



TURN TO ALUMINIUM— IT'S A POWER FOR GOOD!

SO SERIOUS, INDEED, IS OUR NON-FERROUS METALS SHORTAGE that by the end of the Third Plan it might be necessary to import large quantities of copper, zinc and lead, costing the country dearly in terms of foreign exchange. And unless there is going to be a sharp or significant increase in export earnings, it would not definitely be possible to make any sizeable allocations for importing the required quantities of non-ferrous metals.

Mr. Manubhai Shah, Union Minister for Industry, has constantly been urging the large-scale substitution of copper by aluminium, as in the U.S.A., Italy and France.

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Editor: R. PARTHASARATHY

THE PURPOSES OF THIS PUBLICATION ARE:

- (i) *To record the accomplishments and achievements of our employees, their joys and sorrows so that our other friends like our customers, shareholders and neighbours may get to know our family better:*
- (ii) *To encourage in our employees pride in workmanship and the high quality of our products;*
- (iii) *To help create and sustain amongst them a spirit of friendliness; and*
- (iv) *To tell the story of our business and that of our customers and other friends so that mutual understanding and respect might be fostered.*

THE COVER: (Colour Transparency by K. S. Ramanujam.)

The Parambikulam Project—an inspiring symbol of Inter-state amity was inaugurated by Prime Minister Jawaharlal Nehru in October. Picture shows him flanked by Kerala Chief Minister Pattom Thanu Pillai and Madras Chief Minister K. Kamaraj.

In respect of aluminium, India is somewhat fortunately placed as the required reserves of high-grade bauxite are already available in the country. The aluminium target set for the Third Plan is 1.25 lakh tons while output averages at present around 17,000 tons. With the expansion programmes on hand of existing units and the setting up of new units, this target does not seem over-ambitious or impossible of being attained; only power should be made available and on much cheaper terms.

In the current context of the planned programme of a "switch-over-to-aluminium," for electrical purposes, Alind can well congratulate itself on the prescience it displayed long, long ago. Since we got ourselves established back in 1950, not only has our initial installed capacity gone up dramatically—it stands at 13,000 tons a year to-day—but new lines have been developed.

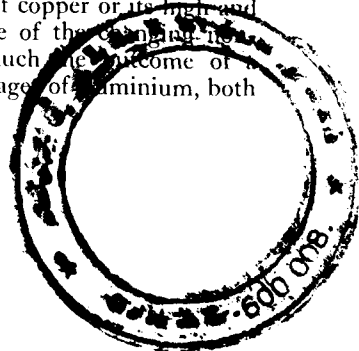
For instance, it was Alind, again, which broke away with tradition, when in 1957, it commissioned the first plant ever in the country for the manufacture of covered (insulated) aluminium conductors for outdoor and indoor wiring.

Alind's next pioneer effort will be its "Solidal" Underground Cable Project.

As a modest contribution to the Third Plan, and with a view to meeting the increasing demand likely as a result of the "switch-over-to-aluminium" campaign Alind is setting up a covered aluminium conductor plant at Hyderabad, capital of Andhra Pradesh.

Right from its inception, Alind has been a 'power for good in the world of aluminium'.

What we said in one of our panels at the Indian Industries Fair, New Delhi, will perhaps bear repetition: "The switch to aluminium... is not just the outcome of the non-availability of copper or its high and fluctuating prices; it is as much the outcome of the country's need for a ferrous metal economy of the country—as much the outcome of consideration of the superior, long-term advantages of aluminium, both in regard to availability and price".



CANADA, WHICH HAS ALREADY GIVEN 23 MILLION dollars for the Kundah hydro-electric project in Madras State, is to participate in the third and final stage of the project. It is estimated that the third stage will cost Rs. 230 million, including Rs. 90 million in foreign exchange. Besides underwriting the entire foreign exchange cost, Canada, which is giving the aid under the Colombo Plan, has also allowed India to use for the project the counterpart rupee funds generated by the sale of commodities supplied by Canada on a grant basis.

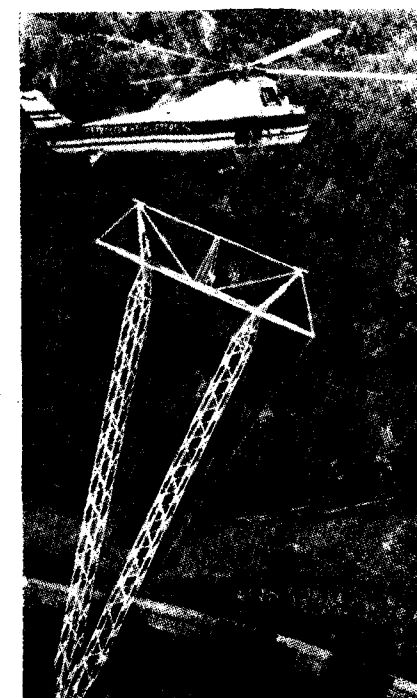
All-India Supergrid

A provision of over Rs. 17 lakhs is likely to be made in the Third Plan for development of regional grids by inter-linking State power systems in the country.

A cell is also proposed to be set up in the Central Water and Power Commission to study planning of zonal supergrids, in association with State Electricity Boards and public electricity supply undertakings and corporations.

Power Projects in the Third Plan

The Government of India have authorised commencement of preliminary works in 1960-61 of seven power projects, which will be included in the Third Five-Year Plan. Two of these projects, namely, Kundah Stage III extension scheme, and Mettur Tunnel Power scheme, with an installed capacity of 2,40,000 and 1,00,000 kW, are located in Madras State. In Kerala, Pamba-Kakki Hydro-electric Scheme will generate 30,000 kW of Power. The Cambay thermal station, with an installed capacity of 1,50,000 kW is in Gujarat and Khaperkheda thermal station extension with 30,000 kW capacity in Maharashtra. In Assam, the Naharkatiya power station will produce 50,400 kW of power, and in Bihar the Barauni thermal station extension scheme—15,000 kW of power.



Airlift for Aluminium Tower

An 80-ft., 2,700 lb. aluminium transmission tower was recently airlifted to its point of placement by Sikorsky S-58 helicopter. The lift took place during the construction of a power line near Lynchburg, Virginia, by the Appalachian Power Co., and was the first project to be undertaken and completed by helicopter.

New All-Metal Conductors

Two unique high voltage conductors have been specially developed by Rome Cable Division, Aluminium Co. of America, for Bonneville Power Administration. They will be installed on a 460,000-Volt test line to be constructed in 1962 near Sandy, Oregon.

These conductors are of expanded design, but represent considerable departure in concept—and expanding medium—from the familiar expanded ACSR. Made entirely of aluminium, they were developed in accordance with Bonneville's specification requiring all-metal construction.

One conductor design employs a "rope-lay" configuration measuring 2.13 in. in diameter. This is the first time such a concept has been applied to a conductor of the size.

The other new conductor incorporates a flexible aluminium conduit as the expanding medium. Its stranding consists of four layers of 5005 alloy wire helically wound around the core. Overall conductor diameter is 2.14 in.; the flexible conduit core is a standard 0.825 in. o.d., flexible conduit.

The "rope-lay" conductor is similar in appearance and structural composition to its namesake, stranded rope. It is composed of groups of wires treated as single strands, helically laid around a similar group serving as the central core. It is encircled with an other layer of conventional single wire strands. Inner wires are 5005 alloy; the outer layer of strands is EC alloy. This combination meets specified strength and electrical requirements.

Kaiser's Aluminium Project in U.P.

The largest single U.S. Private investment to date, in a venture with an Indian firm, is the Hindustan Aluminium Corporation Ltd., a joint venture between Kaiser Aluminium and the Birla enterprises in India. This project will establish an integrated aluminium producing facility

comprised of a 20,000-metric ton aluminium reduction plant near Pipri in Uttar Pradesh, together with related bauxite and alumina facilities.

A licence was issued to Hindustan Aluminium by the Government of India early in 1961 for construction of an aluminium fabricating facility capable of producing 15,000 metric tons of rolled, drawn and extruded products annually.

Hydro-electric power from the Rihand River dam will be used to operate the facilities, which are scheduled to be in operations, early in 1962.

The ordinary shares in Hindustan Aluminium are held by Kaiser Aluminium, the Birla interests, and the investing public. Kaiser Aluminium's interest is approximately 27 per cent and Indian interests are approximately 73 per cent.

Reynold's Aluminium Project

If Kaiser's come, can Reynolds be far behind? A Rs. 40-crore aluminium project is to be launched by Reynolds International Inc. in collaboration with an Indian firm.

The project will have its headquarters in Bombay, where the fabricating unit will be set up, the smelting plant will be set up in the Hubli-Dharwar area and the manufacturing section in Bangalore. The production capacity will be 30,000 tons in the first instance and will reach 90,000 tons in 10 years.

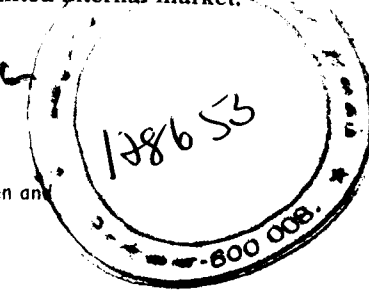
Montecatini's Project at Mettur

A deal for the construction of an aluminium smelter at Mettur in Madras has been finalised between the Madras Aluminium Company and the Italian firm of Montecatini. The Madras Aluminium Company will give \$ 2.52 million in share certificate to the Italian firm—\$ 945,000 in equity shares for technical knowhow, \$ 840,000 for engineering fees and \$ 735,000 for the cost of foreign experts and contractors' agencies engaged in construction, supervision and other services. A sum of \$ 315,000 will also be made available in rupees for out-of-pocket expenditure for Montecatini personnel in India.

India offers almost unrivalled possibilities for the manufacture of aluminium. It has large quantities of bauxite from which the metal is produced, plenty of cheap power within easy reach and an almost unlimited internal market.

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Airlift for aluminium tower: The project was undertaken and completed by helicopter



FOIL TRANSFORMER WINDINGS

Provide Efficiency, Economy, Lightness

IN ANY WINDING CONSISTING OF ROUND wire there must be considerable air space, for one wire is in contact with those around it only at points. The use of flat aluminium foil enables one turn to be in complete contact with the next, permitting the total area occupied by the winding to be reduced to a minimum. Thus aluminium foil provides advantages in cost and weight without increasing size.

Use Should Expand

Writing in *METALLURGIA* L. W. Swan of Fisher's Foils Ltd. examines these advantages and concludes that the reason manufacturers have not adopted aluminium foil as a winding material on a broader basis is the supposed cost of converting a plant to the use of foil. This resistance, he believes, will pass as manufacturers add to or replace equipment. In brief, Mr. Swan foresees the expanding use of aluminium foil for transformer windings.

Although machines for winding copper wire transformer coils cannot be used for producing aluminium foil coils, the machine for the latter can be much simpler in construction and hence less expensive. The foil machine requires no traversing mechanism such as is required to wind wire in layers. Also, a winding of aluminium foil can be made much more quickly. This indicates that the costs of making the necessary changes in production techniques may be much less than a casual estimate would suggest and would be followed immediately by economies in materials and labour.

