the City team bowling a googly dismissed Narayan Rao even before the tea interval. Both our stars fielded very well in the match. Kalyanam took a memorable catch at mid-on to dismiss Raghavan who, it would be recalled, had scored a century in the first fixture at Salem.

The City team made 141 and 230 for seven in the match.

Volleyball and Badminton: Moribund for the best part of the year, these games received a shot in the arm during the tournament season.

Tennis and Table Tennis: continue to collect crowds.

In a practice tournament for juniors, Venkatachalam and S. Narayanan beat N. Thiagarajan and G. Jayaraman by two sets to one in the finals. Eight teams took part in the tournament.

Deepavali Festival Tournament: A volleyball trebles tournament was organised by some enthusiastic members of our club. Five teams participated in the tournament, but the standard of play witnessed was nothing much to write home about.

In the finals, T. A. Javanthinathan's team (with M. Padmanabhan and A. P. Krishnan) beat K. Sampath's team (with N. Subramanian and S. Rajagopal) by two games to one.

Staff Association Annual Day Tournaments: A tournament committee consisting of R. G. Raghavan, N Sundaresan, M. Padmanabhan, K. Sampath and S. Sambandam besides the Sports Member N. Venkatachalam, was nominated to be in charge of the conduct of this year's annual day tournaments. Here is a brief account of some of the matches played.

Tennis: *Senior Singles* (12 entries) N. Sundaresan became the champion of the year by beating the reigning holder of the title, P. B. Srirangan, by two sets to one in a big match jam-packed with thrills. Down in the first set, Sundaresan staged a remarkable recovery in the next two sets. In the earlier round, S. S. Murti gave a game fight to P. B. Srirangan.

Tennis — Senior Doubles: (8 entries) P. B. Srirangan and R. Natarajan (Secretary) beat S. Ramakrishnan and S. Ramamurti (Chemist) in two straight sets in the finals.

Volleyball Sixes: (12 teams) A. P. S. Mani's team beat R. G. Raghavan's team by two games to one in the finals. Many of the matches played in the series were keenly fought.

Volleyball Trebles: (11 teams) A.P.S Mani completed a "personal" *double* by leading the side which beat Sampath's team by two games to nil in the finals Earlier, Venkatachalam's team bravely went down fighting the winners in the semi-finals.

Contract Bridge - finals
(Ind. Day Tournaments)

Table Tennis — Senior Singles: (9 entries). T. S. Subba Rao retained the singles title this year, without conceding a single game to his opponents. He beat S. S. Murti comfortably by three sets to nil in the finals. S. Ramakrishnan put up a good fight to the winner in the semi-final, often gaining a good lead, though losing it subsequently.

Table Tennis — Junior Singles: (17 entries). The junior title was won by M. Padmanabhan who beat R Natarajan (J. E.) in the finals by three sets to two. A ding-dong battle in ping-pong, the match lasted for the record time of 35 minutes! Defence was pitted against defence; only, Natarajan was now and then inclined to hit out. In the earlier rounds, some of the lads who showed promise, did not fulfil expectations.

Table Tennis — Doubles: (13 entries). T. S. Subba Rao and K. R. Srinivasan beat S. Ramakrishnan and P. Subramanian, 3-0, in a tame final. The earlier rounds of the former team against K. Ratnam and Muthukrishnan and of the latter team against Srirangan and Venkateswaran had provided better spectator fare. Subba Rao thus won the double crown for the second year in succession.

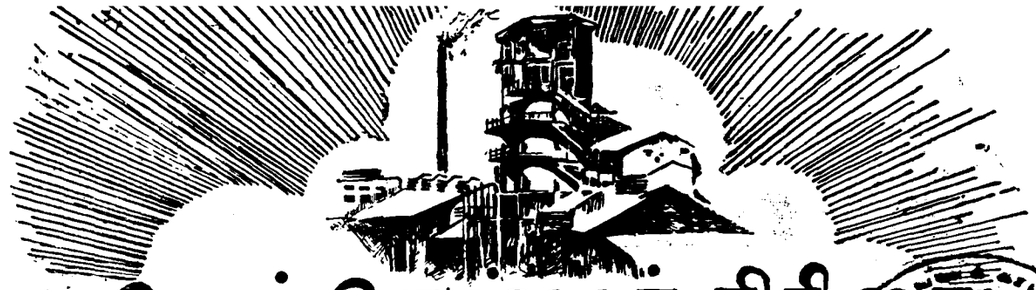
Contract Bridge: (13 entries). K. K. Raman and K. K. Dharmarajan beat M. A. Arokiasamy and P. R. Subramanian in the finals.

