

THE *Westerner*

WESTERN ELECTRIC COMPANY, INC.,
OMAHA, NEBRASKA

VOLUME 3 NUMBER 7 JULY-AUG., 1959

Omaha Works Host To Staff Manufacturing Conference

Western Electric's Omaha Works was host for the first time to the Company's Manufacturing Staff Conference which opened Tuesday, June 23 and continued through Thursday, June 25.

A Manufacturing Staff Conference is attended by the vice president of manufacturing, the vice presidents of manufacturing areas and the managers of manufacturing locations.

Attending the conference were five vice presidents and the man-

agers of ten works and plants. Western Electric vice presidents attending were: P. R. Brousse, A. P. Clow, A. P. Lancaster, H. G. Mehlhouse and J. J. O'Brien.

Representatives from Company subsidiaries attended the conference. Presidents of the Nassau Smelting and Refining, Tottenville, N. Y. and the Teletype Corporation, Chicago, Illinois were present with vice presidents from Northern Electric, Montreal, Canada and the Sandia Corporation, Albuquerque, New Mexico.

Water Flows In New Pool



Arlene

Queen Karen

Virginia

Karen Is Our New Queen

Some 1200 persons attended the Watt, wearing a white strapless

Our Orders Are Growing

A big year was forecasted for the Omaha works in January, but it will be even bigger. Due to a large increase in orders for the Bell System telephone companies, the production schedule for Omaha has been increased.

The increase has been reflected in several products of both the crossbar and cable shops. In the cable shop the amount of exchange cable to be made for the year 1959 has increased from 16.5 billion conductor feet to 17.5 billion conductor feet. Omaha received the major portion of this increase in polyethylene insulated conductor.

The increase in the crossbar shops was in three areas: number 5 crossbar frames, concentrator-identifier and 756A PBX; the latter two are manufactured exclusively at Omaha. Number 5 crossbar frames increased an additional

ing locations.
Attending the conference were five vice presidents and the man-

ern Electric, Montreal, Canada and the Sandia Corporation, Albuquerque, New Mexico.

Water Flows In New Pool



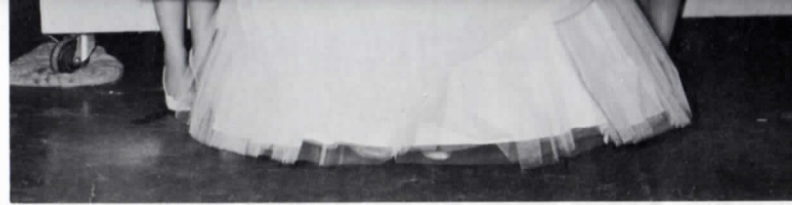
Dave Van de Water, at left, watches the pouring of the wading pool.

A leap and a splash will tell of an end and a beginning. The end is the finishing of a new swimming pool. The beginning will be the hours of enjoyment that will be shared by adults and children.

The pool is the new Westgate-Cedar Hills pool that has just been finished at 82nd and Grover Streets. It came to be because a group of people living in the area formed a committee; headed by Dave Van de Water, of the quality control department. This committee is composed of people from all walks of life; housewives, newspaper men, engineers, real estate agents; in short a group that might have come from any part of town. With no experience in building

swimming pools (only two of the group had more than a average swimming experience) these people have started with nothing and ended up with a pool plus plans for many other recreational facilities in the future. The plans for the 3¼ acres of land includes a baseball diamond, tennis court, and skating in the winter.

The pool, itself, just finished, is of Olympic size, 75 by 42 feet, and will average four feet in depth. In addition an "L" wing 12 feet deep and 35 by 30 feet will safely separate diving from swimming. For the toddlers, there is a wading pool separated by a fence from the main pool. There is also a bathhouse with shower facilities.



Arlene

Queen Karen

Virginia

Karen Is Our New Queen

Some 1200 persons attended the Omaha Works' second Coronation Dance held in the City's Civic Auditorium on Saturday evening, June 20. The crowning point of the evening was, of course, the coronation ceremony.

The master of ceremonies, Jim Bosworth, opened the coronation ceremony by introducing Herbert P. Heath, works manager, who welcomed everyone to the 1959 Hello Charley Dance. After the words of welcome, the master of ceremonies introduced the 1958 Vacation Queen, Kaywin Tomes Geisler, who was presented a crown-shaped pin by Mr. Heath as a memento of her year's reign.

