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THE
Arm-co-operator

A MAGAZINE FOR ARMCO MEN AND WOMEN



BOTTOMS UP!



THE Arm.co.operator

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for all Armco men and women.

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THE COVER

Photo by ARNOLD BOXWELL, E. Wks.

It's a giant ladle, filled with 100 tons of molten pig iron, that we picture on our cover this month. Into the front door of an Open Hearth furnace at Armco's East Works, the glowing iron is being poured. Temperature of the iron is 2550 degrees. This iron will mix with melted scrap inside the furnace; after a few hours it will become a heat of Armco steel, ready for the rolling and processing that will make it into steel strip or steel sheets for our customers.

Handling this big ladle and its seething contents is a job that requires a high degree of cooperation between the man on the floor and the crane operator overhead who moves the ladle. William Baird is the First Helper pictured signalling to the crane operator. It's a massive piece of equipment, but the men who run it can tilt the big ladle as expertly as you could pour from a teacup at your dinner table.

Jobs for Tomorrow

By W. W. SEBALD, President

You can't expect much of a future from a job of making horseshoes, wagons or buggies.

Industry's onward march of progress leaves behind it a trail of products of the past, no-longer-needed machines, and out-of-date jobs. When automobiles became popular, earlier in this century, the buggy-makers of that day had to convert to more modern products or go out of business. In the auto industry, competition resulted in the scrapping of old designs and models almost every year, in favor of new improved products. The airplane industry shows the same pattern of progress: last year's latest model plane may be a back number by this year end.

You and I benefit from this constant and rapid change. When we buy articles for our homes or our families' use, we get increasingly better products for our money. But such changes affect our jobs in industry; our own steel industry is no exception. How can you and I find any security in the future of jobs which might be out of date in a few years?

That is one of Management's many problems. At Armco, we've kept up with the parade of progress for 43 years. An Armco job today offers more opportunities for the future than it has at any time in the past. This is due to many things, all of them costly. We have spent millions of Armco dollars in research, and other millions to develop new products to meet tomorrow's demands. More millions of Armco dollars were spent through the years to keep our machines, our tools of production, our jobs, equal to the task of turning out improved products at lower costs. Hundreds of thousands of hours of training were provided, without cost to Armco men and women, to give them the opportunity to learn new skills and better ways of doing their job. No Armco man need become "rusty" on his job. He has the opportunity to not only keep up to date on his present job, but to study for a better job ahead.

We have never found an "easy" way to provide for the future. When your next payday arrives, Armco must have the money in the bank to pay your wage or salary check. When new machines, new methods, new raw materials are needed to produce the things we make, we must have the money to finance them, too. To keep our jobs modern, to meet the changes which the future is sure to bring, there must be profits from our business. The amount of that profit determines how much Armco can invest in the future of our jobs.

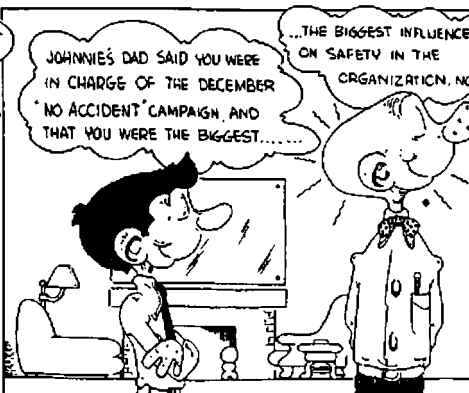
Armco men and management have done a good job of cooperating together through the years. That spirit of cooperation, and understanding of each others problems, has helped create more jobs, more opportunities than we have had at any time in our company's history. Our continued security for the jobs of tomorrow will come from the teamwork and profits of today!