Auction Bridge: (16 entries). P. A. Raghupathy Iyer and T. M. Krishna Rao beat K. Rajagopal and S. Ramasamy in the finals.

Several bridge matches were decided only in the last deal, providing excitement not only to participants but also to the on-lookers, who certainly saw most of the game and all of the cards!

Literature: (10 entries). R.S. Subramanian's team beat M A. Arokiasamy's team in the finals. Here also many matches had to go up to the fourth deal to decide the winner, as the scores remained level till at least the end of the third deal.

Chess: (11 entries). T. K. Sitaraman and K. Srinivasan reached the finals, but the sudden and unexpected demise of Srinivasan left the issue undecided. Sitaraman has, however, conceded victory to the late Srinivasan.



மெட்கெமபத்திரிகை

ஸ்திர ப்ளீச்சிங் பவுடர்

சில வருஷங்களுக்கு முன்னால் எங்களுக்குக் கீழ்க்கண்டவாறு ஒரு கடிதம் வந்தது.

"ஐயா, நான் ஒரு கைத்தறி நெசவாளி. நூல், துணி இவற்றை சலவை செய்ய உங்கள் ப்ளீச்சிங் பவுடரையே உபயோகித்து வருபவன். போன மாதம் வாங்கி உபயோகித்த சரக்கு ரொம்ப நன்றாக இருந்தது. இந்த மாதம் முதல் வாரத்தில் வாங்கி வந்த 'டிரம்'ல் உள்ள பவுடர் திருப்திகரமாக இல்லை. அதே எடை நூலை வெளுக்க அதிகம் பவுடர் தேவையாக இருக்கிறது. ஸ்டாக்கிஸ்ட் அவர்கள் போன மாதம் வந்த சரக்கில் பாக்கி இருந்த 'டிரம்' தான் இந்த மாதமும் எனக்குக் கொடுக்கப்பட்டது என்று சொல்லி, நான் சொல்வதை ஏற்றுக் கொள்ளவில்லை. இது விஷயத்தை தாங்கள் கவனித்து உதவிபுரியும்படி கேட்டுக் கொள்கிறேன்".

நமது நெசவாளிநேயர் சொன்னது முற்றும் சரி. ஏனெனில், சாதாரண ப்ளீச்சிங் பவுடர், நாளாக நாளாக, தன் க்ளோரின் பகுதியை இழந்து, சலவை செய்யும் சக்தியில் குறைபாடு அடைகிறது. ரசாயன சாஸ்திரம் அறிந்த யாவரும் அறிந்த உண்மை இது. இதையே நாங்கள் எங்கள் ரசாயன நிபுணர்களின் உதவியால் மேற்கூறிய நெசவாளியைப்போன்ற வாடிக்கைக் காரர்களுக்கும், எங்கள் ஸ்டாக்கிஸ்டுகளுக்கும் எடுத்துக்கூறி, எங்கள் ப்ளீச்சிங் பவுடரை தயாரித்த மூன்று அல்லது மூன்று மாதத்துக்குள் உபயோகித்தால் நல்ல குணமுடையதாக இருக்கும் என்று தெரியப்படுத்தினோம். அதற்கு உதவியாக, தயாரானவுடனேயே ப்ளீச்சிங்பவுடரை ஸ்டாக்கிஸ்டுகளுக்கு லாரி மூலம் அனுப்பி அதை சீக்கிரமாக வினியோகிக்க ஏற்பாடுகள் செய்தோம்.

