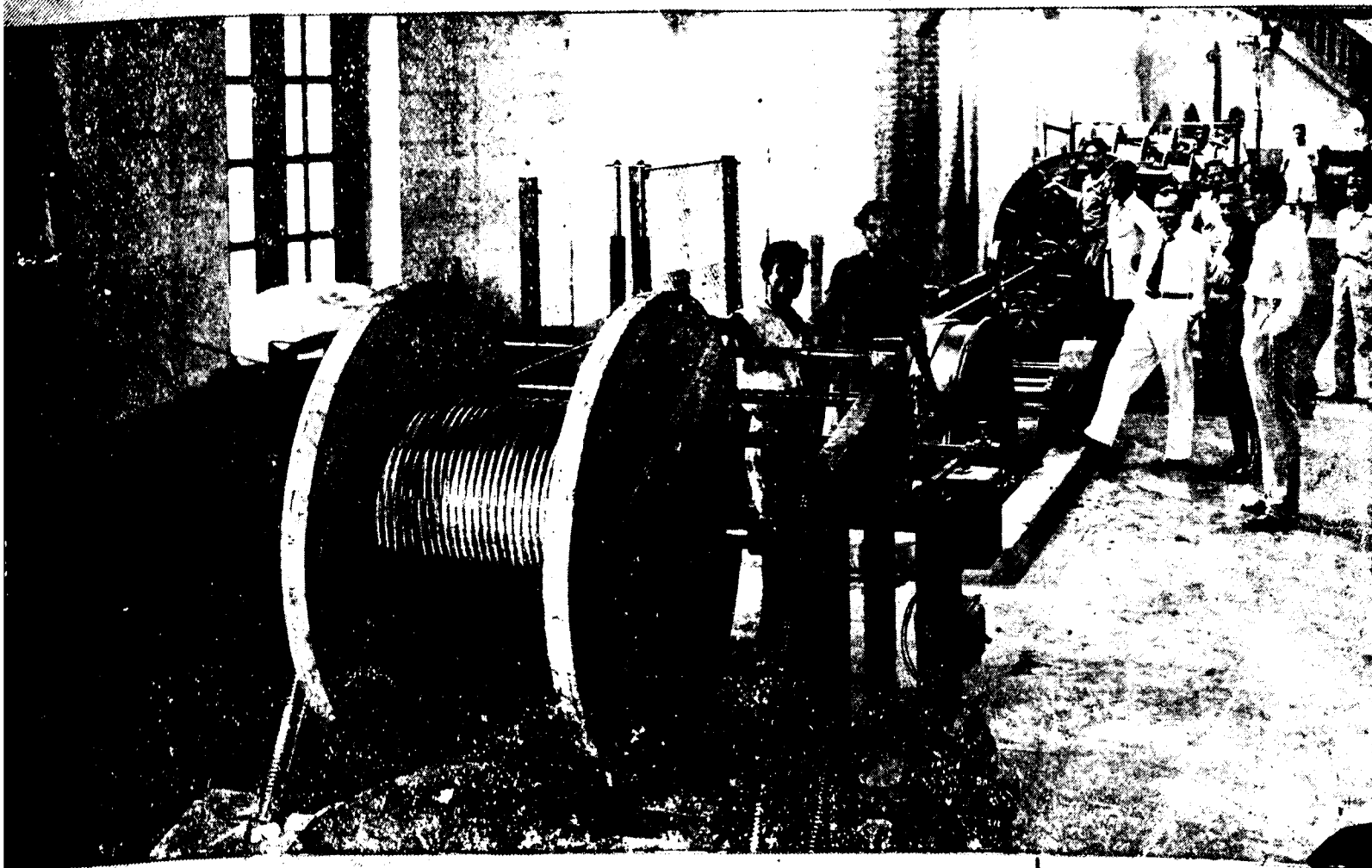
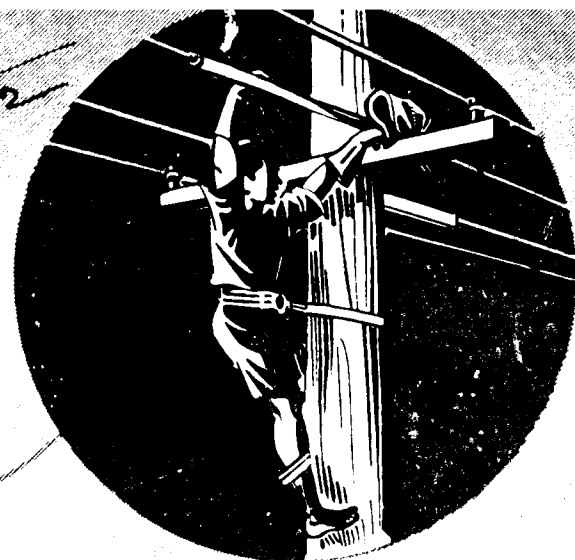


83 THE ALIND

Chronicle



Multi-strand Cabling Machine.

JL
X8 (E131) m212NS2
NS2
221726.

Number

ALIND

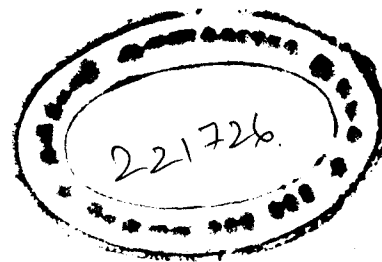
- Editorial Comment
- News & Developments
- Technical Notes
- Our Story
- Our Friend — the Customer
- Our Family
- Our Neighbours
- International Exhibition
- Aluminaries



A MESSAGE FROM
THE CHIEF MINISTER
TRAVANCORE-COCHIN

XS. 221726 12. N. 12

I am glad to hear about your proposal to publish a House Magazine for the employees of Aluminium Industries, this year. The idea is, indeed, a laudable one and I hope that the publication will not only advance the cultural activities of your employees, but will, also, go a long way to foster good-will and understanding between your management and the employees. I wish the venture an unqualified success and hope the publication would be really worthy of the institution.



Chavan

Editorial Comment

ALUMINIUM has a commercial history of a little more than half a century. The earliest applications were in packaging, house-hold utensils and electrical conductors. Even to-day, these continue as important applications.

At Kundara, we are mainly engaged in the manufacture of aluminium conductors. Our full story appears, elsewhere, in this issue. We will, therefore, content ourselves, here, with a brief statement of the purposes of this publication.

These are:

1. 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;
2. To encourage in our employees pride in workmanship and the high quality of our products;
3. To help create and sustain amongst them a spirit of friendliness; and
4. To tell the story of our business and that of our customers and other friends so that mutual understanding and respect might be fostered.

In short, to the twin ends of creating a well-knit, well-informed employee group within the organisation and making our friends without, also, understand us, our problems, plans and policies better, ALIND CHRONICLE is dedicated.

THE ALIND *Chronicle*

(Issued by The Aluminium Industries Ltd., Kundara.)

R. Parthasarathy

Editor

RECOGNITION of the reliability of ACSR of as a transmission line conductor is exemplified in its choice as the conductor for the new Swedish 380 kv double conductor line from Harspranget to Hallsberg, now under construction. The distance between the two places is 600 miles and the line will consist of one three-phase circuit, each phase comprising two 1,033,500 CM 54.7 ACSR conductors.

line is being manufactured by the ALCOA for the Appalachian Electric Power Company, a subsidiary of the American Gas and Electric Company. This 1.6 inch diameter "Expanded" ACSR is designed to provide the large diameter required to minimize corona at the operating voltage of 315000 to 330000 volts, the highest transmission voltage ever used in America. At the same time, the conductor maintains the customary

NEWS & DEVELOPMENTS

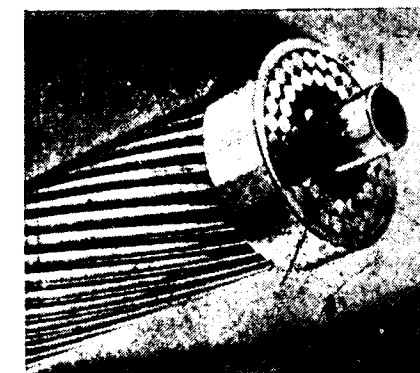
A span of 1080 ft. is used and cross beam level is 75 ft. above ground level. The cables are whipped at the points of support to protect them against damage due to fretting, and vibration dampers are fitted on either side of the holder— that is, 12 dampers per tower. Designers claim transmission costs for the same capacity to be 25 to 40 per cent lower at 380 kv as compared to 220 kv and 2 to 14 per cent lower when using double conductors instead of single conductor.

high strength-to-weight ratio. The conductor is being shipped on 84-inch diameter, steel reels.



LARGEST ROOF IN THE WORLD.
365 feet diameter, unsupported clear span, over 1,350 mile in circumference.