Then the Queen's two attendants were named—Virginia Kilgore and Arlene Schroeder. A brief biography of each girl was given as they gracefully crossed the length of the Civic Arena to the stage. The band played softly "A Pretty Girl is Like a Melody". Attendant Virginia carried the Queen's bouquet of brilliant red roses and Arlene carried the Queen's crown. Both wore dresses of seafoam green nylon organza with petal-tiered skirts and velvet-trimmed fitted bodices. Following the attendants came the Vacation Queen, Karen

Watt, wearing a white strapless floor-length gown of velvety organza over double-net skirts. The bodice was styled along Princess lines accented with folds of pleated net at the top. The skirt was fashioned with an apron-effect overskirt which was pleated high on each hip and held by tailored tafeta bows.

When all three lovely girls were on the stage, Mr. Heath placed the royal crown on Karen's head and former Queen Kaywin presented her with the royal roses. The new Queen thanked everyone for the honor they had bestowed on her.

Women To Hold Fashion Show

It's fashion firsts for Western Electric gals as announcement is made of the coming *Fall Fashion Show for Women* to be held on Wednesday, August 26, 1959, at the Town House. A buffet dinner will be served from 6:00 p.m. to 7:30 p.m. Tickets will be on sale for \$3.50 each by selected representatives.

Prizes will be awarded for the best and most appropriate costume made by the employee and worn by her to the dinner. So watch the needles fly and the sewing ma-

has increased from 16.5 billion conductor feet to 17.5 billion conductor feet. Omaha received the major portion of this increase in polyethylene insulated conductor.

The increase in the crossbar shops was in three areas: number 5 crossbar frames, concentrator-identifier and 756A PBX; the latter two are manufactured exclusively at Omaha. Number 5 crossbar frames increased an additional 90 frames for the year bringing the total from 5210 to 5300. The concentrator-identifier has increased 25 systems to a total of 145 systems for the year. The 756A PBX has increased 100 systems to 2300.

The increase in our program is the result of the public's demand for more telephone service. It will require a united effort on our jobs to deliver the necessary equipment to the telephone companies as scheduled so they may meet the telephone service needs of their customers.

chines hum, for the competition will be keen in the selection of the fashion-wise women of Western Electric.

For the gals whose fingers are all thumbs when it comes to sewing, there will be a surprise form of competition which will be entered by all. Sounds exciting and mysterious? hmm!

The Weoma Club committee hopes to see all of you gals in your finest finery at our first Annual Fall Fashion Show. No men allowed!

THE **westerner**

Published monthly for the information of Omaha Works employees by the

JULY-AUG.

1959

Western Electric Company
INCORPORATED

Donald Shafer, Editor
George Morris, Associate Editor

Four Promoted To Supervision

Four promotions to section chief have been announced at the Omaha Works. Those promoted were Alvin French, Richard Petersen, William Mathis and Dave Van de Water.

Alvin W. French, formerly assembler AMA reader, was promoted to section chief, miscellaneous apparatus assembly section, effective June 15. "Wayne" joined the Company at Omaha in January, 1957 as a material handler. He worked on relays, both flat and wire spring-type, in the B building prior to attending several schools at Hawthorne in order to help in the setting up of the area for the AMA reader. He lives with his three children in the Maenner area.

Force. When his promotion was announced he was an analyst, accounting. Dick, his wife Julia, and their son live in Council Bluffs, Iowa.

William R. Mathis was transferred from the Indianapolis Works and promoted to section chief terminal strip piece part and machining section, effective June 15. Bill started at the Indianapolis Works in 1948 after service in the Army. He had been a machine set up man there until his promotion. His wife Virginia will soon be joining him in Omaha.

Dave Van de Water was promoted to section chief, raw material, survey, results, complaints, purchase material and switchboard



Ole Looks Ahead To Some Fishing

Oluf Ulseth, section chief of engineering and plant accounting section, will retire at his own request on August 1, after 38 years of service. He will be the first Omaha employee to retire under the Company retirement plan.

Ole was born in Calumet, Michigan. After school he worked in the copper mills in his home town until World War I. He spent several months in the Army Corps of Engineers during the War and when released worked for a while in Detroit, Michigan. In 1921 he went to Chicago to visit his sister living there. He had friends working for Western who told him he should come out to Hawthorne and apply for a job. This was the first and only job he applied for in Chicago, because he was hired.

Ole's first job with the Company was as an inspector. From this start he moved on to many different assignments during his years

Traveling? - Taking Tots? Try To Do It The Easy Way

Vacation time is here. In the next few days there will be several thousand Omaha Works employees who will begin two weeks of rest. Many of them will be traveling on the nation's highways to all parts of the country and in some cases the surrounding countries. One major item of vacation time involves children: what to do with children while traveling to provide for a safe and calm trip.