Insulation

There are several methods of insulating one turn from another in the construction of an aluminium foil

transformer. The foil may be wound with paper or film. When this is used, it is recommended that the completed foil be sealed or impregnated with one of the varnishes familiar to the electrical trade. This provides rigidity, guards against the penetration of moisture and provides ordinary heat resistance.

A second method of providing insulation is by anodising, which has two distinct advantages. The anodic coating will withstand high temperatures and because it is so thin it enables the size of the foil to be reduced to an absolute minimum. The expansion of continuous anodising facilities will enhance the popularity of this form of insulation and do much to promote the use of foil in transformer windings.

A third method now being investigated uses inter-turn insulation. The method involves the application to the foil, by means of a suitable coating apparatus, of a resin or a lacquer of the two-stage type, which is then dried off sufficiently to permit the foil to be reeled up. The foil is then slit into reels of suitable width for use by the manufacturer. The resulting coil is submitted to a heating or final curing when the coating softens and fuses. On cooling, the coil becomes one solid piece.

The merit of this technique is that a simple coating applied to the foil provides the inter-turn insulation and the essential rigidity. The thermo-setting property of the coating is designed to ensure that it will withstand the heat which might later be generated within the coil during its use. While this technique is not yet perfected on a commercial basis, investigation has led to the conclusion that it has so many advantages that it

could revolutionize the construction of instrumentation types of transformers.

Equivalents

In arriving at an aluminium foil equivalent of any round copper wire, a manufacturer should take the cross-sectional area of the wire and increase it by 64 per cent to allow for the higher resistivity of aluminium. The new cross-sectional area may be expressed in width and thickness of many combinations. For example, a narrower coil may be made with thicker foil; a coil with limited overall diameter can be made with thinner but wider foil.

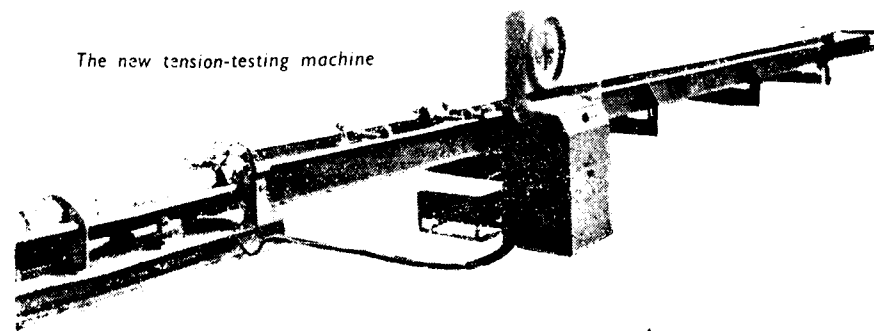
A manufacturer contemplating the production of aluminium foil transformers will need to satisfy himself concerning the best way to make the necessary electrical connections with the foil windings. There are a number of such techniques available to him, with the choice governed by the thickness of the foil on the winding, whether or not intermediate tappings had to be taken and to what the foil had to be joined - an aluminium surface or a copper wire. One of the most effective methods of joining is by cold-pressure welding, necessitating only a simple hand tool. For large production, this tool can be adapted to mechanical use. When sufficient pressure is exerted, the metals forming the surfaces to be joined will flow, forming a true weld with continuous grain structure. Aluminium foil may be joined with copper in this manner.

The advantages in cost and technical performance, together with the continuously growing market throughout the world for transformers, indicate an increasingly bright future for aluminium foil windings.

New Testing Machine

A 20-meter long aluminium conductor tension-testing machine installed recently at our Kundara works is a new addition to the series of testing equipment already in use here.

The machine's loading unit can develop hydraulic pressures up to 60 tons and can, therefore, be used for the tensile test of almost all sizes of All-Aluminium and ACSR conductors, normally manufactured in our country.



The new tension-testing machine



Across Naruto straits : Seventy-seven multi-coloured balloons were used on a stringing operation

Operation - Balloons

Seventy-seven red, yellow, pink and white striped balloons carried a wire across the 1,700 metre wide sea straits of Naruto in an unprecedented stringing operation to connect two big electric power transmission towers—one (114.5 m in height) on Awaji Island and the other (145.5 m in height) in Naruto, Tokushima Prefecture, Shikoku Island.

This unique "operation balloons" was instituted by the Company since

ordinary stringing work was not suitable for putting a wire across the Naruto Straits, where sea currents are complicated and swift (10 knots per hour) and ship traffic is heavy.

As the operation was started from the Awaji Island side, balloons were individually tied about 20 meters apart to a 9 mm messenger wire which was pulled across the straits by a five-ton tugboat.

When the tugboat was almost

across, it was met by a similar vessel pulling another wire connected to the power transmission tower on Shikoku, and the two wires successfully spliced together at sea.

The messenger wires were gradually replaced with bigger lines in the order of 14 mm, 16 mm, 19 mm, 24 mm, 28 mm, and the power conductor having the diameter of 35.2 mm. A total of 60,000 kW of electric power is expected to be transmitted from Shikoku to Awaji Island by the end of September, 1961.

INDEPENDENCE DAY

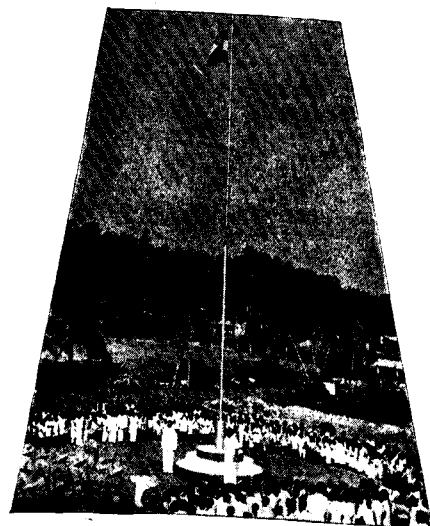
Alind celebrated Independence Day—August 15—with befitting solemnity. In the morning, there was flag hoisting and salutation; in the evening an enjoyable fare of entertainment was offered.



Music and drama chiefly constituted the Entertainment Programme. Picture shows a vocalist at the mike



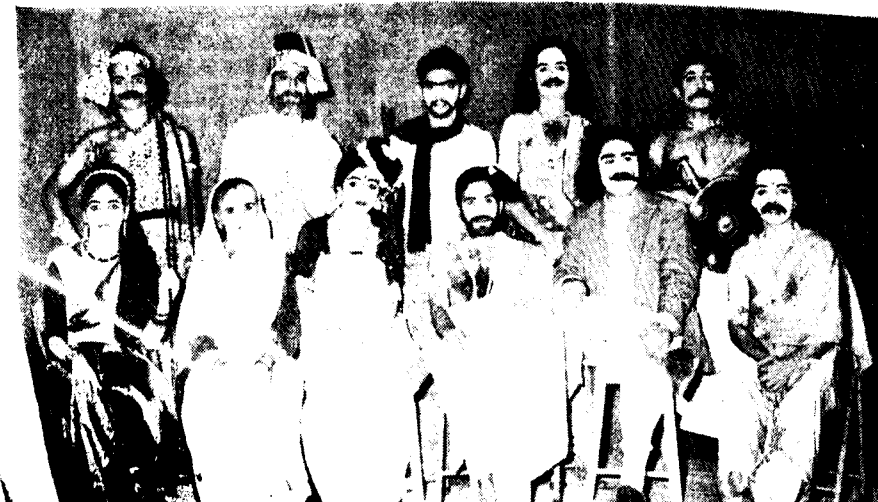
A scene from the Independence Day play



Jai Hind! Flag hoisting



Another scene from the play



Independence Day Drama — Those who took part in it

PARAMBIKULAM PROJECT

Inspiring Symbol of Inter-State Amity

THE RS. 40-CRORE, MULTI-PURPOSE Parambikulam Project, inaugurated by Prime Minister Jawaharlal Nehru in October is a huge and ambitious undertaking involving the construction of seven reservoirs, 12.5 miles of tunnels, two weirs, 30 miles of contour canal, mostly in a hilly tract, and 128 miles of lined canals.

Speaking on the occasion, the Prime Minister said that there was nothing more important in India than the development of irrigation and production of more electric power. He continued: "Through electric power we can do many things, start many industries—big, small, cottage or home industries. In fact, power is the source of our work today. I have no doubt that if we have enough power all over Kerala, you will find industries growing up, small or big, and employment coming to its people. Wherever we have a hydro-electric scheme, it fulfils two basic needs of India to-day. We want many things in India, we want to change our country and make it a prosperous State. We have to improve and maintain good standards of living and have opportunities of progress".

The Project involves the integration of seven rivers, five in Anamalai Hills—Nirar, Sholiar, Parambikulam, Tunakadavu and Thekkadi and two in the plains of Coimbatore—Aliyar and Palar.

By diverting these west-flowing rivers, which after passing through the Kerala State empty themselves into the Arabian Sea and by making the waters available for irrigating 240,000



Parambikulam Project: In the foreground are seen Prime Minister Nehru and Chief Minister Pattom Thanu Pillai.

acres in the taluks of Pollachi, Palladam, Dharapuram and Udumalpet and for generating 180,000 kW of power at the drops available in diversion courses, this project bids fair to convert the chronic famine areas of the Coimbatore District into a fertile territory of plenty.

Since the rivers concerned are inter-State, the Madras and Kerala Governments have entered into an agreement about the size, shape and implementation of the Project.

The Sankarpathi Power-house in the Madras State—an outcome of the Parambikulam Project—will generate 40,000 kW of power.

The impressive inauguration ceremony was attended by the Chief Ministers of Madras and Kerala, Mr. K. Kamaraj and Mr. Pattom Thanu Pillai, and Ministers of the two States besides prominent officials and non-officials.

A 37-foot high column was unveiled by the Prime Minister amidst cheers. Over 20,000 men and women were at work on this project in blazing heat and biting cold.

The Special Chief Engineer of the project, Mr. U. Ananda Rao, extended a warm welcome to the Prime Minister and made a brief statement about the technical details of the project.

Savers all!

The National Savings Organisation Kerala News-letter has come out with editorial praise for our savings efforts. Wrote the Journal in its September issue:

... "The winner of this signal honour (of achieving cent-per-cent payroll savings) is the Aluminium Industries Limited, Kundara. All its 508 permanent employees, workers, staff and officers have been enrolled under Payroll Savings.

The per capita monthly saving comes to Rs. 10 which is the highest for any payroll savings group in Kerala. This achievement was made possible only because of the whole-hearted co-operation and assistance of all the officers of this progressive unit and the results are all the more remarkable, considering that an industry belonging to the private sector has shown the way in Kerala."

Our Family

We said welcome to . . .

Jose Thomas, Asst. Engineer.
P. Oomamaheswaran Asari, Maistry (on probation).
C. P. Pillai, Travelling Sales Representative.
Joseph Mathew, Asst. Engineer.
R. Ramanujan, Asst. Engineer.
K. Krishna Pillai, Asst. Engineer.
M. L. Antonykutty, Construction Section.
K. Thyagarajan (Paid apprentice).
M. Chellayya, Unpaid apprentice.
M. John ; K. Appa Nair ; Thomas Peter ;
S. Mohammed Iqbal ; B. Chandrasekharan Nair ;
B. Viswanath ; K. Ibrahimkutty ; Vivekanandan ;
T. M. George (Plant No. 3).