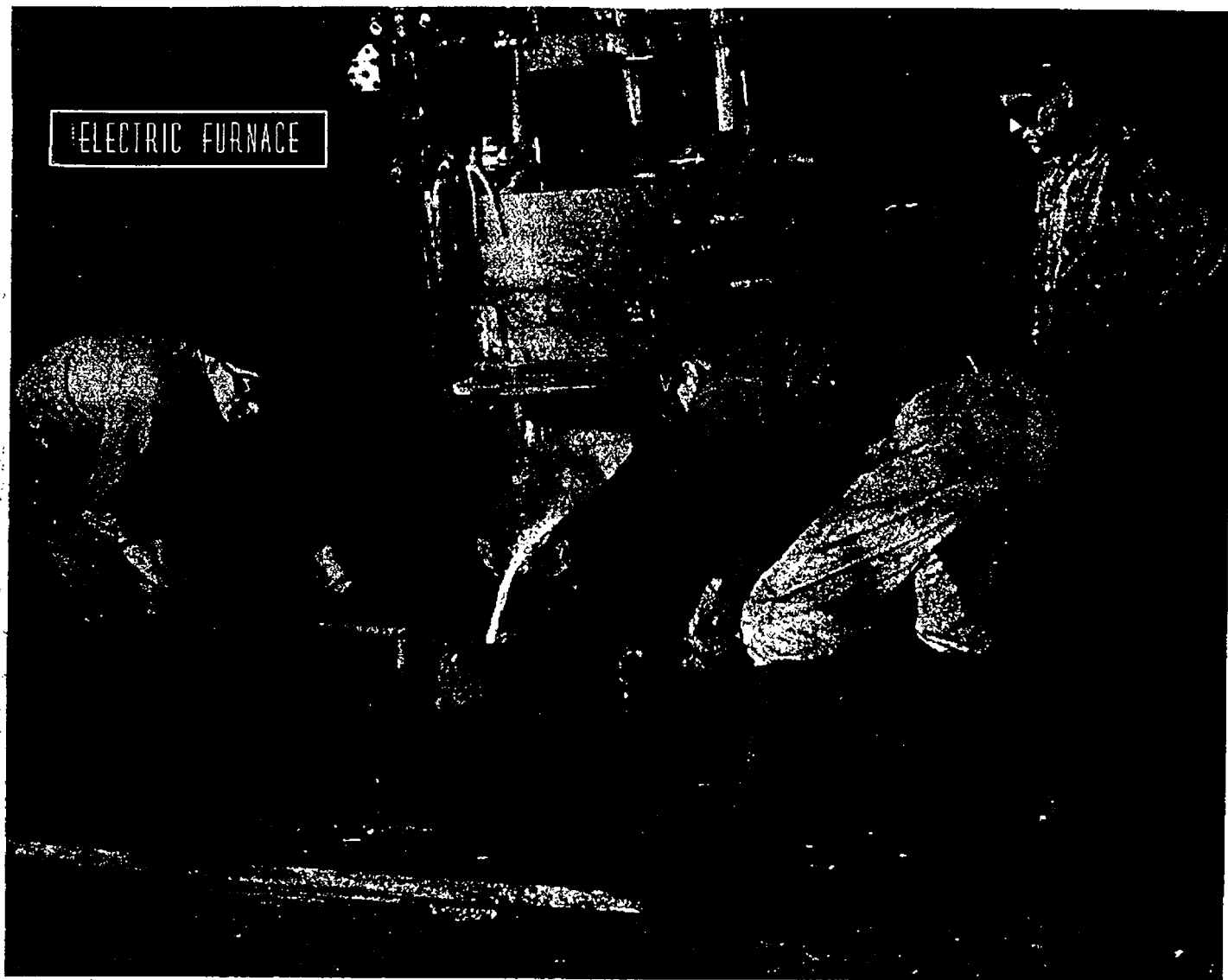
INSIDE INFORMATION

If you ever get on a radio quiz program, and they ask you, "How much does a ton weigh?", better be careful, or you won't win the jackpot. In 1942, a ton of Armco steel ingots weighed more than a ton of Armco steel sheets. That was because the 2240-pound Long (or Cross) Ton was used in the Open Hearth departments, while the Processing departments measured their sheets in the 2,000-pound Net (or Short) Tons. In January 1943, Armco changed all its mill records to the Net Ton figure. However, we still pay freight rates on many items (iron ore, for example) on the Long Ton basis.