Several parents with experience in this field—to qualify they must have five or more children—were asked what they did with their children while traveling. Keeping young children amused and out of the driver's lap is a big job that has many different answers. Some of the methods used by these experienced people might be the answer for you.

One person said "start early and stop early". When the light starts getting dim in the evening, it's bad for your eyes after driving all day. Most of the parents tell us that you are going to get tired sooner with a back seat of children, pets, etc.

Games were the answer for many parents. They found crayons and coloring books helped. Counting games were very popular (license plates, cars, animals, etc.) Don't expect children to stay with the same kind of entertainment. Have a number of different things for them to do.

One father found that keeping the children doing something was not his problem. Trying to keep them out of his hair literally was the trouble. First, he removed both the door handles and the window handles in the back. The children could not open the doors or the windows from the inside. He then built what he called a "parent protector". It was a wire screen that fit between the front seat and the back. He claimed it worked wonders in stopping large toys and small bodies from thudding over into the driver's lap.

One parent found that letting the children help prepare the trip kept them busy while they were on the road looking for that next point of interest they had picked out at home. Knowing that vacation travel in July can be very, very warm she lets the children pick out a few places they would like to go swimming. It gives the children something to look forward to and it gave her a relaxed feeling knowing they would be in supervised play while she could rest.

The main idea from our selected board of parents was to keep the children's interest on something besides the driver. After all, driving on the highway or any road is a full time job these days, for you and your children's protection, drive safely.



Wayne French

Dick Petersen

Bill Mathis

D. Van de Water

Stancavage, Lane Join Omaha

the setting up of the area for the AMA reader. He lives with his three children in the Maenner area.

moted to section chief, raw material, survey, results, complaints, purchase material and switchboard



Wayne French Dick Petersen

Bill Mathis D. Van de Water

Richard A. Petersen was promoted to section chief, forecasting and bookkeeping, effective June 15. "Dick" started with the Company at Omaha as a clerk, cost and accounting, in August, 1957, after first getting a degree from the University of Omaha and then completing three years in the Air

and BU wire quality control section, effective July 1. Dave received his degree from the University of Iowa, spent two years in the Army, and joined the Company in January, 1957 as a results investigator. Dave, his wife Jean, and their two children live in the Westgate area.

ENGAGEMENTS — — —

Dale Nichols, plant engineer, to Carol Siford, June 6.

MARRIAGES — — —

Paul Diederich, tester, wired equipment, to Nancy Hale, May 18.
Barbara Ann Swisher, assembler relays, to Leonard B. Worcester, utility operator, June 5.
Robert Tams, crossbar switch adjuster, to Brenda Morisse, vertical units adjuster, June 6.
Stanley Kotrba, punch press operator, to Joan Emanuel, June 20.

Robert S. Lampert, business methods planner, to Ingrid Carlson, June 26.

BIRTHS — — —

Mr. and Mrs. Herman Busch, analyst, a daughter, Nancy Ann, May 24.
Mr. and Mrs. L. A. Wengel, assistant superintendent, manufacturing engineering, a son, Steven Phillip, June 7.
Mr. and Mrs. Gary Baltzer, planning engineer, (Mrs. Baltzer, formerly Carol Plott) a daughter, Pamela Lynn, June 13.

Engineers during the war and when released worked for a while in Detroit, Michigan. In 1921 he went to Chicago to visit his sister living there. He had friends working for Western who told him he should come out to Hawthorne and apply for a job. This was the first and only job he applied for in Chicago, because he was hired.

Ole's first job with the Company was as an inspector. From this start he moved on to many different assignments during his years at Hawthorne that included working in operating, E. of M., and accounting. He became a section chief in 1927. In 1944, he transferred to the St. Paul Shops where he remained until he came to Omaha in May of 1958.

Ole has been doing some thinking about what he will be doing in the future. He first plans to visit his mother who continues to make her home in Calumet, Michigan. Following this, he will be moving to his new home at White Bear Lake, Minnesota. Here he will be able to renew his hobby of fishing. He hopes to catch up on his golf and gardening, plus a few trips to California and Florida.

Eight Contribute Blood To A.R.C.

Eight Omaha Works people donated a pint of their blood to the American Red Cross Regional Blood Program during May. They are: Michael P. Bizal, Theron J. Bolton, Katherine Eggersgluess, Robert F. Hardin, Richard L. Hiatt, Norman W. Lundberg, James A. Trenerry and Joe L. Wilson, Jr.

are going to get tired sooner with a back seat of children, pets, etc. Games were the answer for many parents. They found crayons and coloring books helped. Counting games were very popular (license plates, cars, animals, etc.) Don't expect children to stay with the same kind of entertainment. Have a number of different things for them to do.