APPRENTICES

P. M. Mohammed Atheekullah
P. S. Radhakrishnan
R. Narayana Panicker
D. Chandra Bose
M. Sivarama Pillai
V. K. Sasikumar
Gopimohanann Unnithan
M. Abdul Vahab
A. V. Sasidharan
M. Vijaya Das
K. P. Sankaran Nair
K. M. Abdul Bhari
K. P. Ramakrishna Karnaver
N. Chellappan Asari
B. K. Prabhakara Panicker
G. Sahadevan
K. Poulouse Michael
P. K. Narayana Pillai

TRAINEE

N. Gopalakrishnan (Plant No. 3).

We said farewell to . . .

N. Ramabhadran
Isaac Fenn
P. K. Thankappan Pillai
T. K. Ipe (Plant No. 3).

They were married . . .

S. N. Nayar, Project Supdt., Steel Wire Plant with Miss Ambika Devi.
M. G. Sukumaran Nair, Supervisor (Plant No. 3) with Miss M. G. Sathi.
N. Anandapadmanabha Kurup, Sales, with Miss Indira.
G. Ramachandran Nair, Shipping, with Miss Vijaya-lakshmi.
T. R. Chandrasekharan Nair, Sales Accounts, with Miss Thankamani.
Rajan, Asst. Engineer, with Miss Radha.



Ambika Devi—Narayanan Nayar



Kurup—Indira



Rajan—Radha

Hirakud Notes

Alind signs Agreement with Hirakud Plant Personnel

ON SEPT. 24, 1961, ALIND SIGNED A comprehensive, bi-partite agreement covering employees of its Hirakud works.

The agreement was negotiated to provide orderly collective bargaining relations, to secure fair and prompt disposition of grievances, to establish fair wages and other working conditions and to maintain harmonious relationship between workmen and employers.

Both parties have defined their rights and responsibilities in the Agreement. That it is the right of the management to manage and that of the Union to organize and bargain for the men is conceded.

Facilities granted to the Union include collection of dues and permission to display notices in the premises of the factory. The Union has conceded that it is the right of the management to hire and discipline workmen and to plan for production.

Embodied in the agreement are (i) a formula for annual bonus based on production, and (ii) a detailed grievance procedure aimed at expeditious settling of the day-to-day grievances of the men at various levels.

The Union undertakes not to strike or slow-down and the management agrees not to declare any lock-out during the pendency of this contract. The Union also agrees that no further demands for wages, bonus or on any of the terms and conditions of employment covered by the agreement will be advanced during the contract period.

The agreement provides for the appointment of the Labour Commissioner of Orissa or his nominee as an arbitrator to settle any dispute, difference or disagreements between the parties, during the period covered by it.

A special feature of this agreement was that it was negotiated between the management and the representatives of the Aluminium Industries Employees' Union (which is recognised as the sole bargaining agent for the workers) without the help of a third party for mediation. The negotiations lasted about a week.



Sahoo—
Shailabala

They were married . . .

G. K. Sahoo, Foreman, Wire & Rod Mill with Miss Shailabala.

We said welcome to . . .

Basudev Jena ; Niranjan Misra ; Trilok Singh ; Kailas Chandra Panda ; Manoranjan Das ; Kanja Kumar Rath ; Chittaranjan Das ; Dibya Singha Patnaik ; Sudhakar Panda ; Satyapriya Rath ; Niranjan Otta (In-plant trainees); and **Chintamani Joshi**, (on probation).

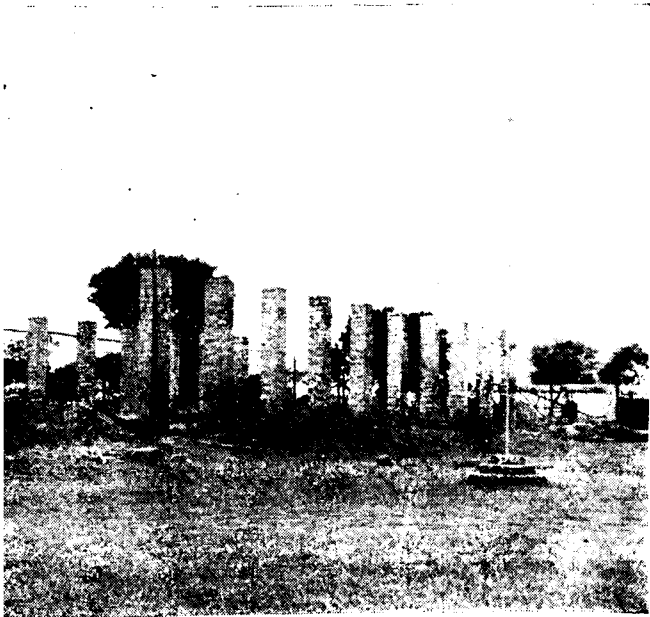
They were welcome . . .

Mr. S. B. Mohanty, Superintending Engineer, Electrical, Cuttack ; **Mr. V. Rama Rao**, Chief Engineer, Irrigation, Orissa ; **Mr. M. Shankaran**, Superintending Engineer, Electrical, Hirakud Dam Project ; **Mr. A. N. Ghosla**, Member, Planning Commission ; and **Mr. Zullig**, Managing Director, Indian Aluminium Co. Ltd.

We said farewell to . . .

P. K. Narayana Pillai, Head Guard ; **Babulal** (House-keeping) ; **Chaitanya Behera**, Trainee ; **Radhakant Patel ; Sachinath Moharana ; Trilok Singh ; and Satyapriya Rath** (In-plant trainees).

Hyderabad Notes



C. C. Plant at Hyderabad :
Work is now in progress on Building No. 4.

Good with Rod and Reel

P. MADHAVAN, Works Superintendent, (who has now been posted to Hyderabad) is a B.Sc. (Madras) and a Grad. I.E. (India). He joined Alind in 1954. The best part of his service here with us was at the C.C. Plant, so he was an obvious choice for our new plant at Hyderabad. A quiet and modest type, devoted to his work, Madhavan was a well-liked personality at Kundara. His considerable technical ability and his amiable nature are sure to win for him new friends in Hyderabad.

Madhavan's principal hobbies are swimming and fishing. Good with rod and reel, eh? And his favourite author is the late Ernest Hemmingway. Which is of course in line with his off-work interests. He is a good bridge player too.

All the best to him in his new assignment !

Lover of peaceful life

'Let me lead a happy and peaceful life', says E. P. RADHAKRISHNAN, Asst. Accountant, another Kundara employee, now posted to fabulous Hyderabad. He, too, joined us in 1954. A commerce graduate, he did his Intermediate at St. Thomas College, Trichur, and his B.Com. at the City College, Calcutta. For a period of four years—from 1950 to 1954 he saw service at Stewarts & Lloyds of India Limited. Volleyball, badminton and basketball are his principal sports interests, books and pictures constituting his other interests.

ALIND'S PLANT NO. 3 FOR THE MANUFACTURE OF covered aluminium conductors is located at Lingampalli, 17 miles from Hyderabad, close to the Hyderabad-Bombay trunk road. The locality is rich in scenic beauty and the terrain is dotted with the famous "Deccan Boulders".

The area is about forty-five acres of land. A skeleton staff comprising K. R. O. Nair (Project Superintendent), M. K. Varughese (Construction Superintendent) and E. P. Radhakrishnan (Assistant Accountant) is working on the Project.

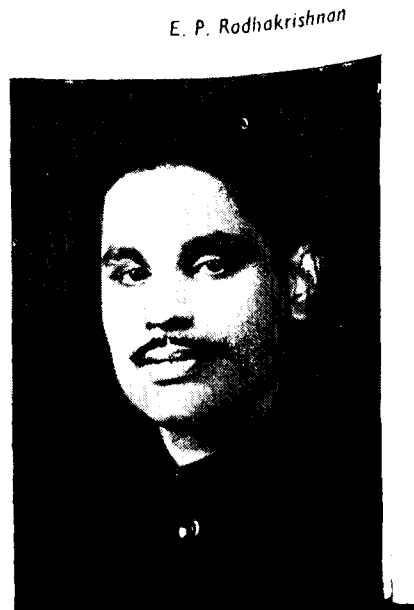
Work on the factory buildings and a few residential buildings is in progress.

We said welcome to . . .

N. Vasudevan Namboothiri, Typist ;
R. S. Deva Dathan, Civil Maistry; and
P. K. Narayana Pillai, Head Guard, who joined us after expiry of his service period with the Hirakud Plant.



P. Madhavan



E. P. Radhakrishnan

INSTITUTION OF ENGINEERS (INDIA)

Kundara Paper Centre

Subject	Date	Speaker	Summary
Process control in Industry	... June 22	... P. M. Joseph, General Supdt. (Works).	He dealt with statistical methods of Process Control and in particular, as applied to electrical conductor manufacture.
Design and Construction of Transmission Lines	... July 20	... K. Sudhakaran Nair, Asst. Engineer, Kerala State Electricity Board.	Covered in his paper and the discussions that ensued were : construction practice ; choice of conductors ; corona effects ; types of conductor supports and ranges of transmission voltages and modern developments in Europe and America ; the adoption of EHV for transmission ; and the advantages arising from an adoption of aluminium conductors in preference to copper.
Design and Construction of Transmission Lines (Symposium)	... Aug. 8	... G. Narayana Pillai, Construction Supdt., Alind.	* Some aspects of Design of 'Transmission Lines', was the paper presented.
Do.	... Sept. 9	... T. K. Radhamonie, Plant Supdt., Alind.	Discussions at both meetings included practically all aspects of transmission line construction such as : Survey of Lines ; use of profiles, conductor stringing, conductor accessories with special reference to AAC and ACSR.
Ethics of Engineering Profession	... Oct. 5	... Hasan Marikar, Mg. Director, Marikar (Motors) Limited.	(Summary below)
Requisites of an efficient organisation	... Oct. 30	... R. Anantha Subramania Iyer, Asst. Professor of Electrical Engineering	
Some aspects of manufacture of Premo Prestressed Concrete Pipes	... Dec. 7	... K. I. Oonithan, General Manager, Premo Pipe Factory, Chavra	The speaker dealt with the outstanding characteristics of Premo prestressed products compared with ordinary concrete Pipes.
Shaded Pole Motors	... Dec. 21	... S. Kumaraswami, Lecturer in Electrical Engineering	His paper elaborately dealt with the characteristics contributing to the preference of Shaded Pole Motors to other types of AC motors.

"AS DEFINED IN CHAMBER'S DICTIONARY, 'ETHICS IS THE SCIENCE OF MORALS OR that branch of philosophy' which is concerned with human character and conduct. It is, therefore, a systematic study of the ultimate problems of human conduct. Ethics is not a positive science of study, but a normative one," declared Mr. Hasan Marikar

**Creator,
Sustainer and
Destroyer—
the Engineer!**

"An engineer is a very indispensable individual in all walks of life. He figures in every branch of applied scientific research. He plays a vital role in shaping the world and in making it, so far as it lies in his power, a happy and a perfect place," he continued.