There are some more kinds of tons besides Long and Short tons which have been used over the years. A Special Long Ton of 2268 pounds, it was used for sand cast pig iron, 14 1/2% above the Long Ton being added to represent approximately the adhering sand. Back farther in history was the Double Gross Ton of 2464 pounds, a weight 10 1/2% above that of the ordinary Long Ton. Then there's the Metric Ton of 1000 Kg. equal to almost 2205 pounds. The reason we got started on such a weighty subject was from looking at our cover picture this month. That 100-ton ladle of hot iron is really a heavy cupful to tip!

The story on our back page reminds us that we have always looked forward to bigger and better things at Armco. That brings up a matter of history. Back in 1912, an automobile maker publicly advertised his new model as his "Farewell Car." His ad said, "The car I now bring out is regarded by me as pretty close to finality. I do not believe that a car materially better will ever be built. So, I've called it my Farewell Car." The car cost \$1,055 with an additional \$125 extra for self-starter, top windshield and acetylene gas tank. . . . Point is, we all need to have faith in the future. That is where we are all going to spend the rest of our lives!





ELECTRIC FURNACE

NOT AS SPECTACULAR AS SOME OF THE OTHER, BIGGER ELECTRIC FURNACES, YET THIS ONE DOES A BIG JOB. IT IS IN THE FABRICATING DIVISION AT MIDDLETOWN

SMALL FURNACES DO BIG JOB

Fabricating Division's $\frac{1}{4}$ -ton furnace produces castings which are used in other Armco plants

"Not so big as the super-doozers, but just as useful", is how the 15 men at Armco's Fabricating Division Foundry at Middletown refer to their two $\frac{1}{4}$ -ton electric furnaces. When they make a heat of steel, the special scrap is weighed as carefully as a housewife baking a cake. The furnaces work the same as the larger size electric furnaces. The products they make include castings made from special heat-resisting alloys, and from copper. To Armco's East Works plant, they send carrier blades for furnaces, special welding rods. By the thousands, items are sent from the their foundry to Armco's Ashland and Butler plants, too. It's a safe group of Foundrymen; no major accident for over 3 years! "We're not big, but we're good", they say.



JACKETS are placed on the sand moulds before the metal is poured into them.



MOLTEN METAL, poured into moulds, becomes machine parts for other Armco plants

Safety Glasses Look Better Than Sightless Eyes



BUREN CHANDLER, Mining Division, had molten babbitt splash in his face. His eyes were unharmed; he is pictured with the safety glasses he was wearing.



TOM HAMILTON and **PETE BOSS**, working together at Butler, were peppered with slag. Today, they're still both working, unharmed. Reason: safety glasses.



CHARLES MILES, Ashland plant, was struck on the left lens of his safety goggles by hot metal. He has a broken lens instead of a badly seared eyeball.

ARMCO IRON MAN SAFETY CONTEST



DIVISION STANDINGS — SEPTEMBER 30, 1948

DIVISION	Major Accidents	STANDING
FABRICATING	1	FIRST
MIDDLETOWN	17	SECOND
BUTLER	36	THIRD
ASHLAND	28	FOURTH
RUSTLESS	22	FIFTH



SAFETY ADVISORS from various Armco plants met in annual conference at the Butler plant in September. Headed by C. M. Allen, Staff Supervisor of Safety, the group planned ways and means of keeping us safe while at work.