Stancavage, Lane Join Omaha

John J. Stancavage from the Company's headquarters in New York and Vincent B. Lane from the Hawthorne Works have recently transferred to the Omaha Works.



J. J. Stancavage V. B. Lane

Mr. Stancavage, assistant superintendent, general plant service and plant maintenance and construction, joined the Company at the Kearny Works in 1929 where he held various assignments in works service, engineering, personnel and operating. He was promoted to section chief in 1942 and department chief in 1944 at that location. In 1955 he was promoted to assistant superintendent and transferred to the Allentown, Pa. Works. In 1958 he transferred to Dellwood, the location of Western Electric's management develop-

ment program where he remained until he transferred to Omaha. Mr. Lane, assistant superintendent, wire spring relays and miscellaneous central office equipment apparatus, joined the Company at the Hawthorne Works in 1933. He held various assignments in the operating department at that location where he was promoted to section chief in 1943. He was promoted to department chief in 1952 and to assistant superintendent in 1955.

TRANSFERS

Robert E. Dostert, department chief, from the Duluth Shops, transferred to department chief, financial payroll and data processing department.
Earl R. Behrens, section chief, from the Duluth Shops, transferred to section chief, piece part, apparatus and expense ordering, and service section.
Robert N. Buetow, section chief, from the Hawthorne Works, transferred to section chief, surface wiring.
John Slama, section chief, from the Lincoln Shops, transferred to section chief, wage incentives, mounting, stamping, relay adjusting and cable forming section.

WANTED:

The Westerner looks forward to seeing photographs of you and your family on your vacation wanderings. If you pose in front of the camera during your vacation please send a print of the photo to the Westerner. Print your name and department number on the back of the photo so that it may be returned to you. Colored photos are as welcome as black and white. Happy vacation.

ANNIVERSARIES

35 E. F. Tomiska, superintendent, cable, wire products and works service, will celebrate 35 years with the Company on July 7. Mr. Tomiska, a native of Ravenna, Nebraska, began his career in 1924 at the Hawthorne Works shortly after receiving his degree in electrical engineering from the University of Nebraska. He was a methods investigator until 1926 when he was promoted to department chief. He became a division chief in 1928. He transferred to the New York headquarters in 1935 as a distribution engineer where he stayed until 1942 when he was given a leave of absence for special assignment with the government in Washington, D.C. In 1944 he returned to the Company as methods and warehouse manager at the Kearny Works. In 1952, after a year as assistant superintendent of the Queensboro Shops, he returned to Kearny as superintendent. He transferred to Omaha in December of 1956.

Mr. Tomiska and his wife, Marguerite, live at 9802 Rockbrook Road. His interests include hunting, fishing and the Telephone Pioneers. He is presently a member of the Board of Trustees, First Central Congregational Church, and chairman of the Youth Government Committee (Downtown Kiwanis Club).

30 Herbert J. Schober, section

children live in the Westgate addition. He spends his spare time on his major interest of fishing.

20 Frank D. Donovan, section chief, plug and connector wiring section, celebrated 20 years with the Company on July 2. Frank began at the Hawthorne Works as an inspector. He transferred to the Omaha Works in March, 1957. He lives with his wife Grace in Prairie Lane. They have a married daughter and a son in the service.



F. D. Donovan



F. M. DeLo

15 Frances M. DeLo, coil inspector, June 26.

R. L. Donahoo, section chief, high speed twisting and wire repair section, July 10.



R. L. Donahoo



H. M. Barrett

H. M. Barrett, section chief, polyethylene insulating and wire drawing section, July 11.

Madeline Clark, crossbar unit surface wireman, July 12.



Many Manage Little League Teams

The crack as a ball and bat meet, the shouts of the crowd as they urge on the players, the pounding of feet moving rapidly on bare dirt and the thud of the player's feet hitting the base. These are the sounds of the great American sport of baseball. This is the game not necessarily of professional men, but also of Little Leaguers, boys.

Little League baseball started in Omaha for the first time this year. Their games will run from May 17 to August 1. The League is organized like the professional leagues into majors and minors. There are four major teams and eight minor. The ages are 9 to 12 for majors and 8 to 12 for minors. Games may be seen six days a week at the Sunset Hills school ground.

The spectators for these are fully as much thrilled as they would be in the National or American League play, with the added sensation of watching their own children make a home run or reach

way up in the air to pull down that fly. Parents may think their children make a lot of noise, but at a game like this the noise is from the adults as they make known the team of their choice.