Largest Transmission Conductor:
The largest electrical conductor ever

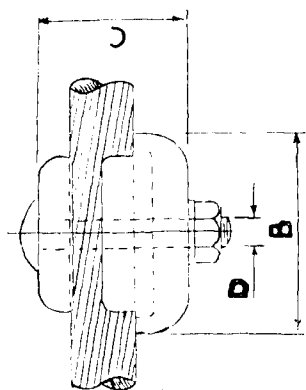
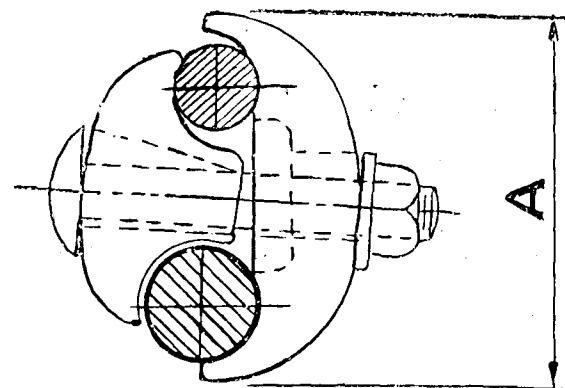
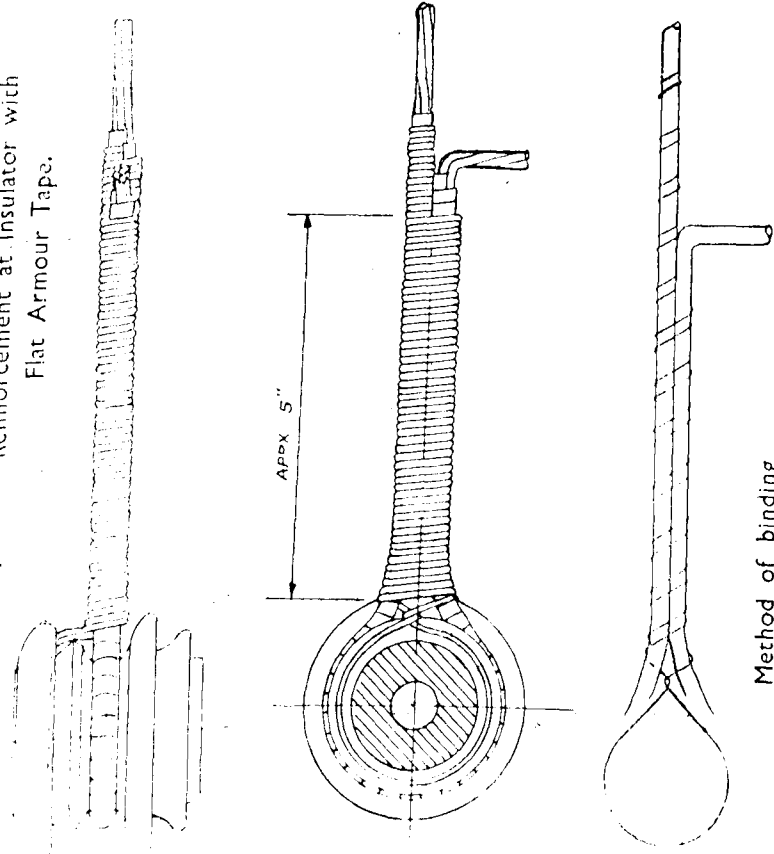


supplied for overhead transmission

Dome of Discovery: Probably the most outstanding example of the use of aluminium in the structural field is the great Dome of Discovery at the Festival of Britain. The Festival Dome, the largest roof in the world, is supported by arch ribs manufactured in aluminium alloy, demonstrating their particular suitability for use in large span structures to provide entirely clear floor areas.

The great Dome is more than a feat of engineering; it has a beauty which is truly breath-taking. With no provision for natural lighting the visitor gets an impression on entry of "bewildering vastness, dimly lit and reminiscent of a series of peepshows."

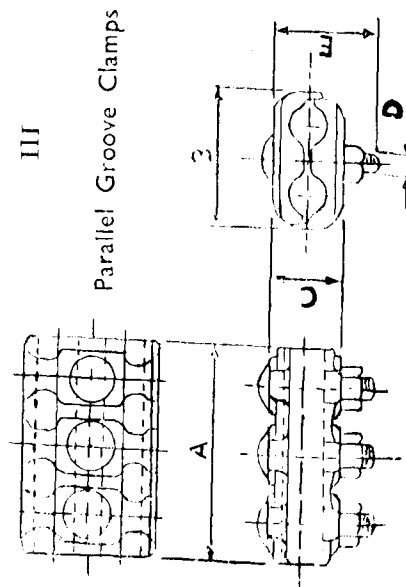
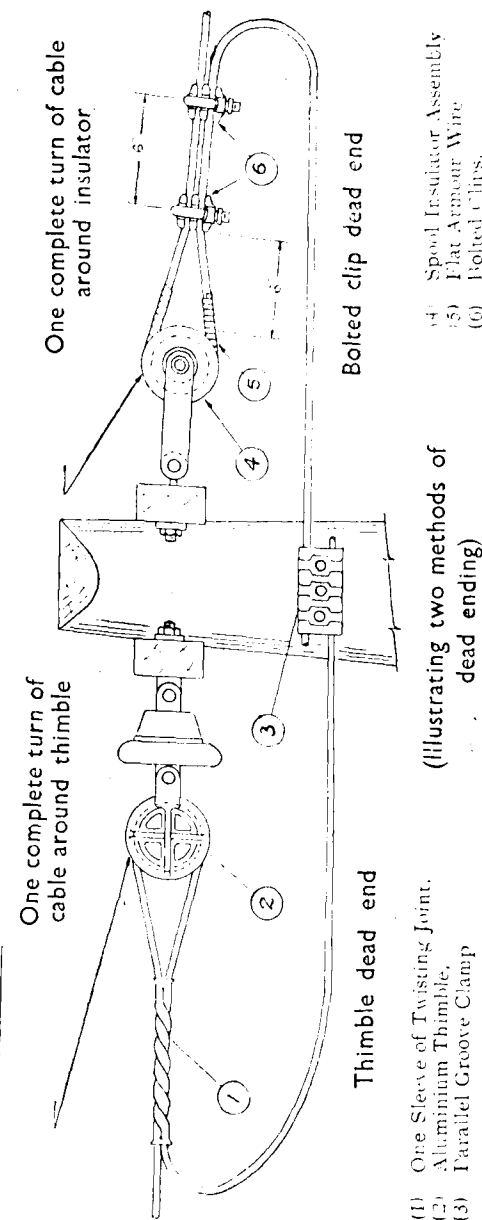
Reinforcement at Insulator with Flat Armour Tape.



Method of binding

IV

Loop dead ends for small A. C. S. R. and All-Aluminium Cable.



technical notes

ALL-ALUMINIUM CABLE (I)

THIS subject has already been dealt with in our brochures entitled: *Aluminium as an Electrical Conductor* and *All-Aluminium Cables for Power distribution*. Nevertheless, we thought we would do well to deal with certain questions, frequently raised by our customers.

The relative changes in the price and availability of conductor material following the War forced a shift from copper to aluminium for distribution and service construction all over the United States. Almost overnight the Jackson Tennessee Electric Department made a complete switch to all-aluminium cable for distribution circuits and to Neoprene-covered solid aluminium wire for services. All-Aluminium cables have been used for all overhead facilities and the rebuilding of inadequate lines even in urban areas. ACSR cables have been used for rural lines while copper conductors continue to be used only for transformer leads, pole grounds, etc. In this particular case, rural customer density was high enough to warrant 300 ft. spans and all-aluminium cable was selected resulting in a price saving of nearly cent per cent.

With No. 2 all-aluminium conductor, spans were limited to 300 ft. while with No. 3/0 aluminium lines, spans not greater than 200 ft.

were contemplated. In both cases, armour rodding or tapping was resorted to at the supports. For tapping at supports throughout, standard aluminium parallel groove clamps were used. "No-Oxid" grease was applied to all current-carrying fittings as a precaution. Wire was spliced with Nicopress aluminium compression sleeves.

The example mentioned above should set at rest any scepticism on the part of intending users of all-aluminium conductors for distribution purposes. The following general observations will be of interest:—

1. **Sags:** Sags for all-aluminium and copper conductors installed at the same tension may for all practical purposes be treated to be the same.

2. **Supports:** The normal supports used for copper conductors can be used for all-aluminium conductors without any additional stays or modifications and without decreasing any normal spans.

3. **Fittings:** (a) *Tappings:* In the U. K., the ALCU tap consisting of a non-corrodible aluminium alloy body gripping the main all-aluminium conductor in one groove and the copper service connection housed in a dead soft aluminium

sleeve filled with grease in the other groove has been successfully used. In Canada, the Universal Parallel Groove type of clamps incorporating a copper sleeve soldered in, properly on the copper side has been found to be popular and acknowledged to be both economical and reliable.

(b) *Non-Tension:* Full current, aluminium to aluminium non-tension joints can be made in standard Parallel Groove clamps.