ஆனால் இது நிரந்தரமாக செய்யக் கூடிய ஏற்பாடல்ல என்பதை உணர்ந்து நாங்கள் தரம் குன்றுத 'ஸ்திர ப்ளீச்சிங் பவுடர்' தயாரிக்கும் முறைகளையும், அவற்றை உஷ்ணப் பிரதேசமான இந்தியாவில் தயாரிப்பது சாத்தியமா, அதற்கேற்ற மாறுதல்கள் எவை-என்பனவற்றையும் சில வருஷங்களாக ஆராய்ந்து வந்தோம். இவ்வாராய்ச்சியின் பலனாகவும், மேலைநாட்டு நிபுணர்களின் உதவியினாலும், இப்போது மேட்டூரில் 'காவேரி பிராண்ட்' ஸ்திர ப்ளீச்சிங் பவுடர் தயாரிக்கும் சாதனத்தை நிர்மாணித்துள்ளோம். இதில் தயாராகும் ப்ளீச்சிங் பவுடர் குணம் குன்றுமல் எல்லாவித சலவை வேலைகளிலும், சுகாதாரப் பாதுகாப்பிற்கான உபயோகங்களிலும், நிரந்தரமான திருப்தி அளிக்கும்.

இச்சாதனை மேட்டூர் கெமிகல்ஸாரின் அபிவிருத்திக்கு மட்டுமின்றி, நாட்டின் தொழில்துறை முன்னேற்றத்திற்கும் ஒரு எடுத்துக்காட்டு என்று நாங்கள் நம்புகிறோம்.

மெட்கம் செய்திகள்

வேத தர்ம சாஸ்திர சபை— 4-வது சம்மேளனம் :

கும்பகோணம் வேத தர்ம சாஸ்திர பரிபாலன சபையின் சார்பில் மேட்டூரில் நான்காவது சம்மேளனம் அக்டோபர் 27 முதல் 30 தேதி வரை சிறப்பாக நடைபெற்றது. இந்த சம்மேளனத்துக்கு MCIC சேர்மனும், கும்பகோணம் அத்வைத சபாவின் காரியதரிசியுமான ஸ்ரீ S. வைத்யநாத ஐயர் அவர்கள் அக்கிராஸனம் வகித்தார்கள். ஸ்ரீமான்கள் குண்டலம் ரெங்காச்சாரியார், மஞ்சக்குடி ராஜகோபால சாஸ்திரிகள், வேப்பத்தூர் சுப்ரமண்ய சாஸ்திரிகள், N.K. வெங்கட்ரமண சாஸ்திரிகள், அக்னிஹோத்ரம் ராமானுஜதாத்தாச்சாரியார், சேங்காலிபுரம் அனந்தராம தீக்ஷிதர் முதலிய பண்டிதர்கள் இந்த சம்மேளனத்தில் வேத பூர்வமான விஷயங்களைப் பற்றி சொற்பொழிவாற்றினார்கள்.

பள்ளி விழாக்கள் :

மேட்டூர் கெமிகல்ஸ் உயர்தரப் பள்ளி, ஆரம்பப்பள்ளி மாணவ மாணவிகள் இவ்வருஷம் சுதந்திர தினம், பாரதி தினம் முதலிய விழாக்களை சேர்ந்து, சிறப்பாக கொண்டாடினர். சுதந்திர தின விழாவுக்கு மேட்டூர் அரசியலார் ஆதாரப்பயிற்சி பள்ளிக் கூடத்தின் தலைமை ஆசிரியர் ஸ்ரீ K. கோபாலன், M.A., M.SC., B.T., அவர்கள் தலைமை வகித்தார்கள். அவர் தேசியக் கொடியை ஏற்றுவித்து, தம் தலைமை உரையில், தேசத்துக்கு மகாத்மாகாந்திஜி அவர்களின் தலைமையில் சுதந்திரம் கிடைத்த வரலாற்றைக்கூறி, சுதந்திரம் பெற்ற முழுப்பயனையும்பெற ஆசிரியர், மாணவ மாணவியருக்கு நல்ல முறையில் பயிற்சி அளிக்க வேண்டியதின் அவசியத்தையும், மாணவ மாணவியருக்குக் தேவையான ஒழுங்கு, கட்டுப்பாடு, சரியான பழக்க வழக்கங்கள் முதலியவைகளையும்பற்றி சொற்பொழிவாற்றினார்கள்.