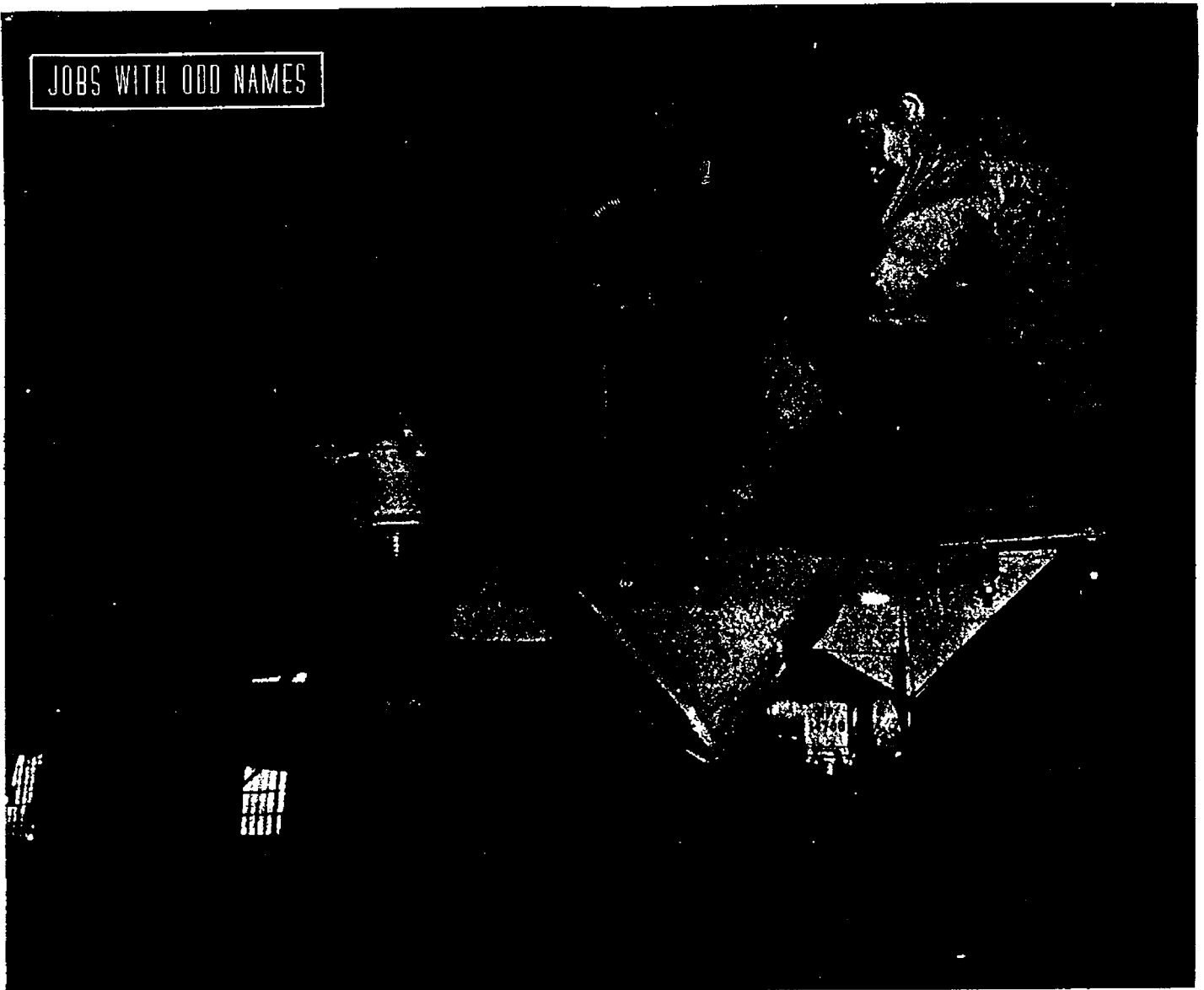


WELD SHOP crew at Ashland, pictured here com-

28th. By that date, the crew had amassed a total

Cunningham is the Foreman of the group. Con

JOB WITH ODD NAMES



SAND SLINGER

AT ASHLAND'S new Foundry, this man operates a machine which throws (slings) sand into the moulds

at high velocity. Sand is mixed with conditioning agents before being used for moulding purposes.