Watching some of the adults one might wonder just how many are employed by W.E. The answer would be quite a few. Two of the major teams are managed by Mike Schultz and Ed Wigg while Wally Holm is in charge of a minor team. John Mack and Dave Frye are assistant managers for two of the major teams. Tom Yorke is the official scorer aided by Russ Burton. The umpires, a necessary evil of the game, are well represented by W. E. men. Gayle Parker is responsible for the umpire schedule of 16 persons. Umpiring for the majors are Gayle, Ray Manthey, Dick Kirchmeyer, Bob Hartman, and Bob Metz, while Jim Schwetz works with the minors.

While most of the people help-

ing with the Little League are there because some of their children are playing, it is not true for all. Dave Frye, Ray Manthey, Dick Kirchmeyer, Bob Hartman and Jim Schwetz are helping because of their interest in children and a desire to help with the sport.



"Your next" (John Mack)



superintendent. He transferred to Omaha in December of 1956.

Mr. Tomiska and his wife, Marguerite, live at 9802 Rockbrook Road. His interests include hunting, fishing and the Telephone Pioneers. He is presently a member of the Board of Trustees, First Central Congregational Church, and chairman of the Youth Government Committee (Downtown Kiwanis Club).

30 Herbert J. Schober, section chief, unit test section, celebrated 30 years of service with the Company on July 2. Herb started his Company service at the Chicago Distributing House. He went to the Hawthorne Works in 1946 and in March, 1956 he was promoted to group chief and transferred to the Montgomery Shops. He was promoted to section chief and transferred to Omaha in November, 1956. Herb, his wife Helen and their three children live in Sunset Hills. His favorite sport is golf.



H. J. Schober

J. Sokol

Joseph Sokol, screw machine operator, will celebrate 30 years with the Company on July 19. Joe started at the Hawthorne Works where he remained until November, 1953 when he went to the St. Paul Shops. In August of 1958 he came to the Omaha Works. Joe, his wife Helen and their three



R. L. Donahoo

H. M. Barrett

H. M. Barrett, section chief, polyethylene insulating and wire drawing section, July 11.

Madeline Clark, crossbar unit surface wireman, July 12.



M. Clark

J. E. Guevara

Jose E. Guevara, technician, July 24.

Alice Y. James, coil winder, July 24.

Russell T. Queen, section chief, shipping and receiving section, July 24.



A. Y. James

R. T. Queen

10 Virgil Pace, assembler crossbar equipment, July 9.

Officers Elected

The Weoma Choral and Instrumental Club elected Joe Sinkule to be president, Dorothy Geihls to be vice president and Rita Miller to be secretary-treasurer. Membership is open to all Works employees who are interested in singing or joining an instrumental group.



"Can I bat, Coach?" (Wally Holm)



"I don't know about that play" (Mike Schultz)

Summer Brings Students To Works

Six student engineers have joined the Omaha Works engineering organization for the summer.

This form of summer employment will aid the students by giving them experience in the practical training which will supplement the course of study they have had thus far in their college or university.

The six who have joined us for the summer are:

William M. Trester who will be working on a statistical quality study involving the wire spring relay blocks in the crossbar shops.

James A. Nowatzki is working in the area of general piece part planning.

Cleve B. Moler will spend his time working on various electrical problems involving the wire rewinders in the cable shop.

Roger W. Robinson will spend much of his summer on the wire pickup at the wire drawing lines.



Shown in the technical library, left to right, are: H. Kopel (U. of Nebr.), D. Bair (Mont. State U.), J. Nowatzki (U. of No. Dak.), B. Rogers (M.I.T.), C. Moler (Cal. Tech.), B. Trester (Ia. State), R. Robinson (Cornell).

Donald R. Bair is working on the wire straightening lines.

Howard J. Kopel is working as a draftsman for this summer.

Willard L. Rogers Jr., will be working with several different assignments concerning piece parts.

Both James A. Nowatzki and Donald R. Bair are recipients of W.E. scholarships at their universities. These scholarships are sponsored by the Company and the recipients are selected by the college or university.

Long Road Of Developments Leads To Omaha

From Lead Pipe To Alpeth Sheath

Once upon a time, not so long ago, exchange cable was sheathed by the strength of men's backs and the seat of their pants.

In the 1880's, only a few years after Bell's telephone was out of the laboratory, Western Electric began to make cable and to sheath it. The prime function of the sheath was then, as it is now, to protect the bundle of conductors against moisture infiltration. The other requirements of the sheath are mechanical (withstand stresses), electrical (shielding and lightning protection) and anti-corrosion (either in the air or underground).

The first standard sheathing practices were established by a young W.E. engineer named W. R. Patterson. To make Patterson cable, as it was called, flexible lead alloy pipe would be rolled off reels, laid out in hundred foot lengths, cut, and straightened on the floor in the manufacturing area. At one end, the pipe would be cupped out and at the other end it would be rasped down to a thin edge, for final joining length to length.