பாரதி விழா இவ்வருஷம் செப்டம்பர் 11 முதல் 18 வரை கொண்டாடப்பட்டது. இவ்விழாவை ஒட்டி பாரதி—கவிதை, கட்டுரை, பாட்டுப் போட்டிகள் நடத்தப்பட்டன. ஒரு சித்திரப்போட்டியும் நடத்தப்பட்டது!

இப்போட்டிகளில் பரிசு பெற்ற மாணவ மாணவியருக்கு, செப்டம்பர் 18 அன்று பாரதி தின விழாவில் தலைமைவகித்த ஸ்ரீமதி ராஜேஸ்வரி பத்மனுபன் ('அனுத்தமா') அவர்கள் பரிசுகள் வழங்கினார்கள். அவர் தம்

வேததர்ம சாஸ்திர சபையின் நான்காவது சம்மேளனத்தின் போது எடுத்த படம்

உரையில் பாரதியாரின் வாழ்க்கை வரலாற்றை சுருக்கமாகக்கூறி, பாரதியாரின் கவிதை, கட்டுரை முதலியவற்றில் தோற்றும் தேசபக்தி, வீர உணர்ச்சி, காவிய நயம், தமிழின் சிறப்பு முதலியவற்றை எடுத்துக் காட்டினர். அதன் பின்னர் ஆரம்பப்பள்ளி மாணவியர் பாரதியாரின் பாப்பாப் பாடலை ஒரு புதிய முறையில் அபிநயத்துடன் நன்முகப் பாடினர்கள். உயர்தரப்பள்ளி மாணவியர் பாரதியாரின் சரஸ்வதி ஸ்தோத்திரத்தை அழகாகச் சேர்ந்து பாடினர்கள். இரு பள்ளி மாணவ மாணவியரும் பாரதியாரின் "பாஞ்சாலி சபத"த்திலிருந்து இரு காட்சிகளை நாடகமாக நடித்துக் காட்டினர்கள். இதில் கீழ்க்கண்டவர்கள் நடித்தனர்.

முதற் காட்சி :

விதுரன் தூது உரைத்தல்.

N. ராமச்சந்திரன்—தருமர்
காளியப்பன் —பீமன்
T. S. ரகுநாதன் —அர்ச்சுனன்
L. பத்மனுபன் —நகுலன்
R. வின்ஸெண்ட் —சகாதேவன்
K. R. நடராசன் —விதுரன்

இரண்டாம் காட்சி :

துரியோதனன் சபை.

R. சுசிலா —பாஞ்சாலி
காளியப்பன் —தருமர்
P. ராமசாமி —பீமன்
R. லக்ஷ்மிகாந்தன்—அர்ச்சுனன்
L. பத்மனுபன் —நகுலன்
R. வின்ஸெண்ட் —சகாதேவன்
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N. உமா —துரோணர்
N. ராமச்சந்திரன்—துரியோதனன்
மனோன்மணி —துச்சாதனன்
T. R. சரோஜம் —விகர்ணன்

கடைசியில் குமாரி R. ஜெயாவும், R. வசந்தாவும் நடனமாடினர்கள். தலைமை ஆசிரியர் ஸ்ரீ S. K. வெங்கட்ராமன் அவர்கள் வந்தனோபசாரம் கூறிய பின்னர் விழா இனிது முடிந்தது.

"ராஜ நர்த்தகி"