Mr. Marikar went on : "And an engineer can, therefore, deliver the goods, can contribute to the achievement of *summum bonum* which, in a way, is the quintessence of ethics.

"An engineer is a thinker, a planner, a designer. " He is a creator, a sustainer, and a destroyer. In other words, he is Brahma, Vishnu and Siva—all rolled in one. It is a challenge to the engineer of to-day that he promotes ethics in his profession for the good and happiness of mankind".

ALIND Celebrates ONAM

ONAM, THE GREAT KERALA NEW YEAR FESTIVAL WAS CELEBRATED AS A STATE festival in 1961, just as Mysore celebrates its Dusserah. Alind, too, organised the festival in style, the highlights being *poovidal* (flower arrangement) in front of colony houses, Indian sports like *kabadi* and *kilithattu* and a boat race with a grand feast providing the fitting finale.

Miss Jayalakshmi Sreenivasan gave a delightful music recital in the evening and Director B. V. D. Menon gave away the prizes to successful participants in sports and other competitions.

Prize-winners in Onam Competitions

POOVIDAL	...	...	Mrs. K. Ramaraj	...	...	I Prize
			Mrs. B. B. Kaimal	...	...	II Prize
BOAT RACE	...	...	S. N. Nayar (Proj. Supdt.)	...	...	I Prize
			(Capt.) ; M. John and N. Titus	...	...	
			C. G. Madhavan Pillai and crew	...	...	II Prize
KABADI	...	...	Winners—Rod Mill Team.			

THIS YEAR, WE WENT ONE BETTER ON our Ayudha Puja celebrations—we had four days of festivity. From Oct. 17 to Oct. 22 (morning).

The new steelwire plant, appropriately enough, we think, served as the chief venue. A small sanctum of an enclosure housing a lovely *mantap* with a picture of Goddess Saraswati, the patron deity of knowledge and wisdom, installed in it, had been provided in the place, imparting to the premises tone and atmosphere.

Proceedings started off at sundown with a procession of gaily-caparisoned elephants wending its way from the steel plant to the colony, a distance of nearly a mile.

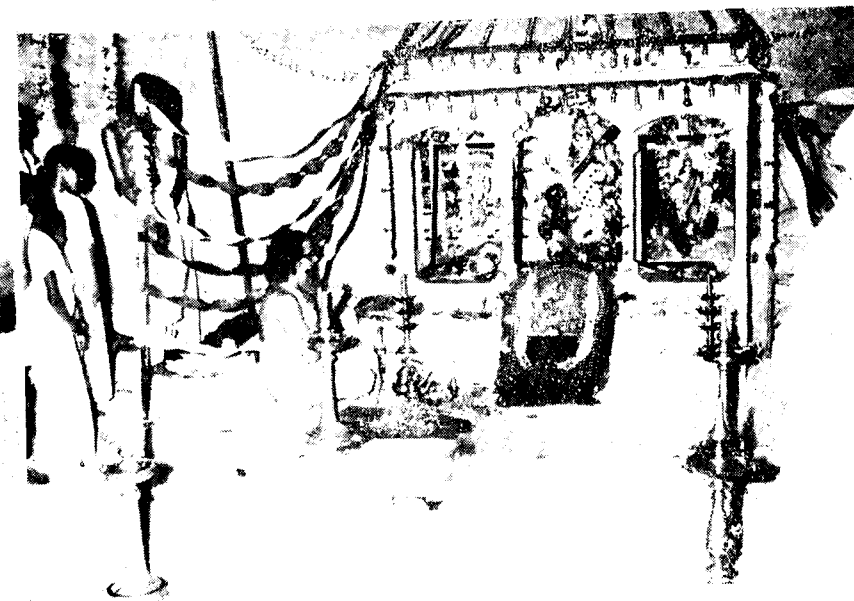
All through, we had *nadaswaram* music, with fireworks, also, thrown in, to the intense delight of the children who contributed a sizeable contingent to the procession.

ALIND Celebrates AYUDHA PUJA

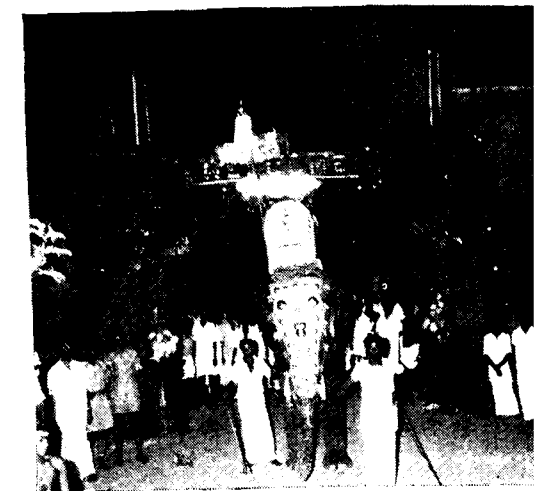
Children's Sports—
Kuzhi Pandu



S. N. Nayar, Skipper, being chaired by his crew on winning the Boat Race.



Swami Abhedanandaji performs puja



The elephant procession

Nadaswaram recital: Thiruvizha Raghava Panicker and party

"Vrindaganam" by Prof. Ramanathan and party

The first prize entry in Poovidal



The Boat Race



At its conclusion, we had devotional music at its thrilling best, the like of which it had not so far been our good fortune to listen to, at the newly-erected auditorium. Swami Abhedananda's Bhajana Party provided for us this new musical experience.

From 9 p.m. to 11 p.m. we had a *nadaswaram* recital—very exalting, indeed, but sad to relate, it had to be played to a thin house, probably because the hour was getting late and people were both tired and sleepy.

Oct. 18 :

A *bhajan* by Prof. Ramanathan and party was the main feature of the morning. Attractions in the afternoon included an *Ottam Thullal* performance by members of E. V. Arts Club, Adur, and a *Harikatha Kalakshepam* by Thazhava Janamma and party.

Oct. 19 :

Harinamakirtana—by N. S. Ramanatha Iyer and party.

Oct. 20 :

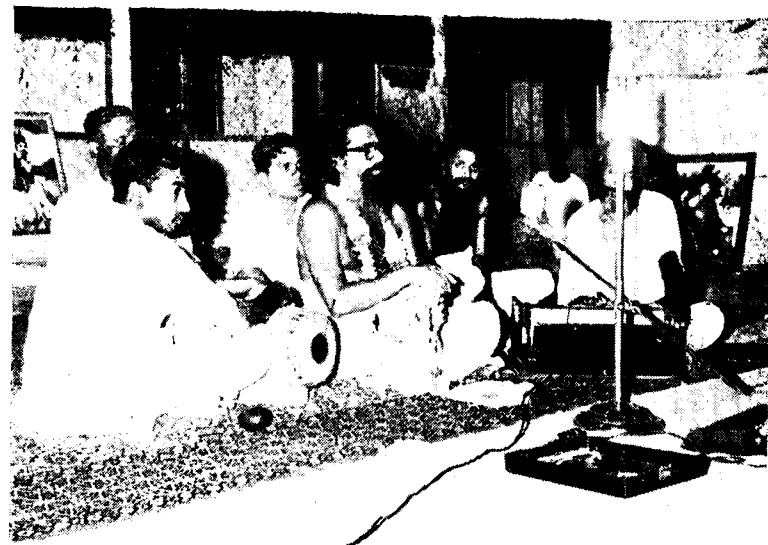
Bhagavatha Parayanam.

Oct. 21 :

The *piece de resistance* of the celebrations was a *kathakali* performance—*Nala charitam*—staged by Kerala's most celebrated troupe (Kalamandalam Krishnan Nair, Changannur Raman Pillai, Kudamalur Karunakaran, Chambakulam Pasu Pillai, Oviyur Kochu Govinda Pillai, Chennitla Chellappan Pillai and Mangombu Sivasankaran). Normally, *Nala charitam* requires four days to do, but the artistes wonderfully compressed the story, trimming and tailoring it to meet the requirement of only one day's performance.

Oct. 22. End of Puja.

Altogether, *Ayudha Puja*, this year reached a new dimension in 'devotional diversion' if we may so describe the event.



Swami Abhedananda's Bhajana



Puja at the Steelwire plant



Nala charitam
—Kathakali

GLIMPSES OF GANDHIJI

Kaka Kalelkar Saheb, one of Gandhiji's closest associates, paid us the honour of a visit sometime ago. And he very kindly agreed to our request to address Alinders. His subject : "Mahatma Gandhi." Here are a few glimpses of the Mahatma as revealed by Kaka Saheb.

Motilal Nehru to Gandhiji : "Ask anything of me—but not my butler!"

* * *

We were all working at Champadini, Rajan Babu was there, so many others were there. Bapu said that everyone should contribute Rs. 200 a month to the *Ashram*. One day, when mangoes at a rather high cost were purchased, Gandhi remonstrated : "What do you mean by spending so much for mangoes in the Ashram? We are living in an Ashram and we just can't afford to spend money like this. From tomorrow onwards, we stop such purchases. I can't call this an Ashram if everyone of you is not leading an Ashramite's life. We should work like servants".

One day, I received a letter from my daughter-in-law stating that she was not keeping well. I simply wanted to inform Gandhiji that she was not keeping well. He said "No, no, give me the letter". He read the letter carefully, and sent her a telegram costing about Rs. 15. Detailed instructions about medicines, doctors to be consulted, etc., were given. He did not mind spending Rs. 15 on one telegram! When the need was there he was prepared to spend. He was an aristocrat and he would spend. He put his foot down where wasteful expenditure was concerned.

* * *

Continuance of protection to conductor industry

The Tariff Commission has recommended the continuance of protection to the industry manufacturing ACSR (Aluminium Conductor Steel Reinforced) and AAC (All Aluminium Conductor).

Briefly, its recommendations are : —

- (i) Protection granted to the industry manufacturing ACSR and AAC should be continued at the existing rate of duty for a further period of three years—that is, till December 31, 1963.
- (ii) Protection granted to the industry manufacturing bare copper conductors and electrolytic copper rods need not be continued beyond December 31, 1960.
- (iii) There is no case for grant of protection to the industry manufacturing cadmium copper conductors.
- (iv) The duty payable on imported electrolytic aluminium ingots, bars and rods used in the manufacture of ACSR and AAC should be reduced to 15 per cent *ad valorem* plus such countervailing excise duty as may be imposed from time to time.
- (v) The Ministry of Commerce and Industry should, in consultation with the authorities concerned, devise methods by which the units manufacturing copper conductors, ACSR and AAC might be saved the inconvenience and expenses of too many inspections of their products by Government and semi-Government undertakings.

Government have accepted recommendations (i) to (iii) above.

Gandhiji was practising as a barrister in South Africa. One day, a Muslim butler came to him and said : "*Bhai, kya karen, muchche Angrezi nahin athee*". (I do not know English.) If he knew English, he would have received promotion. This butler could cook well but as he didn't know English, he couldn't get a good job. Gandhiji told him : "I will teach you English, if you don't mind. I have the time". The butler replied : "You are a big barrister, how can I believe?"

This butler was serving two miles away and said that he couldn't come even if Gandhiji was willing to teach him. Then Gandhi said, "I shall come to you." And for fourteen weeks Gandhiji trudged two miles to teach a Muslim butler who subsequently got a very good job.