Big Pull For Cable

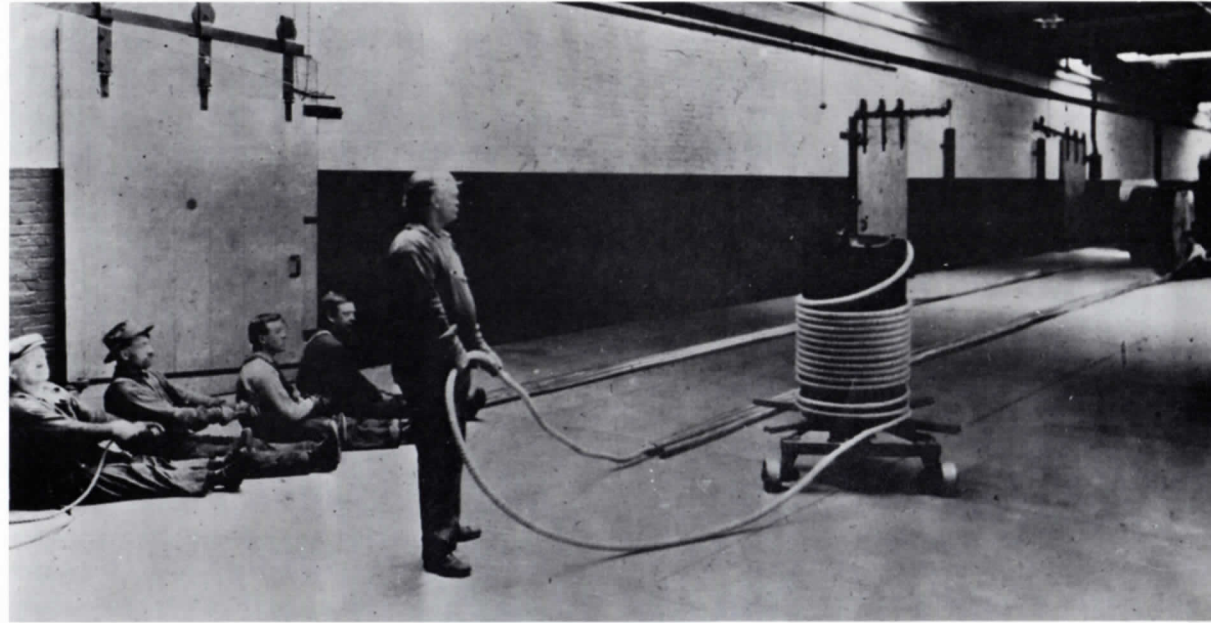
A wad of cotton waste tied to the end of a stout linen thread would be sucked through a hundred foot length of pipe by a small portable pump. After a length of pipe was so "threaded", a manila rope was drawn through. This, in turn, would be spliced to the cable core,

diameter. With the Robertson press, the process of extruding lead sheath directly upon cable core, was begun. Rather than pulling the cable through previously manufactured pipe, the press enabled W.E. to form the pipe around the cable core.

It could be said that the Bell System communication network grew up with lead sheathed cable. For more than fifty years, the major portion of Western Electric's cable was produced by the extrusion of lead over the cable core. As the production reached higher and higher levels, Company engineers became concerned about the ability of lead suppliers to meet future demands for this material in the amounts needed and at reasonable cost. Then in 1929 the assignment was issued — "Develop manufacturing methods for eliminating or reducing lead in cable sheath by the use of other materials."

This key decision put into motion a program that was to result, almost two decades later, in the volume production of a cable sheathed in a thin corrugated metal and a jacket of plastic. The new sheath of aluminum and polyethylene was called Alpeth.

The commercial production of Alpeth cable late in 1947 represented a fundamental and radical change in Western's cable manufacturing methods which had remained unchanged in fifty years.