சிறுவர் சிறுமியரின் ஆர்வத்தின் காரணமாக இவ்வருடமும் ஒரு நாட்டிய

ராஜ நர்த்தகியிலிருந்து ஒரு காட்சி

நாடகம் உருவாகி விகற்சி பெற்றது. ஸ்ரீ K. ராஜகோபாலும், ஸ்ரீ K. தேவனுதனும் அவர்களுக்குத் தேவையான வசதிகள் செய்து கொடுத்தனர். ஸ்ரீ K. ராஜகோபால் அவர்கள் 'ராஜ நர்த்தகி' என்ற கதையைத் தேர்ந்தெடுத்து, அதில் குழந்தைகள் பங்கு எடுத்துக்கொள்ளக்கூடுமாறு காட்சிகளைக் குறிப்பிட்டுக் கொடுத்தார். ஸ்ரீ K. தேவனுதன் பாட்டுக்களைத் தேர்ந்தெடுத்தும், எழுதியும் கொடுத்ததோடு, இதற்குத் தேவையான ஆடை ஆபரணங்களை காகிதத்தில் தயாரித்தார். ஸ்ரீமதி சரோஜா ராஜகோபால் தினமும் ஒத்திகை நடத்தி குழந்தைகளுக்குப் பயிற்சி அளித்ததுடன், தேவையான உடுப்பு

ராஜநர்த்தகியில் பங்கெடுத்துக் கொண்டவர்கள்

பாரதினை விழா : குழந்தைகளின் பாப்பாப் பாட்டு

பாரதினை விழா : பாஞ்சாலி சபதத்திலிருந்து ஒரு காட்சி

பாரதினை விழா : ஸாஸ்வதி ஸ்தோத்திரம்

களைத் தைத்தும் கொடுத்தார். இவ்விதம் தயாரித்த 'ராஜ நர்த்தகி' நாட்டிய நாடகம் ஆகஸ்ட் 27 அன்று MCIC டைரக்டர்கள், பங்குதாரர்கள் கூட்டத்துக்குப் பிறகு, ஸ்ரீ K. ராஜகோபால் அவர்கள் பங்களாவின் முன்புறம் அமைக்கப்பட்ட கொட்டகையில் நடைபெற்றது. நாடகம் சிறந்த முறையில் அமைந்திருந்தபடியால், MCIC டைரெக்டர்கள் அனைவரும், மற்றும் அங்கே வந்திருந்த பெரியோர்களும் கடைசி வரை இருந்து குழந்தைகளைப் பாராட்டினர்கள். ஸ்ரீ K. K. ராமன் அவர்கள் நாடகத்தின் மத்தியில், குழந்தைகளுக்கு அவசியம் பரிசளித்தாகவேண்டுமென்று அபிப்பிராயப்பட்டு, உடனுக்குடன் பரிசுப்பொருளை வாங்கி வர ஏற்பாடு செய்தார். நாடகம் முடிந்தவுடன், MCIC சேர்மன் ஸ்ரீ S. வைத்யநாத ஐயர் அவர்கள் குழந்தைகளைப் பாராட்டிப் பேசிவிட்டு, அவர்கள் எல்லோருக்கும் பரிசுகளை வழங்கினர். முதற் பரிசு தோழியாக நடித்தும், சிறப்பாக சமயத்துக்கேற்றாற் போன்ற முகபாவத்துடன் நடனமாடி எல்லோரையும் கவர்ந்த, சிறுமி R. வசந்தாவுக்குக் கிடைத்தது. இரண்டாவது பரிசு ராஜ நர்த்தகியாகத் திறமையாக நடித்த R. ஜெயலக்ஷ்மிக்கும், மூன்றுவது பரிசு பிம்பிசாரனாக நடித்த K. சாந்தாவுக்கும், நான்காவது பரிசு ராஜாவாக நடித்த N. ராமச்சந்திரனுக்கும் கிடைத்தன. மற்றும் இந்நாடகத்தில் பங்குகொண்ட N. சுகந்தா, G. கஸ்தூரி, K. நிர்மலா, T. ரீடா, S. சியாமளா, சரோஜம், V. கமலா, சாந்தா, சரஸ்வதி, S. வஸந்தா, மாலினி முதலியோருக்கும் பரிசுகள் வழங்கப்பட்டன. இந்த நாட்டிய நாடகத்தில் பின்னணி இசை, குமாரி லக்ஷ்மி, ஸ்ரீமதி பங்கஜம் ஸ்ரீனிவாசன் முதலியோரும், வாத்திய இசை, ஸ்ரீ ஸ்ரீனிவாச ராவ், ஸ்ரீ S. நடராஜய்யர், ஸ்ரீ N. நியாக ராஜன் முதலியோரும் அளித்தனர். மற்றும் மேக்கப், அலங்கார ஜோடனை முதலியவற்றை ஸ்ரீ K. தேவனுதலும், குமாரி லக்ஷ்மி, ஸ்ரீமதி கமலா ஸ்ரீரங்கன் இவர்களும் கவனித்துக் கொண்டனர். முடிவில் ஸ்ரீ K. ராஜகோபால் அனைவருக்கும் நன்றி கூறினர்.