Mahatmas are not made easily—Two miles, every day he walked in sun, rain and cold to teach a servant!

Salesmanship—there's more to it than selling at a price !

N. K. P. NAIR, OUR RESIDENT REPRESENTATIVE IN TRIVANDRUM UNDERWENT THE Tack Sales Training in Bombay for a week. On his return, he presented a paper to the Supervisory Study Group. Here's a summary :

Salesmanship is a specialised profession to-day, just like any other profession. It is a simple fact that we like people whom we think like us. Conversely, we dislike people whom we think dislike us. It is important, therefore, to develop a positive attitude and a likeable *personality*. To attain this, we must be our own severest critic. It is important to know how we look to the buyer.

Personal Appearance : Men of business are frequently judged by their appearance. Clean clothes are more essential than good clothes. What is wanted is the appropriate dress which does not attract attention, but is so perfect in taste that not one part of it will stand out—that is, there is nothing startling about the dress.

Courtesy and politeness : These two virtues are the most essential ones for successful salesmanship as they are for practically every walk of life ; they are even more valuable than the knowledge of the goods one has to sell.

Sincerity : This springs from a belief in the product, and in the Company. Sincerity has a twin sister—loyalty.

Familiarity and Formality : Of these two, formality is better. Mispronounced names can fray tempers.

Tact and Temper : Two other credits for the human ledger. Tact is an ineffable quality. Losing tempers means losing orders, friends and customers.

Enthusiasm : An essential attribute in this competitive world.

Effective Communication : Much selling depends upon the salesman's communicative efforts, his conversations, his effective use of words and sentences.

Purchasing—there's more to it than buying at a price !

M. R. G. MENON, EXECUTIVE ASSISTANT TO THE GENERAL MANAGER WAS ONE OF twenty-three participants who attended a course on Purchasing, Store-keeping and Materials Management held in New Delhi under the auspices of *Eastern Purchasing Journal* from July 28 to August 3.

According to him, some of the points stressed at the Course were :

The modern concept of “ purchasing ” goes far beyond the mere act of buying an item at a price. Certain complementary activities are also included, such as :

- (i) Research and study for a proper selection of materials ;
- (ii) Maintaining close contact with salesmen, sales literature, specifications, etc. ;
- (iii) Locating suitable sources of supply and maintaining adequate and up-to-date records about them ;
- (iv) Proper inspection and testing for quantity and quality of materials purchased ;
- (v) Proper follow-up to ensure delivery in time ;
- (vi) Ensuring prompt payment of suppliers' bills ; and
- (vii) Maintenance of proper records for future guidance.

A group photo taken on the occasion of saying farewell to Nakayama (Centre)



Sayonara...

In August, we said *sayonara* (farewell) to Mr. SHIGEO NAKAYAMA at a party got up in his honour—he had completed his assignment at the ACSR Core-wire plant.

A technician deputed by SEKIYA INDUSTRIAL FURNACE CO., Tokyo, Japan, he was with us since April 15 providing technical service for erecting the new mill's furnace.

At the function, warm tributes were paid to Nakayama's work and social activities. N. Satyanathan, Secretary of the company, and S. N. Nayar, Project Superintendent echoed the sentiments of every one present when they expressed the hope that Mr. Nakayama would soon return to India with some other new project.



P.S. Gopalakrishnan Nair

Territorialist

P. S. GOPALAKRISHNAN NAIR, Operator, Die Shop, considers his stint with the Territorial Army, as his most memorable episode in life. Whilst with TA, he had the opportunity of handling various types of modern war equipment.

Gopalakrishnan is an E.S.L.C. who holds a diploma, too, as a machinist. He passed his examination in the first division. His previous experience includes service as a land-tax assessor, a machinist, a craftsman-turner and as a workshop foreman.

Football is his favourite game, Sivaji Ganesan is his favourite star and Swami Vivekananda his favourite author.



P. Narayanan Pillai

Compounder

A qualified compounder who has worked in a regular medical dispensary before is Timekeeper P. NARAYANAN PILLAI. He joined the Company about eight years ago.

Badminton is his pet sports activity and reading—particularly fiction—is his hobby.



M. Sreenivasan

Studious Sportsman

M. SREENIVASAN, Stores, is a good badminton and table-tennis player. In both games, he has won prizes in our tournaments. Now in his eleventh year of service with Alind, he is a young old-timer—he is only 29 years old.

An E.S.L.C., he did one year at the S. N. College, Quilon. His chief off-work interest is reading. Fiction is his favourite mental pabulum, Takazhi his favourite author.



Sivaji fan

Yet another old-timer is V. GERMIAS, Foundry, having joined us as far back as 1948. His previous experience includes a four year spell with the local ceramic works. Cards are a passion with him, gardening is another. He is an avid reader of Malayalam novels and a fervid fan of Tamil films. Sivaji Ganesan is his favourite star.

V. Germias



Lover of simple life

The credo of N. RAMACHANDRAN THAMPY, Sales Department, is simple : 'Live a simple life, adjust yourself to what you get and don't just bother others.'

And he tries to practise in his own life what he preaches.

A former employee of the South Indian Railway, Trichy, he later acted as Supervisor of Census Operations at Trivandrum. He came to Alind in 1955.

Elastic in his tastes, his principal interests are agriculture (rubber plantation) books and pictures. While at college, he was playing badminton, tennis and ring-tennis—even now he retains his interest in the first game.

* * *

A mighty man is he

DAMODAR SAHU, Mechanical Section, is another war veteran. His "theatre" was Burma where he had to undergo all sorts of difficulties. Indeed, during the period the country was subjected to heavy bombardment by the enemy, he had to flee away into the jungle.

A most keen blacksmith, Sahu hopes some day to settle down as a small-scale entrepreneur. His other interests (besides *kabadi* and Nargis) include social work.

* * *



Shiba Shanker Patnaick

"Let me turn out to be a good technician"

A veteran of World War II who has had a miraculous escape from a might-have-been watery grave is SHIBA SHANKER PATNAICK, Mechanical Section. Besides his war record, his previous experience includes a short spell with the Hirakud Dam Project. He is most keen on earning a name as an 'Excellent technician'. Swimming is his favourite sport.



N. Ramachandran Thampy



Damodar Sahu

Would-be Wireman

BIKARI CHARA LENKA, Wire Mill, joined Alind in 1958. Before that, he was working in the Receiving Station of Hirakud Dam Project. Football, films and music are his chief interests. His principal current ambition is to become a good electrician.

B. C. Lenka





Rajamonie, son of
T. K. Krishnan, first Seshasayee
Scholar, receiving the award
from Mr K. K. Raman



Kusuma Kumari

ARC Award to SSLC Scholars

THE ALIND RECREATION CLUB HAS INSTITUTED A MEMORIAL AWARD OF Rs. 100 in the name of V. Seshasayee to be given to the boy or girl who scores maximum marks in the SSLC and who wishes to continue further studies at college. Sons and daughters of Alind employees at Kundara only are eligible for receiving the award.

The first award under this scheme went to RAJAMONIE, son of T. K. Krishnan, Asst. Secretary.

Mr. K. K. Raman, Chairman and Managing Director, Seshasayee Bros. Private Limited formally made the award to Rajamonie.

On the occasion Mr. Raman announced an additional award of Rs. 60 to the second best of passed SSLC candidates from amongst employees' children. Miss KUSUMA KUMARI, daughter of P. Narayana Pillai, Timekeeper, was this year's recipient of the 'Raman award'.

Supervisory Study Group

Date	Speaker	Subject
September 9	K. R. Sankaranarayanan	Administrative Staff College Training
October 12	P. A. Ibrahim	Contemporary Collective Bargaining—a review of its various phases
October 31	M. R. G. Menon and N. K. B. Nair	Purchase Techniques and Tack Sales Training
November 15	Mr. Fred Sparks of TCM	Hot Line Maintenance
November 27	Mr. S. Narayanaswamy	Impressions of West Germany
December 11	P. M. Mammen	Indian Income-tax

FACTORY DAY SPORTS

LIST OF PRIZE-WINNERS



The athletes' march past

200 Metres

K. Rajasekharan Nair—I.
C. G. Krishnankutty Nair—II.
N. Thomas Panicker—III.

400 Metres

K. Rajasekharan Nair—I.
M. Abdul Karim Rowther—II.
R. Velappan Nair—III.

One Mile

K. Rajasekharan Nair—I.
M. Abdul Karim Rowther—II.
Alex Francis—III.

Cross Country Race

K. Rajasekharan Nair—I.
M. Abdul Karim Rowther—II.
R. Velappan Nair—III.

Long Jump

Tommy Louie—I.
M. Nazimuddin—II.
G. Prabhakaran Pillai and Shahul
Hameed—III.

Hop, Step and Jump

Tommy Louie—I.
G. Prabhakaran Pillai—II.
V. K. Sasikumar—III.

High Jump

Tommy Louie—I.
T. K. Subramoniam—II.
A. V. Thomas—III.

Pole Vault

Tommy Louie—I.
Rajan Philip—II.
M. Sukumaran Nair—III.

Shot Put

Tommy Louie—I.
K. V. Rajendran—II.
C. G. Krishnankutty Nair—III.

Hammer Throw

K. V. Rajendran—I.
N. Thomas Panicker—II.
Tommy Louie—III.

Javelin Throw

C. G. Krishnankutty Nair—I.
P. Thankappan—II.
N. Thomas Panicker—III.

Sack Melee

Rajan Philip—I.
R. Gopalakrishnan—II.
S. Mohammed Iqbal—III.

Slow Cycle Race

P. Rajagopal—I.
Rajan Philip—II.
O. Thomas Panicker—III.

Veterans' Race

V. M. Abraham—I.
Kuttan Pillai—II.
B. V. D'Cruz—III.

Obstacle Race

Alex Francis—I.
G. Prabhakaran Pillai—II.
M. Nazimuddin—III.

4 x 100 Metres Relay

Plant No. III—
K. Rajasekharan ; M. Nazimud-
din ; Alex Francis ; S. Moham-
med Iqbal.

Wire Mill—II.

A. V. Thomas ; C. G. Madhavan
Pillai ; A. R. Gopalan Nair ;
K. K. Madhavan Nair.

Office—III.

P. Raghavan Nair ; K. R. Rama-
chandran Nair ; P. A. Kamarud-
din and R. Sreedharan Nair.

200 Metres (Open)

K. Rajasekharan Nair—I.
Philipose Panicker (State Bank of
Travancore)—II.
C. G. Krishnankutty Nair—III.
Ravindran Pillai and Sreedharan
Consolation Prizes.

Grease Pole Climbing

P. A. Ommen—I.
Alex Francis—II.
Ravindran Pillai—III.

Pole Vault Tommy Louie (1),
Rajan Philip (2) and C. G. K. Nair (3)



Veterans' Race : V. M. Abraham (1),
Kuttan Pillai (2) and B. V. D'Cruz (3)



Tug-of-War

Winners—

Steel Wire Plant

G. N. Pillai (Captain); Mutsu-
moto ; M. Joseph ; Kuttan
Pillai ; R. M. Nair ; K. Prabha-
karan Pillai ; K. K. Rama-
chandran Nair ; Alex Francis ;
Joseph Zachariahs ; S. James ;
T. M. George ; M. Sukumaran
Nair.