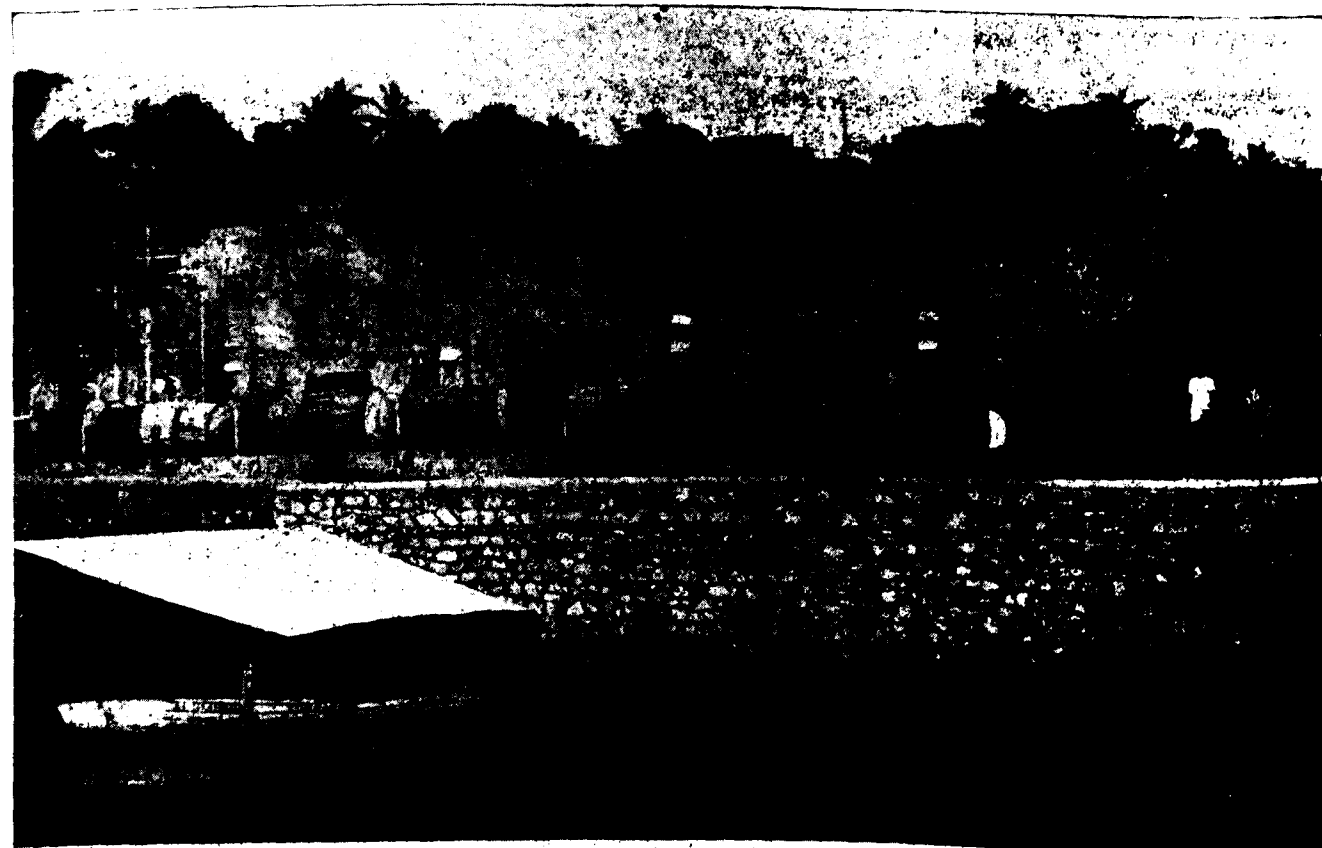
(c) *Tension Joints:* Twisting Sleeves of the MacIntyre type are at once economical and efficient. Compression joints can also be used.

(d) *Terminations:* It has become standard practice to serve the conductor with soft high purity aluminium tape at dead-ends. A simple form of dead-end arrangement is shown. Dead-ending can be done straight on to the shackle insulator by means of bolted clamps or through thimble dead-ends, as shown in the sketch. (Facing page.)

All-aluminium cables have been very favourably received in this country by distribution engineers and we have already supplied over 1,000 miles of conductor ranging from 7/.0772 in. equivalent to No. 8 swg. Cu. to 7/.1740 in. equivalent to No. 2/0 swg. Cu.

TABLE — Standard Wire sizes used for Distribution by Jackson Electric Department, Jackson, Tennessee, U. S. A.

Use	Former	Present
Primary tap lines in residential and comparative lightly-loaded areas; street light pilot, medium-span rural line primary and secondary.	Copper Wire size No. 6 bare hard drawn solid.	All-Aluminium wire size No. 2 bare hard drawn stranded (No. 4 ACSR on long span rural lines)
Short 12-kV feeders to industrial customers up to 1,000 kW — secondaries in residential and light commercial areas.	No. 3 AWG bare hard drawn solid copper.	No. 2 AWG bare hard drawn stranded.
12 kV feeders to 2,000 kVA 12/4-kV sub-stations. 12kV feeders to industrial customers up to 2,000 kVA; major taps from 4-kV network, secondaries in medium commercial areas.	No. 1 0 bare hard drawn stranded.	No. 3 0 bare hard drawn stranded.
12 kV feeders greater than 2,000 kW.	No. 4/0 bare hard drawn stranded.	2 separate lines of No. 3/0 bare hard drawn stranded.
4 kV primary network: secondaries in business district.	No. 4/0 bare hard drawn stranded.	No such new lines contemplated at this time.



The Aluminium Industries Factory is located in a scenic setting. In the foreground is Lake Ashtamudi, the Loch Lomond of Travancore, facilitating the transport of our products to Cochin Port.

OUR STORY

THE story of Aluminium Industries has been told before, in our brochures and booklets, and in the lay and trade press, but it is a story that will bear repetition.

For one thing, as a pioneering organization, we have, perhaps, a claim on public indulgence.

For another, a House Journal would be singularly failing in its duty, if its inaugural number did not carry the story of its progenitor.

With this brief exordial statement, let us get to brass—rather—aluminium tacks.

Location

The Aluminium Industries plant

is located in an extremely pleasant "Lake District". The surrounding scenery is most rewarding, and



Mr. T. K. Narayana Pillai declares our Factory open.

during winter, especially, it is green to your left, green to your right, green in front of you, and green behind you. In short, at Kundara, Nature has laid on scenic beauty with an outsize in trowels. It is a place where, as the poet says, every prospect pleases.

Lake Ashtamudi (the lake with eight creeks) on whose palm-fringed shores stands our factory at once assures its products of easy access, by water, to Cochin Port. Rail transport facilities are again well-assured on account of Kundara's strategic location on the important Madras-Trivandrum line. Good, motorable roads, also, radiate in all directions.



The official opening ceremony of the Factory was held on April 24, 1950. Amongst those present were our Directors and several prominent officials and non-officials of the State.

Inauguration

Erected with the closest technical collaboration of Aluminium Laboratories, Limited, Montreal, outstanding consultants in the aluminium field, our works were formally declared open by Mr. T. K. Narayana Pillai, Chief Minister, Travancore-Cochin State, on April 24, 1950.

Speaking on the occasion, Mr. V. Seshasayee, Managing Director, Seshasayee Bros., (Travancore) Ltd., stated that although according to their original schedule, production should have commenced in 1947, it did not—chiefly because of delay in the arrival of machinery from abroad.

Aluminium for power

It is significant that aluminium is turned to uses of special benefit to the electrical industry—the industry responsible for its own production. Which is a kind of allegory on us, in the sense, that the State Government have given us the fullest support in the setting up of this factory, and we, on our side, are helping Government to put

through their power development plans.

In fact, the first aluminium used for transmitting large blocks of electric power was in the form of a bus-bar—installed in 1895; just nine years after Hall's epic discovery. From that time, the use of aluminium for the transmission of electricity rapidly gathered impetus, until to-day over 84 per cent of the world's high tension lines use aluminium or steel-reinforced



Mr. V. G. G. Nayar and friend at Shawinigan Falls Cable Mills.

aluminium conductors — the kind that we manufacture in our plant.

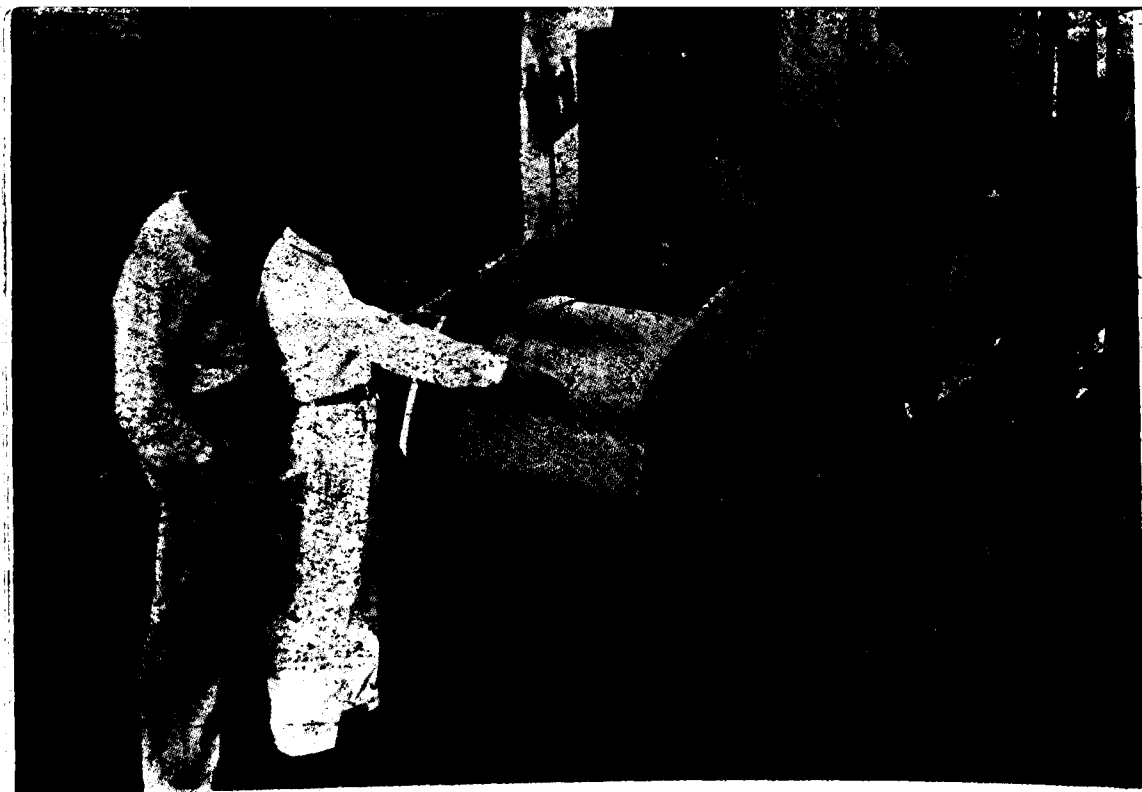
ACSR—Aluminium Cable Steel Reinforced—consists of a central steel (single or multi-strand) wire core, around which are stranded aluminium wires.