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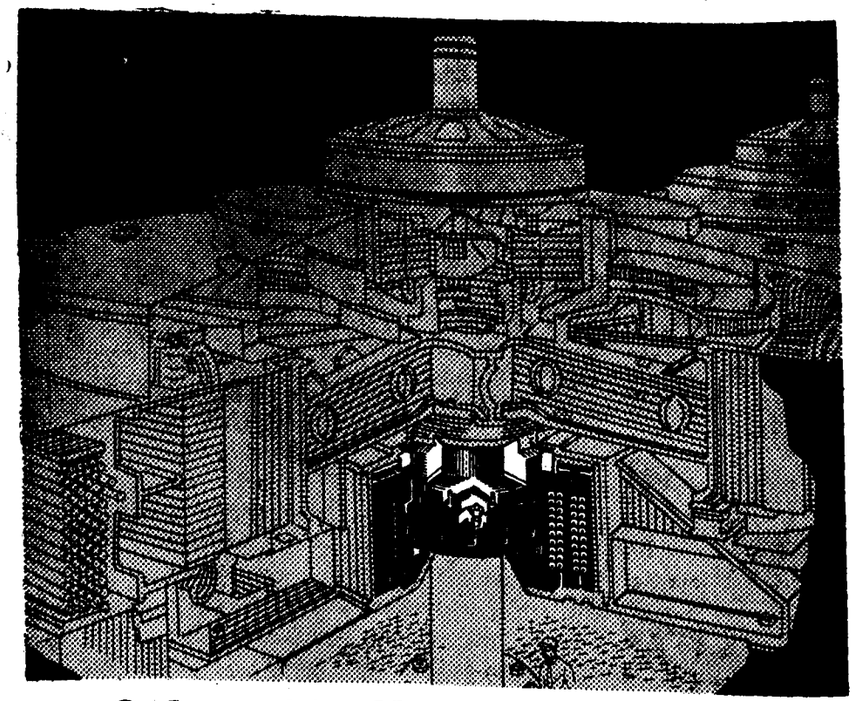

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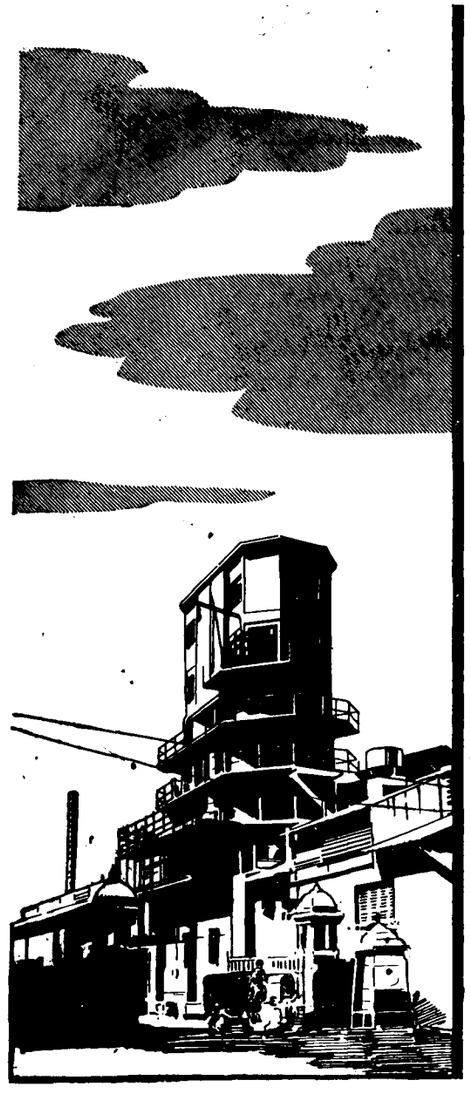

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