Runners-up—

(Rod Mill)

R. Gopalakrishnan (Captain) ;
K. N. G. Nair ; Rajan Philip ;
C. G. Krishnankutty Nair ;
C. K. Koshy ; Thomas Mutha-
lali ; K. Sreedharan Pillai ; P.N.
Abdul Azeez ; Stephen D'Silva ;
A. K. George ; N. S. Indra-
pala and Tommy Louie.

Tug-of-War (Exhibition)

Winners—

(Works Supervisory Staff)

V. Hariharan (Captain) ; P. M.
Joseph ; V. Paramoo ; T. V.
Ramachandran ; K. C. Rama-
chandran ; M. S. Das ; K. P.
Mukundan ; M. P. Aravindak-
shan ; G. K. Warrior ; K.
Seetharaman ; K. N. Gopala-
krishnan Nair and M. N.
Vasudevan Nair.

Runners-up

(Office Supervisory Staff)

D. G. Nayar (Captain) ; P. Rajan ;
K. Krishna Pillai ; D. Siva-
subramaniam ; G. R. C. Nair ;
P. S. Moni ; N. Satyanathan ;
K. N. Nair ; P. Aravindakshan ;
P. M. Mammen ; P. Rama-
chandran Nair and T. K. Gopa-
lan Nair.

Volleyball (Exhibition)

Winners—

(Works)

P. M. Joseph (Captain) ; M. S.
Das ; B. Bhagavathi Perumal ;
Tommy Louie ; C. K. Koshy ;
A. Shahul Hameed ; K. N. G.
Nair and C. G. Balakrishnan
Pillai.

Runners-up—(Office)

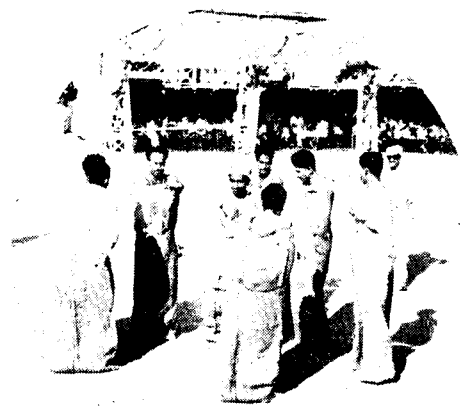
P. Sukumaran Nair (Captain) ;
K. R. C. Nair (Stores) ; K. R.
C. Nair (Sales Accounts) ; C.
S. Kaladharan Pillai ; P. Bhas-
karan Nair ; N. Balan Pillai ;
M. Philip and M. Mathen.



Tug-of-war : The winners were Steelwire plant personnel. Picture shows Mutsumoto (in dhoti) a Japanese technician, being chaired by his team mates.



Tommy Louie, the pole-vault winner, clearing the bar.



Sack Melee



Tommy Louie receives the Championship Cup from Chairman S. Narayanaswamy



Sack Melee : Rajan Philip (1)
R. Gopalakrishnan (2)
S. M. Iqbal (3)



Slow Cycle Race : P. Rajagopal (1)
Rajan Philip (2)
O. T. Panicker (3)



Kabadi (Exhibition Match)

Kabadi (Exhibition)

Winners—

R. Gopalakrishnan (Captain) ;
Tommy Louie ; Thomas
Muthalali ; N. S. Indrapalan ;
K. Mathai (Steel Plant) ; K. N.
Gopalakrishnan Nair ; M. S.
Das and C. K. Koshy.

Runners-up—

A. K. Thirivikraman Nair (Cap-
tain) ; Rajan Philip ; C. G.
Krishnankutty Nair ; M.
Sukumaran Nair ; N. Thomas
Panicker ; Stephen D'Silva ;
S. Mohamed Iqbal and C. G.
Madhavan Pillai.

Badminton

Singles—

K. B. Pillai—I
Shahul Hameed—II.

Ring Tennis

Doubles—

C. G. B. Pillai and Shahul
Hameed—I.
P. K. C. Panicker and Pushkaran
—II.

Singles—

T. R. Raghunandan—I.
P. Sukumaran—II.

Doubles—

T. R. Raghunandan and P. Suku-
maran Nair—I.
M. V. John and S. R. Nair—II.

Caroms

Singles—

G. K. Warrior—I.
C. G. B. Pillai—II.

Doubles—

P. G. D. Panicker and Rajan
Philip—I.
C. G. B. Pillai and P. A. George
—II.

Chess

Winners—

M. Philip—I.
A. K. T. V. Nair—II.

Shuttle-cock

Singles—

P. K. C. Panicker—I.
K. B. Pillai—II.

Doubles—

P. K. C. Panicker and P. M.
Joseph—I.
Shahul Hameed and C. G. B.
Pillai—II.

Table-Tennis

Singles—

S. N. Nair—I.
P. M. Joseph—II.

Doubles—

T. K. Radhamonic and P. M.
Joseph—I.
S. N. Nair and P. K. C. Panicker
—II.

OPENING OF HIGH TENSILE GALVANISED STEELWIRE PLANT

Inauguration by Mr. Yasumichi Iwasaki, Kokoku's President

Governor Giri Presides

"SINCE ITS INCEPTION IN 1950, YOUR Company has been blazing many a new trail—such as the manufacture of ACSR and AAC, Insulated Aluminium Cables and now of high-tensile, galvanised steelwire. It only indicates your zeal to forge ahead rapidly and ceaselessly," observed Mr. V. V. Giri, Governor, Kerala State, in the course of his presidential address at Alind's Eleventh Annual Day celebrations held at Kundara on November 29.

Two special events characterising celebrations this year were : (i) the inauguration of a new steel-core-wire plant by Mr. Y. Iwasaki, President, Kokoku Kosensaku Company Limited, Tokyo, and (ii) the laying of the foundation stone for a plant for the manufacture of "Solidal" Cable (a type of underground aluminium cable) by Mr. K. A. Damodara Menon, Minister for Industries, Kerala State.

The large and distinguished gathering present on the occasion included among others : Mr. Pattom A. Thanu Pillai, Chief Minister, Kerala State, Mr. K. T. Achuthan, Labour Minister, Mr. Maeda, Vice-Consul for Japan in Bombay, Mr. Ikuta of Ataka and Mr. Asano, a Director of Kokoku, Mr. V. Ramachandran, District Collector, Quilon, government officials, executives of other companies, leading industrialists and Alind's Directors, executives and employees.

On arrival at the new steelwire plant, Mr. V. V. Giri, Mr. Pattom Thanu Pillai and Mr. K. A. Damodara Menon were received by Mr. S. Narayanaswamy, Chairman of the Company and Mr. B. V. D. Menon, Managing Director, Seshasayee Brothers (Travancore) Private Limited (Managing Agents).

The distinguished guests were then introduced to the members of the Board, Mr. Y. Iwasaki and other Japanese friends and senior executives of the company.

After Mr. Iwasaki had formally switched into commission the new mill by unveiling a commemorative plaque, the Governor and party were shown round the new plant.

The proceedings began with an invocation song by Kumari Kannamma, an artiste from the Trivandrum station of All-India Radio, who also rendered a welcome song specially composed by Mr. Pala Narayanan Nair for the occasion.

In line with pioneering tradition

Mr. V. G. G. Nayar, General Manager, read the messages of greetings and good wishes received on the occasion which included one from Mr. Manubhai Shah, Minister for Industry, Government of India. Mr. Manubhai Shah said that the scheme for the manufacture of high-tensile, galvanised steelwire, an essential raw material in the manufacture of ACSR conductors, was in line with Alind's pioneering tradition.

"This effort", he continued, "would save the country a considerable amount of foreign exchange and do away with our dependence on imports. This unit has been set up in collaboration with Kokoku Iron & Steel Wire Manufacturing Company Limited, Tokyo, and stands as a monument of co-operative effort between our country and Japan. I believe this will be the beginning of several such programmes where we could take advantage of the progress and development achieved in Japan."

His heartening message concluded thus : "The Aluminium Industries Limited were the first to manufacture insulated aluminium cables in the country and they have successfully overcome the consumer prejudice on the use of these cables. With the ground thus prepared, it will be easier to attempt the large-scale substitution of aluminium for copper in respect of other types of cables."

Japan—willing to give all assistance

Dr. Koto Matsudaira, Ambassador of Japan in India, stated in his message : "On this occasion of inauguration of a new plant at Kundara, I wish to express my heartiest congratulations to Aluminium Industries Limited, pioneers and biggest producers of aluminium conductors in India, who, in collaboration with Kokoku Iron & Steel Wire Manufacturing Company of Tokyo, a leading wire manufacturing company of Japan, as well as Ataka & Company Limited, of Osaka, have established this plant at Kundara for the manufacture of high-tensile, galvanised steelwire."

His message closed with these reassuring words : "I would like to mention that Japan is most willing to extend all possible co-operation for the implementation of the industrial plans of India. The collaboration



Chairman S. Narayanaswami presents Mr. Iwasaki and Mr. Ikuta to Mr. Pattom Thanu Pillai



Mr. Maeda, Mr. Iwasaki and Mr. Ikuta



Our Japanese guests on arrival at Trivandrum airport.



Governor Giri (fifth from left) at the steel plant.



Governor Giri, Chief Minister Pattom Thanu Pillai and other guests at the new plant

between the said Japanese and Indian companies is yet another manifestation of the growing co-operation between Japan and India."

Mr. Maeda, Vice-Consul for Japan in Bombay, read the message.

Mr. K. Izaki, President of Ataka & Company Limited stated in the course of his message (read by Mr. Ikuta of the same organisation) : "The technical alignment and spirit of friendship

which Ataka & Company have established between Alind and Kokoku represent a great event in Indo-Japanese trade history. I am confident that your products of this plant will be as good in quality as the original steel core wires presently produced in Japan. We sincerely hope that the newly-erected plant will make further progress and achieve a prominent position in Indian wire circles."

Steel-core—spinal cord of ACSR

Welcoming the guests, Mr. Narayanaswamy, Chairman, observed : " The inauguration of the high-tensile, galvanised steelwire plant has psychologically a greater significance because the erection of this unit makes ours a fully-integrated, aluminium-cable producing unit. In the wider field of nation-building, we have been talking of national integration ; in the more restricted field of industry, integration seems no less important."

" This plant enables us to dispense with dependence on external sources of supply of the core-wire, without which bare conductor manufacture is impossible. Physically, this constitutes the spinal cord of the bare conductor, as in the manufacture of conductors, strands of aluminium wire are spun over the wire. The core wire imparts to the aluminium cable, its unbreakable or non-snapping quality, when it is suspended over long spans in the process of electricity transmission. The presence of the steel-core wire gives to aluminium conductors the well-known technical name ACSR, which amplified reads : ' Aluminium Conductor Steel Reinforced.' We have hitherto been manufacturing aluminium conductor. From now on, we shall manufacture at Kundara the steel reinforcement also. The manufacturing sequence has been following that of the trade-name, though there has been a ten-year time-lag between the two. To us, who have been concerned with cable production over the years at Kundara, the erection of the core-wire plant affords a new sense of fulfilment."