C R E D O

"If you work for a man, in Heaven's name, work for him; if he pays wages that supply you your bread and butter, work for him, speak well of him, think well of him, and stand by him, and stand by the institution he represents."

If I worked for a man, I would work for him; I would not work for him a part of his time, but all of his time. I would give him undivided service or none. If put to a pinch, an ounce of loyalty is worth a pound of cleverness."

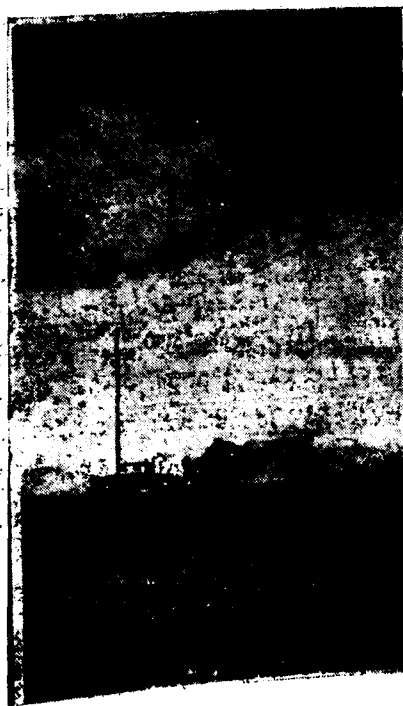
If you must vilify, condemn and eternally disparage, why, resign your position, and when you are outside damn to your heart's content."



Seven-wire strander: The finished wires are passed on to stranding machines.

Raw materials

The chief raw material is 3/8-inch electrolytic aluminium rod, imported at present from the United States, Canada and the United Kingdom. A second raw material is high-tensile, galvanised steel wire, also, imported.



ALIND ACSR goes up in the Nagercoil-Comorin area.

Plant

The plant consists principally of a cable-mill and a foundry. For fabricating the cables and the wires, 3/8-inch aluminium rods are first drawn through graduated dies, in multi-die, wire-drawing machines, until the proper diameter is obtained. The finished wires are then passed on to the stranding machines, where they are stranded over a central core of single or multi-stranded steel wire.

At the foundry, molten aluminium is poured into sand moulds, mass-produced by automatic moulding machines. In the fettling area, the castings are all knocked out from moulds, cleaned, dressed, and passed on to the machine shop for final machining. This shop is equipped with various kinds of metal working machinery like lathes, milling machines, drill presses, etc., required for handling the intricate machining called for, on various types of cable accessories. As some of these accessories will be made

of high-strength, aluminium alloys, which need heat-treatment to develop their strength, an electric heat-treatment furnace of the forced air-pit type has been provided. This furnace automatically maintains pre-determined temperatures for the required length of time.

That the cables made by us possess the requisite strength and current-carrying capacity is ensured by our up-to-date laboratory, staffed by fully-qualified people, and equipped with the most modern instruments.

The Chemical Laboratory is, also, equipped to make a check-analysis of all incoming raw materials; it checks, for instance, the soundness and goodness of the galvanised coatings on the steel wires which form the cores of the cables: it, also, controls the amount of alloying elements that go into some of our castings, imparting those desirable and tailored properties, to such exacting parts as special high-strength type-clamps and strain ends.

Wire-drawing machine. For fabricating cables and wires, 3/8 in. electrolytic aluminium rods are drawn through graduated dies in this and similar machines until the proper dia. is obtained.

BOTTOM

Elephant logging: Logs arriving at our boat-basin are pulled out to saw-pits by elephant—man's "best servant."



Personnel

A word or two about our staff and workers, and we are done. At our plant, we have an enthusiastic band of men imbued with the highest sense of duty. Mr. V. G. G. Nayar, our Chief Executive, is an inspiring leader. A completely integrated personality—to adopt the language of psychology—Nayar is without inhibitions of any kind, and can bring to bear a thoroughly objective mind, on technical and administrative problems. The training that he received in the giant cable plants of Canada has served to give edge to his knowledge.

Up to end of October 1951, we have turned out about 5000 miles of aluminium cables. From Kashmir to Comorin—literally—as our advertisement on the third cover has it, ALIND cables now gracefully loop from pole to pole.

On account of defence programmes in the U.S. and other countries, 'the raw materials position' is not

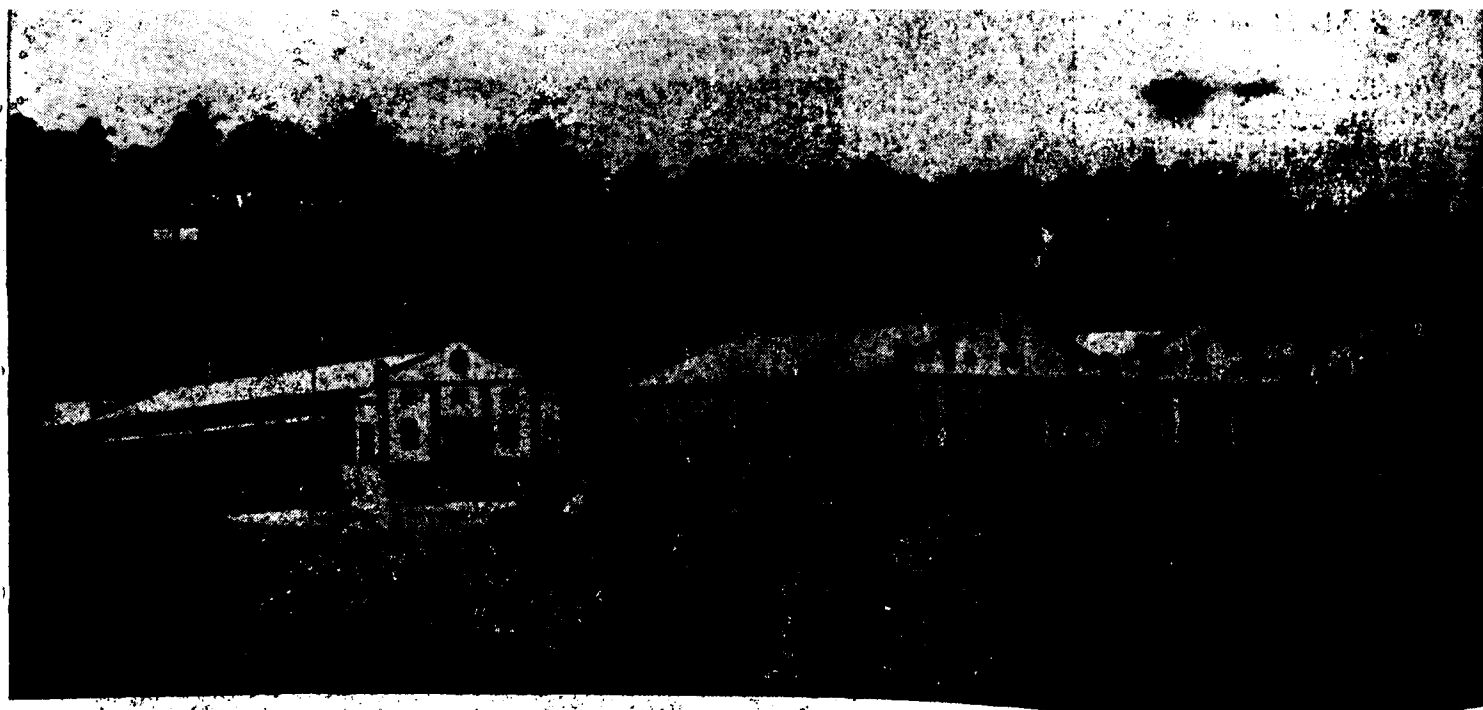
any too easy. (Incidentally, Sir Ernest Gowers, the *Plain Words* pundit, would have blue-pencilled the phrase in quotes, but it is better than the woolly periphrasis we would otherwise have had to use.) Nevertheless, we hope to get our requirements, at least to take care of the bulk of the orders placed with us.