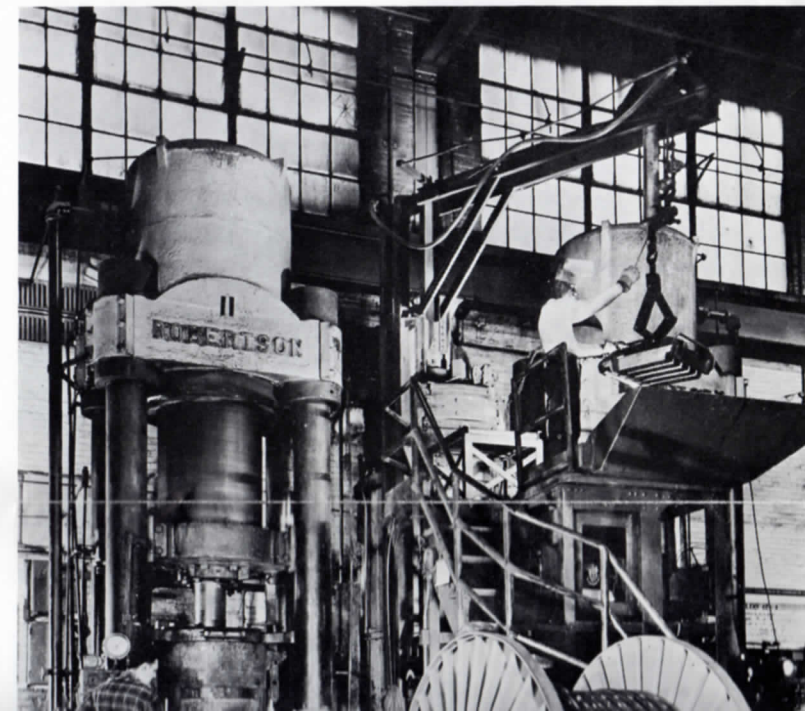


During the 1890's cable was simply pulled through sections of lead pipe by hand.

For cable over .68 inch in diameter, the aluminum tape is corrugated by a separate machine producing ten corrugations per inch. This furnishes added strength and permits better forming. For cable of less diameter, the aluminum strip is left flat. This metal covering shields the core and provides lightning protection.

Plastic "Pipe" Cable

The core now wrapped in rubber tape, bound with nylon and enclosed in a flat or corrugated aluminum tube, moves to the extruder. A black polyethylene "pipe" is extruded over the cable core to complete the Alpeth sheath. The thickness of the plastic jacket ranges from .065 inch to .110 inch for cable core diameters of .20-2.5



and at the other end it would be rasped down to a thin edge, for final joining length to length.

Big Pull For Cable

A wad of cotton waste tied to the end of a stout linen thread would be sucked through a hundred foot length of pipe by a small portable pump. After a length of pipe was so "threaded", a manila rope was drawn through. This, in turn, would be spliced to the cable core, which would be drawn through the lead pipe by the combined efforts of several men sitting on the floor and tugging mightily (see photo).

After the cable has been threaded through the sections of pipe, the rasped end of one length of pipe would be inserted into the cupped end of another length and the joined ends sealed by simple plumbers' "wiped joint". When all the lengths were joined, the pipe was reeled up on a drum to be heated and paraffin poured through as a final filler and sealer. By the simple Patterson process, requiring tough, arduous labor of strong backs, a limited production of sheathed cable was provided by Western Electric to the infant telephone industry.

Lead "Pipe" Cable

The infant industry grew fast and along with it the need for sheathed cable. Strong backs alone could not produce the amount of cable needed. A new method had to be found.

In 1886, the Company made arrangements with an inventor, John Robertson, to build a press capable of extruding a pipe two inches in

a program that was to result, almost two decades later, in the volume production of a cable sheathed in a thin corrugated metal and a jacket of plastic. The new sheath of aluminum and polyethylene was called Alpeth.

The commercial production of Alpeth cable late in 1947 represented a fundamental and radical change in Western's cable manufacturing methods which had remained unchanged in fifty years. Swiftly, Alpeth reduced the use of lead as sheathing for exchange area cable.

Today's Alpeth Sheath

Today, the sheathing of cable core in a thin layer of metal and a jacket of plastic is performed on six sheathing lines located in the northeast area of the cable plant. As the cable core moves through one of these 200-foot sheathing lines, a rubber-polyester (Mylar) laminated tape is applied. On the smaller cable core a thicker plastic tape without rubber is used. The tape, varying in width according to the size of the cable core, joins the cable in a machine which overlaps the tape about the core and spirally binds it with nylon yarn. The plastic or rubber-plastic tape serves as a thermal insulator to protect the plastic insulated conductors from the heat of the extruded polyethylene jacket and to electrically insulate the conductors from the aluminum strip.

The tape-wrapped core moves to the next step in the process where aluminum is formed around it. The aluminum strip is formed over the core into a tube with the overlap seam running lengthwise on top.