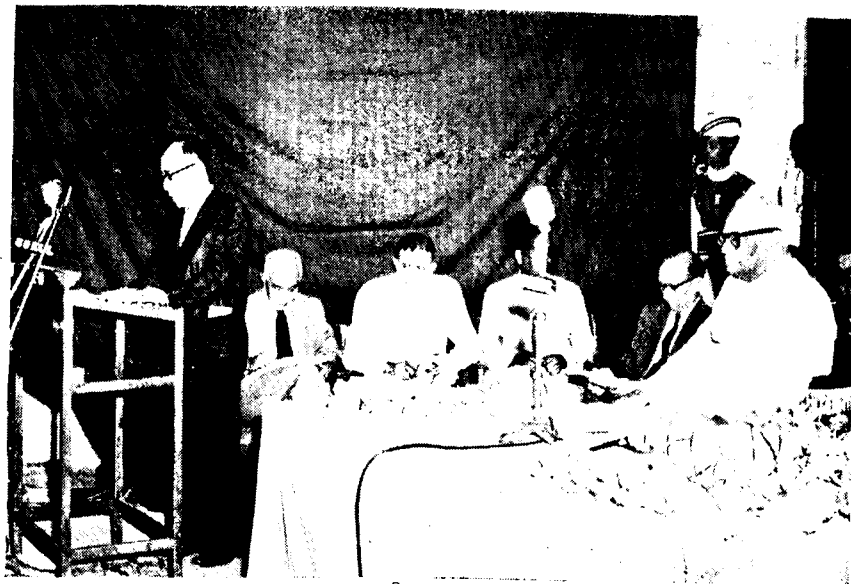
Characterising Alind's relations with Messrs. Ataka and Kokoku -- (built over a period of years) -- as having been 'uniformly cordial', Mr. Narayanaswamy said : " The quality of their supplies and service had left no room for complaint, and it is my hope reciprocally, that Alind's



Mr. Maeda, Japanese Vice-Consul at Bombay, reading the messages received from the Japanese Ambassador at New Delhi

treatment of them has left little room for dissatisfaction. When the Managing Agents brought up before the Board, the proposal to install a core-wire plant, we examined the question from the point of view of its ultimate economics and found it most advantageous to conclude an agreement with our Japanese suppliers of wire for supply of the capital equipment needed for the unit. It was lucky for us that at that time, the Government of India had reserves of Yen Credit, from out

of which they very kindly agreed to make available to us, the Japanese exchange we needed for this project. It afforded us deep satisfaction to avail of this facility and finalise our arrangements with the Ataka-Kokoku group. It appeared to us an appropriate and logical culmination of our long-term relationship, as supplier and consumer, that this group should put us on our feet to supply our own requirements of steelwire and achieve self-sufficiency.



Mr. Ikuta translated the speech of Mr. Iwasaki into English

Breaking new ground— with "Solidal"

Referring to the Solidal Project, for which earlier, Mr. K. A. Damodara Menon had laid the foundation stone, the Chairman said : " Alind has been working on the " Solidal Project " for some two years now. We owe this idea of a solid core aluminium plastic-sheathed underground cable to that fine organisation, ALCAN ASIA, who have been our friends and guides for many years. Mr. Charles G. Gorton, our Consultant in London, has been affording us considerable stimulus in making us take up the project. We are very anxious to commence production and supply of this unique type of handy, underground aluminium cable without delay. Alind has been maintaining leadership in the aluminium conductor industry as has been pointed out by our Union Minister for Industry in his message for to-day's function. It is only appropriate that we should, by being the first in the field of aluminium underground cable manufacture, break ground both figuratively and if I may add, literally, and lay the Solidal cable where it belongs, without much delay. Solidal is an adolescent in the sector of underground cables even in the West, but it has taken rapid root and established its functional efficiency to the satisfaction of the more fastidious and conservative electrical engineers in Western countries. Alind would be the first Eastern manufacturer of Solidal ".

Steelwire—another Alind "first"

Presenting the core-wire mill, Mr. B. V. D. Menon, Managing Director, Managing Agents, first briefly outlined the progress made by Alind in the last eleven years.

" He said : " All the products that we have made here and marketed have been pioneering efforts as far as our country is concerned. Naturally, we had our share of difficulties, because every time the product was something new to India. Apart from contributing in a considerable measure to the success of electrification of the country, we have also succeeded in attaining a substantial degree of self-sufficiency so far as the Indian aluminium cable industry is concerned."



Solidal Project : Mr. K. A. Damodara Menon, Industries Minister, laying the foundation stone

Continuing, he declared : " Our latest pioneering effort is the establishment of this factory for the manufacture of high-tensile, galvanised steelwire, an essential material in the manufacture of bare aluminium conductors, apart from its applications in various other fields of engineering. Until now, this product was imported into India. Our own requirements of this wire are currently 4,000 tons annually, while the plant has a production capacity of 6,000 tons.

He added amidst loud and prolonged cheers : " In fact, I have very great pleasure in announcing that we have already secured orders for the supply of a substantial tonnage of this wire."

Continuing, he observed : " This plant has a foreign exchange saving of Rs. 2.5 million annually, but towards the end of the Third Five-Year Plan, we should be working on indigenous raw materials and then, the annual foreign exchange savings could well be to the tune of Rs. 7 million."

Making a reference to the presence of the President of the collaborating Japanese company, Mr. Menon said : " We are indeed very fortunate in having with us this evening these distinguished overseas guests. It gives us the utmost satisfaction that

Mr. Iwasaki, President of Kokoku Kosensaku Company Limited, Japan, has very graciously consented to inaugurate this plant."

Cordial Alind— Kokoku relationship

" The firm of Kokoku along with its associated business house of Ataka, is certainly known to Alind. We have had a steady business association with them for the last seven years, during which period, we have purchased from them something like 15,000 tons of steelwire. The materials which they have supplied were the cheapest in the world and of excellent quality. Our business association with them has been most cordial. Born out of this association, we, orientals, naturally developed a respect and considerable affection for each other. These feelings resulted in the Japanese offer of engineering skill and technical collaboration with the requisite machinery and equipment and culminated in the production stage of this plant."

Mr. Menon further stated : " Now, this offer was against the most gracious gesture of the Government of Japan to the Government of India of financial assistance under the well-known and largely-appreciated " Yen Credit " scheme.

"The construction of the plant which commenced in August 1960 with the foundation stone well and truly laid by our Chairman progressed always ahead of schedule. Our esteemed Japanese collaborators delivered the machinery and equipment in time, and with their technical guidance so efficiently and promptly given at every stage, it has been possible for us to-day, to go into production. My colleagues and co-workers who had the privilege of working in close association with them have told me that it has been a most wonderful and rewarding experience. They seem to understand much better to-day than ever before in the past why Japan has a known technical ability, industrial efficiency and management skill."

Requesting Mr. Iwasaki to declare the new plant formally open, Mr. Menon concluded: "Now, you see before you to-day the first result of Indo-Japanese collaboration in Kerala State. At this moment of our own self-satisfaction, let me thank my Japanese friends and tell them how very much we are overwhelmed by the earnest co-operation and guidance we have received from their nation, their firms and their technicians."

"Speaking personally for myself, I am much more delighted for another reason—namely, that the same firms of Ataka and Kokoku are collaborating with the firm of Seshasayee Brothers, to which I belong, for establishing a steelwire rope factory in Ernakulam."

Mr. Y. Iwasaki, President, Kokoku Iron & Steel Wire Manufacturing Company Limited who inaugurated Alind's core-wire mill presses a button to unveil a commemorative plaque.



Iwasaki's Address

Declaring the new plant open, Mr. Y. Iwasaki, President, Kokoku Iron & Steel Wire Manufacturing Company Limited said:

"It is hardly necessary for me to say that Alind is one of the most excellent companies in this country. And this company has now gone into the production of high-tensile, galvanised steelwires through more than 10 years' experience in the production of aluminium conductors, and the company has to-day accomplished self-sufficiency in respect of the core wires."

"The achievement of your self-sufficiency of the materials will, I am sure, much more strengthen the foundation of Alind and do a great deal not only for the future prosperity of your company but also for the progress of a great nation like yours."

"At the same time, I have to pay my tribute to the management of Alind who are continuously exploring the

possibilities of new lines of development and have now achieved this attractive project under friendly relationship with us, at Kokoku Kosensaku Company Limited. On the occasion of the successful implementation of this project, I wish to pay my respects to all those who have done their best towards the completion of this project overcoming every difficulty since the work commenced at Kundara."

Continuing, he observed: "Now, we, Kokoku Kosensaku Company Limited, have been supplying you with high-tensile, galvanised steel core wires—the same wires you are going to produce yourselves and supply yourselves—for the past ten years. Our products must have been recognised by you as being of the highest quality and also as being suitable materials for the finished conductors. This fact, I like to think, has given us the opportunity to get a flower into bloom with the fertilizer of our mutual friendship and sincerity."

"The flower of technical collaboration has now blossomed and will surely yield good fruit. But it will largely depend upon the efforts to be made by you at Alind, for a manufacturing technique is acquired as the result of many years' utmost efforts. Besides, it is important that you should be helped and sponsored at every stage by your Government or the authorities concerned. Without such assistance from the authorities,

the flower cannot blossom and develop into the fruit-bearing stage. Likewise we, at Kokoku Kosensaku Company Ltd., will do our best to afford technical assistance in the production of high-tensile, steel-core wires and make the flower forever bear fruit which will be sure to make a contribution to Alind's progress and to the progress of the nation."

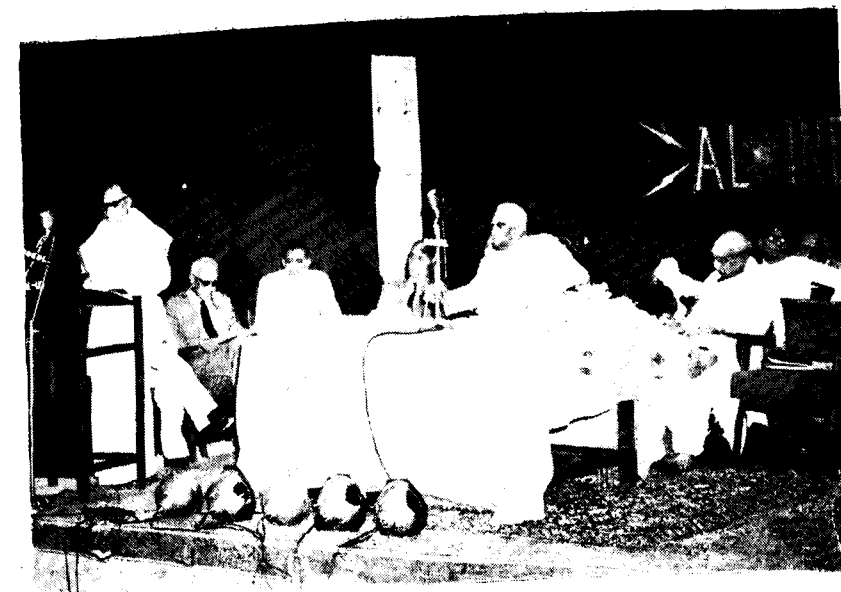
In closing, Mr. Iwasaki observed: "We have good reasons to have started this project with Alind. Not only is Alind a well-run and leading company in its line, but, we, at Kokoku, wanted to contribute our share, however small it might be, to the accelerated industrialisation programme of your country through collaboration on this project for the manufacture of high-tensile, galvanised steelwires, indispensable for aluminium conductors, and this means, indispensable for power supply. We wanted to promote the welfare of all of your people by helping you in this line, which is the manufacture of aluminium conductors enabling electric power to get into every corner of your country and finally making your people have a ray of sunshine and happiness."