We have, we believe, said enough

in this article to give you some idea of our plant, our manufacturing activity and our personnel.

It now only remains for you, gentle reader, to send us your good wishes, so that in the years to come, it may be given to us to serve our beloved *Bharat*, even better. More "Power" to her and—you!





The Electrical and Allied Industries: (1) Planning and Administrative Blocks (2) Laboratory and Workshops.

Our Neighbours

MORE than ties of physical contiguity bind us to our neighbours, the Electrical and Allied Industries, (Travancore) Limited, Kundara. They, too, are in the electricity business. If we make conductors through which flow all the advantages of the world of electricity, our neighbours make a miscellaneous array of indispensable accessories. Switches, cut-outs, fuses, plugs, and lamp-holders are a few, amongst a host of other items, that they manufacture.

The "allied" part of the Company consists in its general Machine Shop and Foundries. This part handles the manufacture of hardware and sanitaryware articles, taking in, for good measure, such widely-removed items as well-pulleys and frying pans.

Communication Facilities

Situated on the shores of Lake Ashtamudi, the Electrical and Allied Industries (Travancore) Ltd., share with us, all the facilities of a first-class location. Among these, must be mentioned the excellent road, rail and water communications that Kundara commands.

The authorised capital of the Company is Rs. 30 lakhs; the issued capital is Rs. 15 lakhs, the State Government having subscribed shares of the face value of Rs. 1 lakh.

The State Government have, also, acquired and leased out to the Company about 14 acres of land.

Plant and machinery were acquired in the first quarter of 1947 and,

sometime later, erected and installed. As soon as erection was complete, the machine shop engaged itself on making the required steel dies for the manufacture of electrical accessories.

"Local Plant Makes Good"

To date, the factory has lined for production as many as twenty-six different items, involving several component parts of bakelite, porcelain, cast-iron and brass. A gratifying feature is that all the necessary dies, jigs, tools and patterns were made at the factory itself.

The cast-iron foundry has been steadily turning out pipes of the flanged and the socket and spigot types, made to withstand 200 lbs. pressure to the square inch.

Flushing cisterns, "Nahani" traps and man-hole covers are a few of the articles of sanitaryware which the Company specialises in manufacturing.

Our readers will be pleased to know that it is our neighbours who provide the electrical junction boxes and the vehicle couplers to the all-steel coaches manufactured by the Hindustan Aircraft, Limited, Bangalore, for the Indian Railways.

Ambitious Programme Ahead

We learn with interest that the Company has an ambitious programme of development. It is on



The Plastic Moulding Section of our neighbours.

— The Electrical and Allied Industries (Travancore) Limited

the cards—rather on the "anvil"—that the Company will shortly launch on the co-ordinated manufacture of electrical motors, table and ceiling fans.

The Managing Director, Mr. P. R. R. V. Rajah, who recently assumed personal direction, was formerly connected with IBCONS, the well-known firm of industrial consultants. On the technical side, he is ably assisted by Mr. K.T.R. Varma, Works Manager, and Mr. R. Madhavan, Planning Engineer. Together, they constitute a wonderful triumvirate, and under their leadership, our neighbours should, certainly, be able to produce articles of good design, top-quality and competitive prices.

Our best wishes go to them.



The tool room where tools, jigs and dies are made.

22/7/20



THERE'S a stirring human side to any business effort...made up of the men who work for a company. As some one put it, smart as machines are, they have only the I. Q. of a worm! The geniuses are the men who direct and operate them. No new-fangled machine is ever going to beat old-fashioned grey matter. If it comes to that, a machine is *always* someone's brain-child!

Recorded in these pages is the story of the activities of members of the ALIND family, during their off-hours. If it turns out to be a sort of recreation review of the year, now drawing to a close, we may as well admit, here and now, that it was precisely what it was meant to be...including that 'sort of'!

We are only about 200 strong, but what we lack in numbers, we make up in our cohesive, closely-knit quality. Again, it is not only a case of youth being at the helm here, it is youth all over the deck.

If relaxation of both mind and body is important for others, with us, it is a *sine qua non*. First, about our minds. We have not been able to build a good library yet, but we subscribe practically to all the better-known magazines, periodicals and dailies. Recreational facilities, at present, include: Volley-ball, Badminton, Ring Tennis, Table Tennis, Caroms and Chess.

Republic Day

Sports formed a significant part of our Republic Day programme

for January 26. There were two sessions—one from 9.30 to 11.30 A. M. and the other from 3 to 7 P. M. Events that were got through in the morning were: 100 Metres and 50 Metres Races, Sack Race, Three-legged Race and Tug-of-war.

In the evening, we had such items as High Jump, Long Jump, Hop-Step-and-Jump, Shot Put, Pole Vault and Slow Cycle Race. A hilarious event in the morning was Musical

Our

Family

Chairs for the children of the colony, it being a moot-point, who were the more enthusiastic—the children or their parents!

The celebrations concluded with a sumptuous tea. Mr. B. V. D. Menon, Director, Seshasayee Bros., (Travancore) Ltd., congratulated the organisers on the good show that they had been able to get up and said that it was an excellent example of team-work. He was sure that that spirit would stand the Company

and the ALIND family in good stead. Earlier, Mrs. Menon gave away the prizes to the various successful competitors.

With a vote of thanks proposed by Mr. K. Ramakrishnan Nair, Foreman, the pleasant function came to a close.

Factory Day Celebrations

On April 24, 1951, we celebrated, with *eclat*, the first anniversary of the formal opening of our factory.

The Sports and Tournaments Committee, constituted earlier (in March) tackled its tasks in a most thorough-going fashion. There were tournaments in Volley-ball, Badminton, Ring Tennis, Table Tennis, Chess and Caroms. The standard displayed was as much of an eye-

opener to the participants, as it was to the onlookers!

Heats for the various athletic events were staged a week earlier. These included: Slow Cycles, 100 Metres, Three-legged Race, Sack Race, High Jump and Long Jump.

The celebrations on the actual date itself were the responsibility of specially-appointed committees. No praise will be too high for the successful and efficient manner in which the committees carried out their several tasks.

The celebrations got off to a fine start with Mr. V. Seshasayee, Managing Director, Seshasayee Bros. (Travancore) Limited, unfurling the ALIND flag over a gaily beribboned



G. V. Nair: Champion Sports.

mast, to the accompaniment of much lusty singing and cheering.

The finals of the various sports items quickly followed. The Sack Race, in particular, was glorious fun.

The morning programme ended with a sumptuous lunch prepared by culinary geniuses! A man's place is, probably, in the home—when it is not in the factory!

In the afternoon, we had the Tug-of-war item—an apposite enough sequel to a hearty lunch. The contest was between Office and Factory Maintenance—mind pitted against muscle, as it were. Muscle won.

We then took time out to be photographed. The lunch had worn off, so we had tea. An unfriended cup of tea never suits us, so we had to go with it—what we later unanimously agreed to describe as—some “light fare”.

Meeting

Formal proceedings commenced

at 6:30 P. M. Mr. V. G. G. Nayar, Works Manager, made a fine speech.

Mr. Nayar said that the function marked the completion of one year of successful working of the Company.

He said: “The year has been successful in many ways. We have produced nearly 2500 miles of transmission line conductor—some of which has already been installed and energised in such distant corners of our country, as Panipet-Karnal in the Punjab, the Damodar Valley in Bengal and the Nagercoil-Cape Comorin area in our own State. We have done well during this year and the prospects for the next year appear to be even brighter in some respects.”



K. S. Kalyan Krishnan, Hon. Secy., ALIND Recreation Club.

He continued: “We started the year with an untrained crew, new machines and little co-ordinated experience. To-day, we can lay claim to a knowledge of our job. We produce material which is as good as—if not better than—what is imported.”

Mr. Nayar emphasised that all this



O. C. Chacko: Best all-rounder who annexed the Works Manager's Cup.

would hardly have been possible, but for team work.

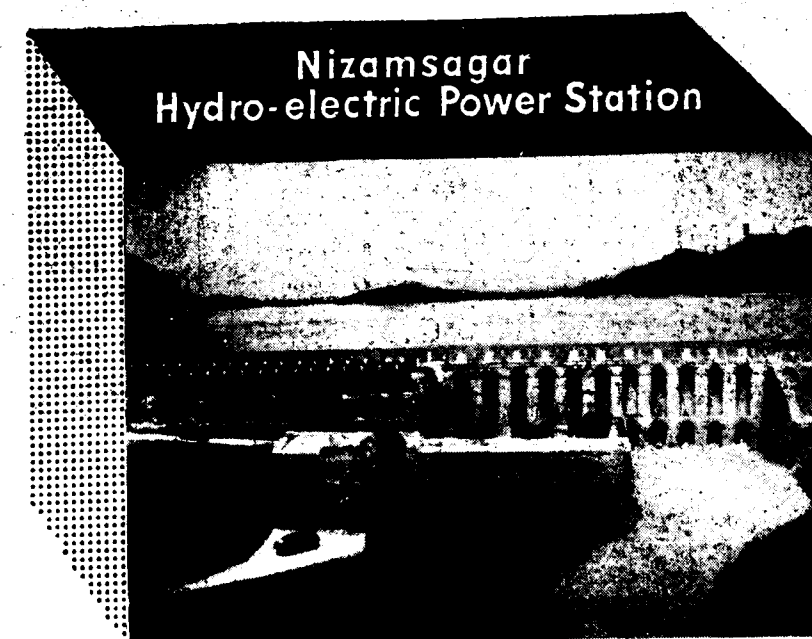
Uttering a note of warning that they should not rest on their laurels, Mr. Nayar held out an assurance to all members of the ALIND family. He said that not one ounce of intelligent, sincere and loyal effort on any one's part would go awry or go unrewarded.