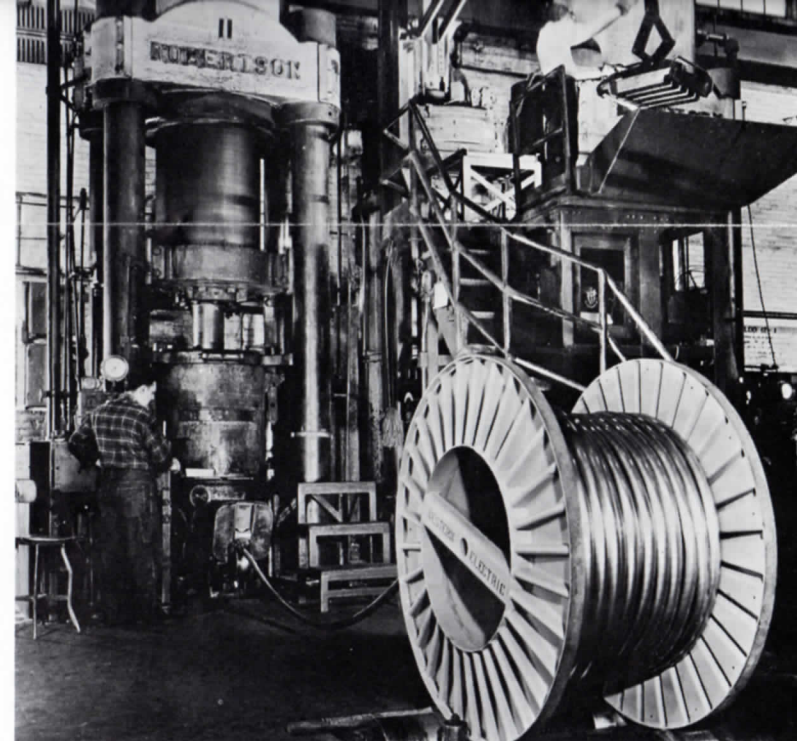
shields the core and provides lightening protection.

Plastic "Pipe" Cable

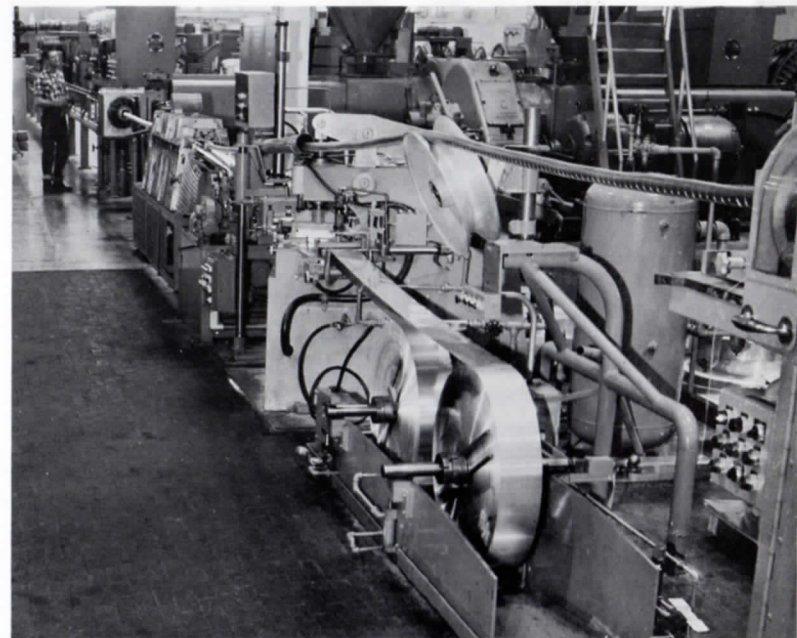
The core now wrapped in rubber tape, bound with nylon and enclosed in a flat or corrugated aluminum tube, moves to the extruder. A black polyethylene "pipe" is extruded over the cable core to complete the Alpeth sheath. The thickness of the plastic jacket ranges from .065 inch to .110 inch for cable core diameters of .20-2.5 inches. The plastic sheath is an excellent barrier to moisture and provides mechanical and corrosional protection to the cable core.

The Alpeth cable we make offers many important advantages to the Bell System customers besides the elimination of more expensive lead. Alpeth cable is lighter than lead. It is as much as 50 per cent lighter than similar lead sheathed cable. This reduction of weight permits telephone companies to install longer aerial runs thus reducing the number of costly splices, and decreasing the number of supporting poles and the line hardware. Even smaller strand and supporting wire can be used with Alpeth. It requires less handling effort during installation and it costs less to ship because of its lightness. Further, Alpeth has proven much more resistant to the corrosive conditions encountered in ground installations, thus considerably reducing cable failure from corrosion of the sheath.

Without a doubt, our product—Alpeth cable—and its quality contributes to the economy, efficiency and dependability of the Bell telephone operations.



For more than fifty years, the major portion of W.E. cable was produced by the extrusion of lead over the cable, by a Robertson Press.



In Omaha's modern cable plant the sheathing of cable core in a thin layer of metal and a jacket of plastic is performed on six sheathing lines.