Employer-employee relations

Delivering the Eleventh Annual Day Address, Mr. K. A. Damodara Menon, Industries Minister, who had earlier laid the foundation stone for the "Solidal Cable Plant" declared: "Alind stands out as a magnificent achievement of the pioneering spirit and organisational ability of the House of Seshasayees. We are deeply indebted to the late Shri Seshasayee for the services he had rendered for the industrial progress of our State."

Continuing he said: "The steel-wire plant which has been inaugurated today by Mr. Iwasaki and the Solidal Cable Plant for which the foundation stone was laid by me, mark the stages of development of this important industry. I congratulate the Chairman and Board of Directors, the Japanese collaborators, the General Manager, the technical personnel and the workers of Alind on this creditable achievement."

Making a pointed reference to Alind's progressive personnel policy, the Industries Minister said: "One of the things that has impressed me in Alind is the healthy and happy rela-



Mr. K. A. Damodara Menon, Industries Minister, delivering the Annual Day address;

tionship that subsists between labour and management. This is in no small measure due to the satisfactory working conditions which the management has taken care to ensure, and the sense of duty and the spirit of co-operation which the workmen have evinced. I have no doubt that it is because of this atmosphere of mutual trust and good will that Alind has been able to function with enviable efficiency."

Stating that there prevailed at present in Kerala a proper industrialisation climate, the Minister observed:

"It is gratifying to find that well-known industrialists from foreign countries, especially Japan, are showing keen interest in our endeavour to put up new industries and are offering collaboration. Messrs. Kokoku Kosensaku Co. of Tokyo is collaborating in the expansion programme of this industry. I understand that they have also agreed to collaborate with Indian promoters for setting up a Wire rope factory at Alwaye. Such assistance from friendly countries is always welcome, and we are deeply grateful to our Japanese friends. I



Mr. K. T. Achuthan, Labour Minister, is being garlanded by V. G. G. Nayar

The commemorative plaque



am hoping that Kokoku Company will offer us assistance for starting a few more industries in this State."

Concluding, Mr. Damodara Menon said: "I wish to refer to a distributing development in our public life which unless curbed in time will land us in confusion and ultimately in anarchy. What is necessary today, especially in the context of our Plans, is a positive and constructive approach to the problems that confront us and not a negative and destructive approach. Industrial progress can be achieved only by creative thinking and by patient and sustained constructive efforts."

Tribute to V. Seshasayee

In the course of his presidential address Mr. V. V. Giri, Governor, Kerala State, stated: "Alind deserves to be congratulated on its grand and stupendous efforts in devoting its attention to many new spheres. As I said earlier, it is very much in their tradition and we owe not a little to the House of Seshasayees—every member of whom is imbued with far-sighted vision and dynamic organising ability—who have been instrumental in nurturing many such new ventures in South India. I knew the late Mr. V. Seshasayee very well and he was all the time working with the zeal of a missionary, his sole ambition being the transformation of the entire face of the region from an underdeveloped and backward rural area into a highly industrialised and economically prosperous one."

Continuing, he said: "I am equally aware of the substantial contribution made towards the establishment and progress of this industry by its Japanese collaborators, who since Alind's inception in 1950, have actively and generously been helping the industry to achieve outstanding results and make a name for itself as A(1). This gesture, in my view, is not merely a symbol of Indo-Japanese commercial co-operation or technical collaboration, but a symbol, more enduring, reflecting fully and broadly the lasting friendship, the hoary cultural bonds and the cordial relations prevailing between these two Asian neighbours for a long, long time. To my mind, this gesture is also symbolic of the growing unity of mankind, and of the responsibility of advanced nations towards their less fortunate neighbours."



Mr. Pattom Thanu Pillai, Chief Minister, spoke on the need for strengthening Indo-Japanese industrial ties on the occasion of the Steelwire Plant Inauguration function

The Governor further stated: "That we should have in our midst Mr. Yasumichi Iwasaki, President, Kokoku Kosensaku Company, is a matter of satisfaction and only points to the keen interest, lively enthusiasm and timely assistance which these Asian friends are rendering to the economic regeneration of India and their sympathetic and helpful attitude in assisting us to break the chains of underdevelopment that have fettered us so long. We are extremely thankful to them for their unstinted co-operation and the various concessions, (specially the supply of machinery and plant under the Yen Credit agreement) they have granted to the industry so that it can make rapid headway."

Inaugurating Alind's Pay Roll Savings Scheme, the Governor congratulated the employees on the 98 per cent coverage attained and expressed the hope that "every one of your employees will co-operate wholeheartedly in our present pilgrimage of progress towards 'Destination Socialism.'"

Requesting the Governor to make the presentation of a plaque and two pass books to the General Manager of the company, Mr. V. G. G. Nayar, Mr. V. Ramachandran, District Collector, said that the company would have a cent-per-cent coverage of the scheme from January 1, 1967 onwards.

"Learn Japanese"

Mr. Pattom A. Thanu Pillai, Chief Minister, Kerala State, offering his felicitations to the company on the successful establishment of a facility for the manufacture of high-tensile, galvanised steelwire, as an integral part of the works at Kundara, stated that the occasion was unique at least for this reason namely, that for the first time in his life he had the pleasure of listening to a speech made in Japanese. He urged the people of the State to learn the Japanese language which he described as the language of science, industry and friendship. "It would be worthwhile to do so", he added, "as the bonds of friendship between Japan and India and Japan and Kerala were being strengthened with Japanese participation in new industries here."

Welcoming the statement of the President of Kokoku Kosensaku Company Limited, Mr. Iwasaki, that his firm would be investing more in Kerala for its industrial development, Mr. Thanu Pillai humorously suggested that our Japanese friends should make India their permanent home.

Mr. S. P. Mohammed, Sales Manager, proposed a vote of thanks.

ENTERTAINMENT

The three days of Factory Day Celebrations (tied up with which was the new Steelwire Plant official opening ceremony) were also days of first-rate entertainment. The bill of fare offered was both rich and varied.

Nov. 28

We had Tagore's *Chitrangada*, a dance drama, presented by the well-known Pratibha dance troupe. Guests of honour at the show were our Japanese friends.

Nov. 29

(a) Kerala State Police Orchestra.

(b) Bharata Natyam recital by Kumari Kamala, the country's most celebrated exponent of the art.

Nov. 30

Variety Entertainment Programme directed and produced by Alind's able impresario T. N. Radhamonie.

(a) This machine age—a tableau. Artistes: Kalamandalam Gangadharan and party.

(b) *Katha Prasangam* (Musical discourse) about Steel Plant. Scripted by K. K. Velayudhan and presented by R. Prabhakaran.

(c) Malayalam Drama (*No mother—she*)

Besides Alinders, Mavilkkara Ponnamma and Vanchiyoore Radha, two well-known outside artistes, participated.



Seen with members of the Pratibha troupe and Mr. and Mrs. Nayar are from L to R: (Seated) Mr. Kato, Mr. Iwasaki, Mr. Ikuta and Mr. Kimura.

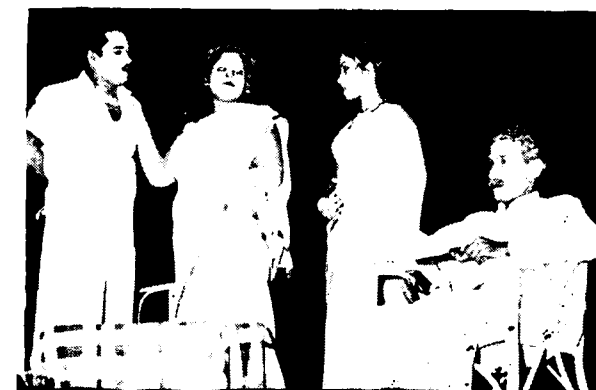


A scene from Chitrangada



Katha Prasangam about steel plant

A moment from the Malayalam play



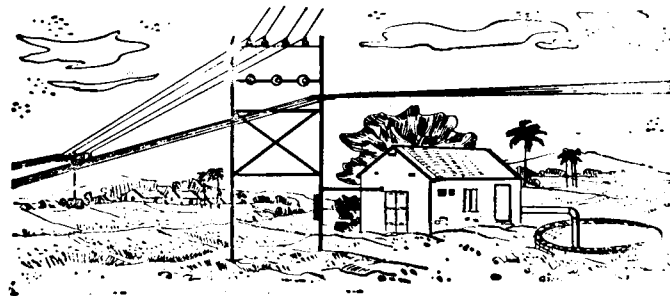
Bharata Natyam recital by Kumari Kamala and party



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At the "poles",
cast your vote
for aluminium!

Why we should care about aluminium (iv)

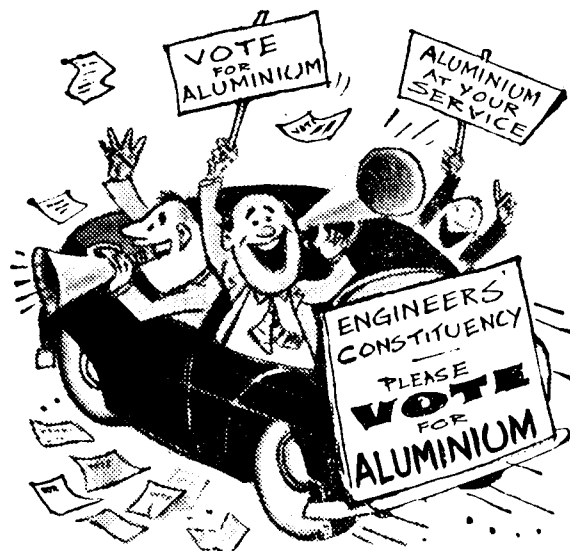


Weighing only half as much as a copper conductor...costing much less...but having the same current-carrying capacity for direct current, bare aluminium conductors for overhead low-voltage power have for long been the obvious choice of electrical engineers.

Now with our programme of extending the benefits of electric supply to more and more villages and copper having to be imported—cutting into our limited foreign exchange—supply undertakings and authorities can't just afford to miss the opportunity of saving 40 per cent on installation costs with ALIND ALL-ALUMINIUM conductors.

At the "poles", therefore, the distribution engineer's choice is ALIND ALL-ALUMINIUM!

Alind's integrated production facilities and its experience of well over a decade in the varied applications of aluminium as an electrical conductor are your best assurance of quality first in the product...service first to the customer.



Drop us a line,
we'll reply by cable!

ALIND

THE ALUMINIUM INDUSTRIES LIMITED
India's largest manufacturers of aluminium conductors and accessories
Registered Office & Plant No. 1: Kundara (Kerala)
Plant No. 2: Mirakud (Orissa)
Managing Agents:
SESHASAYEE BROS. (TRAV.) PRIVATE LIMITED

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