Concluding, the speaker paid a warm tribute both to Mr. V. Seshasayee and Mr. B. V. D. Menon for the sympathy and support they had consistently been giving him.

Mr. V. Seshasayee observed, in the course of his introductory speech, that the need of the hour was a re-orientation of outlook on the part of labour. Higher production was, otherwise, practically impossible, he stated.

Continuing, he said that a lot of harm had already been done, in the country, by interested parties.

“We have to undo it by settling down to hard work”, he added.

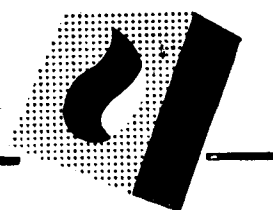


Model of the Nizamsagar Hydro-Electric Power Station, Hyderabad State, at present under construction

The Nizamsagar Hydro-Electric Power Station, when completed, will be lubricated by turbine oils, containing anti-oxidant and anti-rust additives. These oils will be supplied by Burmah-Shell.

...lubrication

by Burmah-Shell



BSY 361

For Supplies of

ALUMINIUM CONDUCTOR

(STEEL-CORED AND PLAIN)

ALUMINIUM & ALUMINIUM ALLOY

WIRE & ROD

ALUMINIUM BUSBARS

TRANSMISSION LINE FITTINGS

&

ACCESSORIES

as well as all forms of

ALUMINIUM & ITS ALLOYS

CONSULT

ALUMINIUM HINDUSTAN LIMITED

Bank of Baroda Bldg.,
Apollo Street, BOMBAY.

56 A, Free School Street,
CALCUTTA - 16.



AGENTS FOR:

THE ALUMINIUM WIRE AND CABLE CO., LTD.,
SWANSEA.

THE BRITISH ALUMINIUM CO., LTD.,
LONDON.

Mr. Seshasayee further stated that his own management had always conceded all the reasonable rights of their employees and that it had always been prepared to help the worker to help himself.

In his concluding speech, Mr. Seshasayee drew pointed attention to the United States of America which had built itself into a flourishing nation by dint of hard work.

There were speeches by others, too.

Mr. M. Govinda Pillai, a prominent local citizen, paid a tribute to the management of our Company for its enlightened employee policy.

Mr. P. A. Ibrahim, Office Manager, also spoke. He dealt with the personnel policy of the Company.

Mr. K. R. K. Nair, Foreman, proposed a vote of thanks.

Open House

The factory observed "Open House" from 8 P. M. to 10 P. M. Members of the "family's" families had an opportunity of witnessing for themselves the dramatic spectacle of the birth of a cable. This



Musical Chairs.

was, indeed, fitting finale to the celebrations.

The two celebrations—apart, however, from giving us a grand time—also made us realise what latent athletic talent lay deep down us. There has been no slackening of effort, since, and all the various games have been continuing to attract players, good, bad and indifferent.

But 'the play is the thing', as Hamlet observed (Shades of Shakespeare!) in an altogether different context. Probably, he would not have made the crack, had he the ghost of a notion that he was talking for publication! Neither did the poor fellow have much of a notion of a ghost...but that is not germane to the issue now. Let us look over the list of Prize Winners.

* * *

Games

Badminton: (Open Doubles) *Winners:* O. C. Chacko, N. R. K. Sarma; *Runners-up:* P. A. Ibrahim, K. R. Sankaranarayanan.

Badminton: (Doubles — Teams selected by lots) *Winners:* N. R. K. Sarma, M. V. John; *Runners-up:* C. S. Kaladharan Pillai, K. Seetharaman.

Badminton: (Singles) *Winner:* T. Ramanathan; *Runner-up:* P. A. Ibrahim.

Table Tennis: (Singles) *Winner:* K. R. Sankaranarayanan; *Runner-up:* K. S. Kalyanakrishnan.

Ring Tennis: (Doubles) *Winners:* C. K. Ponnappa, C. S. Kaladharan Pillai.

Ring Tennis: (Singles) *Winner:* C. K. Ponnappa; *Runner-up:* V. G. G. Nayar.



Long Jump.

Caroms: (Doubles) *Winners:* K. Ramakrishnan Nair and M. R. G. Menon; *Runners-up:* K. R. Sankaranarayanan and K. S. Kalyanakrishnan.

Caroms: (Singles) *Winner:* K. Ramakrishnan Nair; *Runner-up:* K. R. Sankaranarayanan.

Chess: *Winner:* A. R. Nadar.

Volley Ball: (Sixes) (Inter-sectional) *Winners:* A. R. Nadar (Captain) K. R. Sankaranarayanan; M. R. G. Menon; P. A. Ibrahim; M. Mathew and N. Neelakanta Iyer.

Volley Ball: (Eights) (Inter-sectional) *Winners:* C. S. Kaladharan Pillai; P. A. Ibrahim; K. R. Sankaranarayanan; V. Paramoo; B. V. D. Menon; K. V. Marshally; P. A. Joseph and K. V. Lawrence.

Sports Events

Putting the Shot: O. C. Chacko—I, G. V. Nair—II.

Hop-Step-and-Jump: O. S. Chacko—I, N. Neelakanta Iyer—II.

Long Jump: N. Neelakanta Iyer—I, George Mathew—II.

High Jump: C. S. Kaladharan Pillai—I, George Mathew—II.



B. C. Kaimal.

Pole Vault: G. V. Nair—I, N. R. K. Sarma—II.

100 Metres Dash: N. Neelakanta Iyer—I, O. C. Chacko—II.

Slow Cycle Race: G. V. Nair—I, Stephen Fernandez—II.

Sack Race: P. A. Oomen—I, G. V. Nair—II.

Three-legged Race: *Winners:* P. A. Oomen and K. K. Verughese.

Tug-of-war: (Inter-sectional) *Winners:* (Factory Maintenance) M. Alikunju, P. Antony, George Mathew, N. G. Das, C. Joseph, G. V. Nair, R. Meera Sahib.

Fancy Dress: N. G. Das and M. V. John.

Children's Races

Seniors: (Running race) Malcolm Rozario—I, D. Gopalakrishnan Nair—II.

Juniors: M. Koshy—I, V. Alex Koshy—II.

Musical Chairs: Seetha Sankaranarayanan—I, Obriel Rozario—II.

* * *

In 1950-51

We said welcome to...

V. Paramoo, Supervisor, Maintenance, P. Ramachandran Nair, Stenotypist, K. T. Rao, Typist, P. A. Oomen, Accounts Clerk and E. J. Rozario, Charge hand, Mech. Maintenance.

Apprentices:

M. V. Alexander, Cable Mill, K. Madhavan Pillai, Cable Mill, P. Kumaraswamy Pillai and P. M. Kunju, Machine Shop, Philip Mathews, Time Office, K. Sreenivasan, Stores and P. Bhaskaran Nair, Planning Section.

Probationers:

K. Bhaskaran Pillai, Office Junior, P. N. Sivasankara Pillai, Smithy, T. V. Antony, Reel Shop, N. Krishna Pillai, Moving and Handling, N. Gopinatha Pillai, Moving and handling, M. Hydrose, R. Gopala Pillai, K. Abdhur Rahiman, Kunju, K. M. Yohaman and K. Meeran Kunju, Protection.

We said farewell to...

B. C. Kaimal, Stenographer. A cheerful, conscientious and extremely likeable lad, his several friends in office miss him greatly. He has now joined the Southern Railways and is at present working as Travelling Ticket Examiner at Coimbatore. We wish him every success in his new appointment and hope that he will be as happy, there, as he was with us.

Lomer Pellerin, Cable Expert. Mr. Pellerin came to us—from Shawinigan Falls, Canada—towards the end of October 1949. He had been deputed by our consultants, the Aluminium Laboratories, Ltd., Montreal, in the commissioning of our

cable mill. For over two years, as Foreman of the Shawinigan Falls Cable Mill Section, Pellerin had put in much gruelling effort to step up its efficiency.

He came, therefore, to his assignment with us, fully equipped. For two very good reasons, amongst several, we will always remember Pellerin. One—he helped stabilise our manufacturing operations and two—he instilled in our boys a wonderful confidence by telling them what was but the truth, the whole truth, and nothing but the truth that they were making conductors worthy of the best manufacturing traditions of any company in the world.

Both Mr. and Mrs. Pellerin are greatly missed not only at Kundara but in neighbouring Quilon, where they were such popular figures at the local club. Mrs. Pellerin utilised the opportunity of her stay in this country to brush up her English.

And when she left us she had brushed it to such fine gloss that—to drop the metaphor—she could



Mr. and Mrs. Pellerin.



ALIND Recreation Club: Factory Day Prize-winners—In the centre is Mr. V. G. G. Nayar.

rattle off in English like nobody's business or the special business of a College don!

Lomer's linguistic achievement was not much to write Montreal lyrically about; now and then he would gallantly attempt a few words in Malayalam, but would soon lapse into English—and French!

Here's wishing the Pellerins all that they can wish for themselves... only lots and lots more!



"Master V. G. G. Nayar."

K. S. Gopinathan Nair, Electrician. He is now with Travancore Minerals. We wish him every success in his new appointment.

Weddings

Quite a number of our employees entered the married state during the year. Bar **P. A. Ibrahim**, Office Manager, whose wedding with Miss Safia Beevi was solemnised in October 1950 and **K. Padmanabha Pillai**, Time Office, whose marriage with Miss K. Pankajakshi Amma took place in September 1950, all the other marriages were celebrated in 1951.

Our congratulations and best wishes go to: **P. A. Ibrahim**, and Miss Safia Beevi, **K. Padmanabha Pillai**, and Miss Pankajakshi Amma, **S. Bhaskara Nair**, Draughtsman, Planning, and

Miss Gowrikutty Amma. **N. Gopalan**, Mechanical Maintenance Section, and Miss Lakehmi **Kutty Amma**, **A. Joseph**, Machine Shop, and Miss V. Margaritta and **N. Sreedharan Pillai**, Cable Mill, and Miss G. Chellamma.

Births

Congratulations to:

K. R. Sankaranarayanan, Secretary and Accountant, on the birth of a daughter on 21st April.



"Master T. Ramanathan."

*

*



*Our
Friend,*
**THE
CUSTOMER**

(The Punjab P. W. D. Electricity Branch)

"Starred" above is Mr. J. Woodwall, our customer's resident inspector.

THE Punjab P.W.D. Electricity Branch is one of our first customers and we are proud of the fact that it has been given to us to be of service to them. The bulk of their requirements of 132 kv and 66 kv conductors for the Nangal Hydro-electric Project, totalling about 2000 miles have been met by us.

Nangal Project

A brief consideration of this Project will, therefore, be only appropriate. The Nangal Project is a hydro-electric development on the Sutlej for providing power to the Punjab (India), PERSU, Himachal Pradesh and some parts of Rajasthan. In the Bilaspur State, the Sutlej takes a great bend and passes

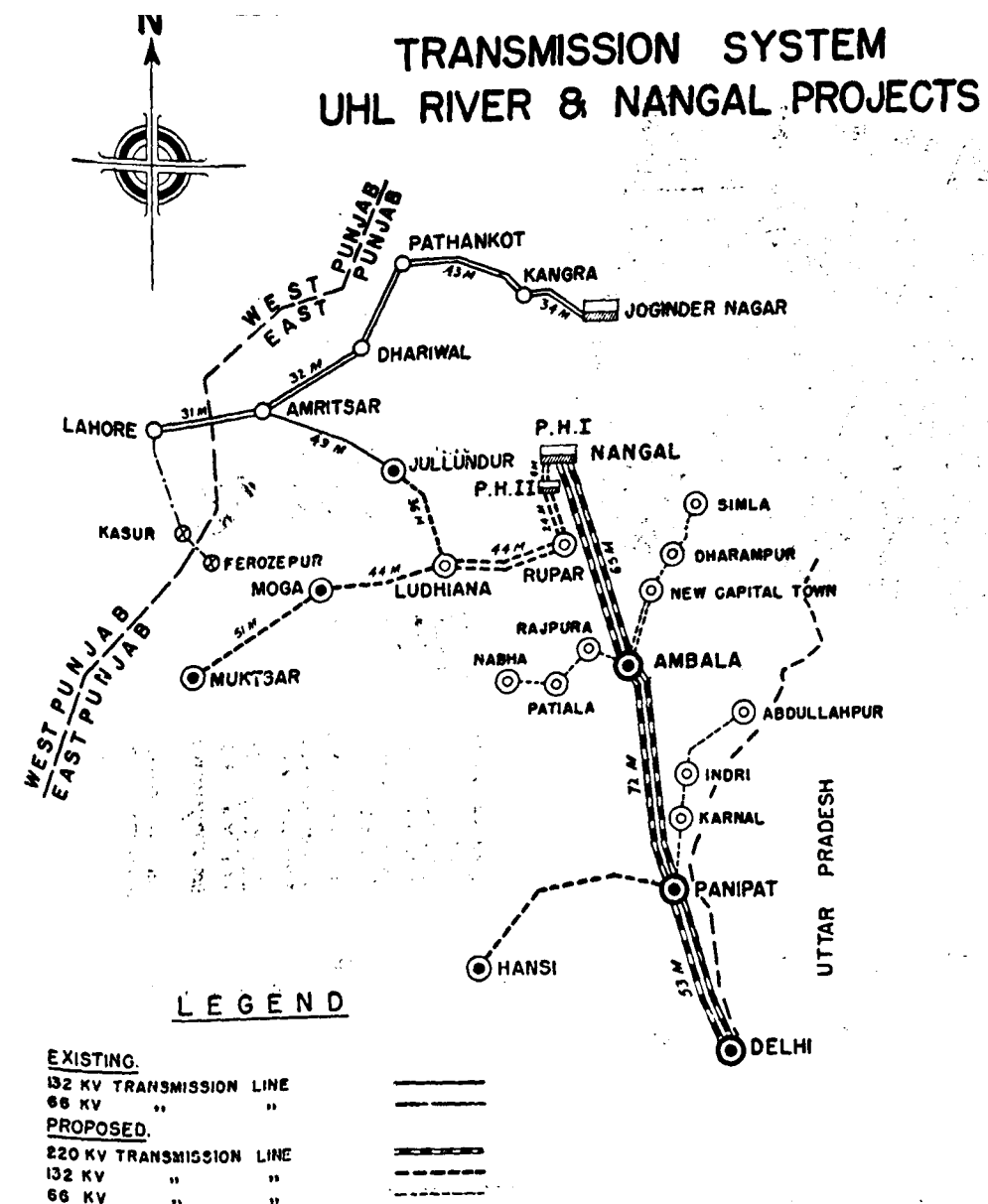
through a gorge which has been selected as the site for the proposed Bhakra Dam. Eight miles down this site, and situated in the Hoshairpur district of the Punjab, a low dam is now under construction at Nangal for diverting the waters of the Sutlej into a canal called the Nangal Hydrel Canal. This is laid out over a distance of 39.6 miles, somewhat parallel to the course of the Sutlej up to Rupar. Here it joins the Sirhind and the Bhakra Main irrigation canals. Between the Nangal Dam and the nineteenth mile of the Canal a total head of 196 ft. would be available, in two falls, and these are harnessed by means of two power stations, each with a head of 98 ft.

Bhakra and Nangal

The Nangal Project is, in fact, a small but significant part of the great Bhakra Dam Project. The Bhakra Dam, which will be 680 ft. high and will provide for a gross storage of over 7,000,000 acre ft. will cater both for large-scale irrigation and power generation. It is expected that eventually power of the order of one million kw would be developed.

This gigantic project, when completed, will regulate flow of water to the two power houses on the Nangal Canal.

In the pre-Bhakra stage, the Project will consist of only two power houses.



P. H. No. I—Two sets of
24,000 kW each

P. H. No. II—Two sets of
24,000 kW each

The installation currently on hand
is for these two power houses.

The Dam itself is 90 ft. high, from the foundation level and consists of 26 bays of 30 ft. span. The Nangal Hydrel Canal would be a fully concrete-lined channel designed for a full supply discharge of 12,500 cusecs. The two power stations will be of quake-proof construction, of identical design, measuring 220 ft. by 90 ft.; they include

provision for a future third generator set.

The estimated costs of the Project are as follows :

Nangal Dam, Hydrel canal and the two power stations ...	Rs. 20 crores.
Transmission lines...	Rs. 16 "
Substations ...	Rs. 4 "
Distribution System ...	Rs. 0.4 "

Transmission System

The first stage of the main transmission system, as shown in the diagram will consist of one double circuit 132 kv line from Nangal Power House I to Delhi; the towers are

designed for 220 kv with a view to increasing the insulation at the time when one of the Bhakra power stations would go into operation. From Power House II a double circuit 132 kv line will be constructed to Ludhiana and from there a single circuit 132 kv line up to Jullundur, where the Nangal system will be linked with the existing Uhl River System. The future 220 kv line from the Bhakra Dam and the 132 kv lines will be interconnected at Power House I by means of auto-transformers. A number of 66 kv and lower voltage lines, also, branch off from various receiving points on which work is now proceeding. Synchronous condensers of suitable capacity will be installed at Delhi at the initial stage.

Load Growth

With the completion of the first stage of the Nangal Project, the Punjab will have at its disposal an additional firm block of 72,000 kw of power.

In combination with the Uhl River System, this power will reach out practically to all important centres in the Punjab, PERSU, Himachal Pradesh and Rajasthan areas. A tremendous impetus will, thus, have been given for the industrial regeneration of all these states.

And it thrills us all at Kundara to realise that it is our cable—ALIND ACSR—that has been entrusted with the task of carrying electricity to areas, long denied its multiple benefits.

[We owe much of the material contained in this article to an article by Shri. S. SWAYAMBU of the Central Electricity Commission, Simla, in POWER ENGINEER. Our grateful thanks are also due to him for permission given to reproduce the diagram here.]



Indian Engineering

The mountains and rivers of the country, some of the more important towns, and present and proposed river-valley projects, were all shown on the map.

Countries that participated in the Exhibition included: Algeria, Australia, Ceylon, Finland, France, Germany, Hungary, Italy, India, Japan, Morocco, Norway, Portugal, Sweden, Switzerland, United Kingdom, United States and Yugoslavia.

The Stall of the Electricity Department of the Madras Government was the biggest "draw" of the Exhibition.

Aluminium Industries Stall

We, also, took a stall, but unfortunately, our location was not as prominent as we would have ourselves liked it to be. Nevertheless, the stall attracted considerable attention. A steady stream of visitors flowed in and out of it, throughout the duration of the Exhibition. Amongst others who visited our stall were Central and State Ministers, high-ranking Government officials, Indian and foreign delegates to the various conferences and students of Engineering Colleges.

Our finest hour ever was when Prime Minister Jawaharlal Nehru visited it. In the unavoidable absence of our chief Delhi office

AT THE invitation of the Government of India, the Fourth Congress on Large Dams, the Sectional Meeting of the International World Power Conference and a Meeting of the International Association of Hydraulic Research were held in January 1951. Along with these, was, also, held a meeting of the newly formed International Commission on Irrigation and Canals. As an aid to promoting the objects of these Conferences, an International Engineering Exhibition was arranged. It was the biggest to be held, so far, in the East.

Preview of shape of things to come

Mr. N. V. Gadgil who opened the Exhibition said: "This Exhibition has come at a most opportune

moment for India as we have only recently embarked on a number of major river-valley projects with still others to follow in the near future. With the help of these exhibits, the common man will be able to visualise for himself the shape of things to come and to follow with understanding the purpose and technique of each development scheme".

Exhibition Proper

The entrance to the Exhibition represented a working model of a dam with tunnels on either side. As one entered the exhibition ground, a huge relief map of India greeted the eye. On the Himalayan peaks of the map, there stood a beautiful, marble statue of Mahatma Gandhi.

International Exhibition

representative, Mr. R. Chakravorthy, in Italy, his assistant, Mr. M. Soundaram, received the Prime Minister and explained to him, the activities of our Company.

The stall itself was an impressive-looking, little affair and displayed charts, posters, and photographs. On view, also, were a dummy and a real reel. The bijou booklet which we had got out for our Company with the snappy title—*Just a few lines*—was very much in demand.

The stall was the work of the South Madras Agencies, Ltd., Tiruchi—a sister company—and was designed and executed under the supervision of Mr. R. Parthasarathy.

LEFT TOP: Mr. C. Perumal-swami Reddiar, Industries Minister, Madras State.

RIGHT TOP: Mr. H. K. Ramaswami, (S.M.E. Tiruchi) Mr. V. Seshasayee, Mr. V. G. G. Nayar, Mr. M. Soundaram (Delhi Office) and Mr. Sankunni Nair, (FACT, Alwaye).

CENTRE: Prime Minister Jawaharlal Nehru was one of our distinguished visitors.

BOTTOM: At a delightful cocktail party given to the Conference delegates during the exhibition were several prominent engineers. In this group, friends can identify the familiar faces of Mr. S. S. Kumar, Chief Engineer, Punjab, and Col. E. G. Mackie, Chairman, Madhya Pradesh Electricity Board, Nagpur.





Standing in centre (fourth from left) is Mr. N. N. Iengar, formerly of the Central Electricity Commission, Simla.



Messrs: K. V. D. Patel (XEN, Trivandrum) V. G. G. B. Rajagopalan (Asst. P. M. G.) B. R. Batra, C. E., and R. Varma, Officer-in-charge, P. & T. Trivandrum



Seth Amritlal Giridarlal, well-known Quilon Textile magnate and family.

Welcome
Visitors



Mr. D. R. Vedamuthu, General Manager, Travancore Bank, Ltd., and family.

Amongst other distinguished people who looked us up during this year were:

Mr. Richard Allen Christopher (Vice-Consul, American Embassy) Madras and Mrs. Christopher; Mr. Saito-Shin-ichi of Osaka, Japan, Mr. Susumir Nishimura, Furukuwa, Japan; Baand Knogvig, Editor, Norwegian Broadcasting Systems, Oslo, Norway; Mr. D. A. W. Hall, Divisional Manager, Jenson & Nicholson, Ltd., Madras and Mr. S. A. Chari, Council of Scientific and Industrial Research, New Delhi.

With Mr. V. G. G. N. Mr. J. Fukuda of Osaka



Mr. R. Srinivasan, Secretary M. Electricity Board, Nagpur, with B. V. D. Menon.

Aluminaries (I)

MR. B. V. D. MENON



JL
X8 (E181) M 212, NS2
NS2

B. V. DAMODARA MENON, Director, Seshasayee Brothers (Travancore) Ltd., Managing Agents of this Company, is also its Director-in-charge.

An engineering graduate of the Benares Hindu University, "B.V.D.", as he is affectionately known to one and all, received his practical training at the works of the Metropolitan-Vickers Electrical Co., Limited, Rugby. He rounded this off with extensive travels in Europe.

Returning to India in 1939

B. V. D. joined the Engineering Department of Associated Electrical Industries (India) Limited, Calcutta. Later, he accepted the appointment of Deputy Director of Electrical Engineering with the Supply Department of the Government of India, where, in collaboration with Mr. Risoe, its Director, he turned out much outstanding work.

Mr. B. V. D. Menon has been associated with Seshasayee Bros., Ltd., for about six years now, first as a Secretary, and now as one of

its Directors.

It is sometimes said that men acquire the characteristics of the metals they work with. In B.V.D.'s case, we rather suspect that it is the other way round, and that aluminium acquired its lightness, strength and reliability from him!

Suave and genial and thoroughly well-informed, B.V.D. easily inspires confidence in others. A brilliant raconteur, some of his stories are little master-pieces of fun.



ELECTRICITY and THE CHEMICAL INDUSTRY



..... AS IN EVERY FIELD OF HUMAN ENDEAVOUR, ELECTRIC POWER IS THE HAND-MAIDEN OF THE CHEMICAL INDUSTRY, TOO. DIRECTLY IN ELECTROCHEMICAL PROCESSES AND INDIRECTLY AS THE MOST CONVENIENT SOURCE OF POWER, IT HAS STIMULATED THE GROWTH OF THIS INDUSTRY, AS WELL AS SEVERAL OTHERS, DURING THIS ERA.



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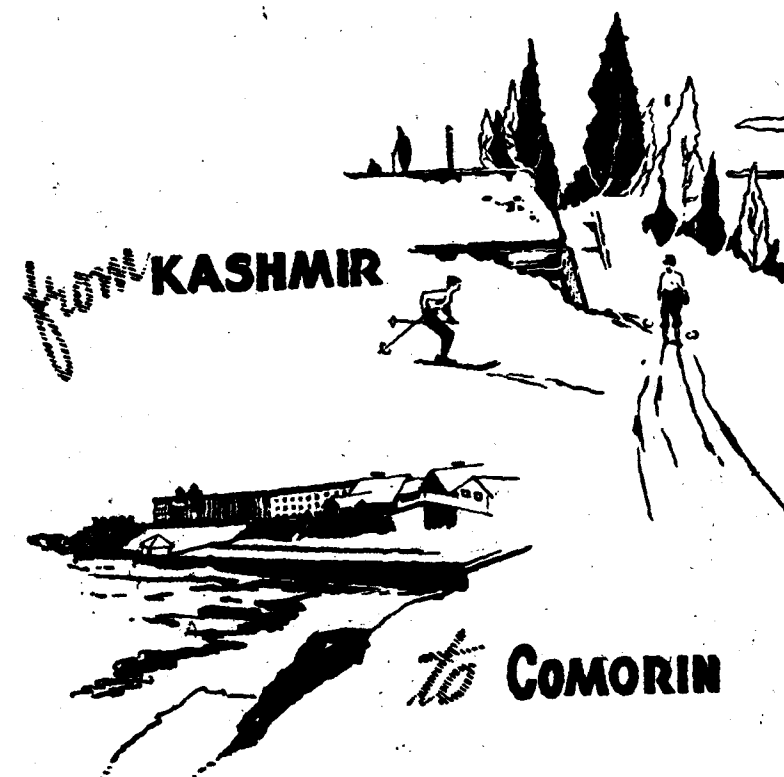
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Not just a pretty turn of the phrase, this...but absolutely true. From Panipat-Karnal in the north to Nagarcoll-Comorin in the south, hundreds of miles of 'AL-IND' aluminium cables now gracefully loop in the air... from pole to pole.

In the years ahead, criss-crossing the country will be more, "AL-IND" lines, bringing the multiple benefits of electricity to industry, agriculture and the home.



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The Aluminium Industries Ltd.
KUNDARA. SOUTH INDIA.

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