MENDING BROKEN NECKS

NECKS of broken rolls are mended at East Works Weld Shop by Thermite Welding. The weld is made by melting steel with a thermite mixture and then



BOTTOM MAKER

EAST WORKS Bottom Makers put Coke Breeze (small pieces of coke) into the bottom of soaking pits to keep slag and cinders from sticking to the



HARDESTY DIVISION

FROM ITS HEADQUARTERS AT DENVER, COLORADO, IT SERVES CUSTOMERS IN FIVE STATES

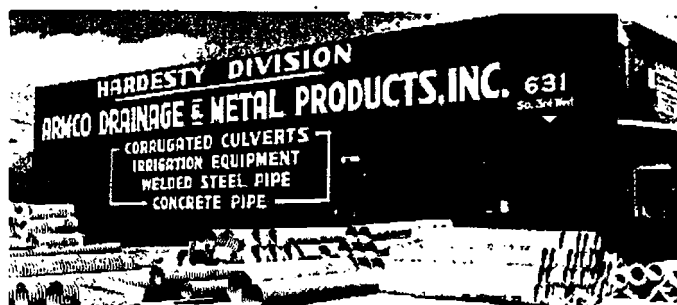
They call it the Hardesty Division of Armco Drainage & Metal Products, Inc. because Mr. Rudd Hardesty started a plant in Denver, back a few

years before this Century began. He started by making tin cans as containers for baking powder. Years later, the business, now greatly expanded, became a part of the Armco organization. No longer do they make cans, but a variety of products including corrugated pipe, straight seam welded pipe, water control gates and other such drainage and irrigation products. They also sell Armco Steelix panels for constructing buildings. There are 288 Armco men and women working at the Hardesty Division. Their plants are at Denver,

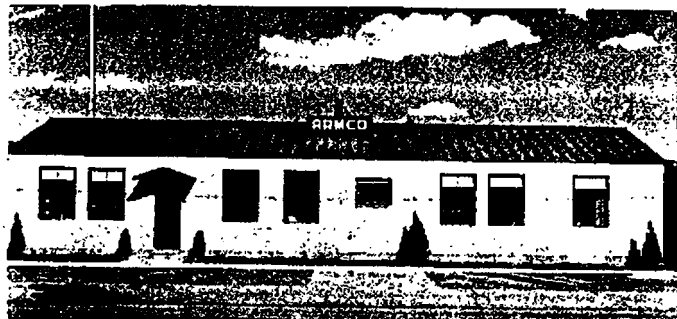
Colorado; Salt Lake City, Utah; at Twin Falls, Jerome, Boise, and Caldwell, Idaho; at Nyssa, Ontario, Oregon; and El Paso, Texas. The Division serves the AD&MP customers in Colorado, Wyoming, Idaho, Utah, New Mexico, and a few counties in Texas, Nevada and Oregon. They fabricate their products from Armco steel made at the Ashland and East Works Armco plants. Pictures on these pages show some of the shop views at Denver, and the plants and people from some of the Division units.

SALT LAKE CITY PLANT REBUILDS AFTER FIRE

From the ashes of a destructive fire, a more modern plant has risen at Salt Lake City, Utah. Part of the Hardesty Division AD&MP, this plant (below) is now better equipped to serve its customers than ever before.



SALT LAKE CITY plant of AD&MP carries a good stock of Armco Corrugated Pipe.



OFFICE of the Salt Lake plant is of modern construction, using Steelix Panels.



BOISE PLANT IS HOST TO IDAHO AND OREGON

Out west, picnics cover large territories. For instance, the Boise, Idaho plant of AD&MP (Hardesty Division) was host to 50 Armco families from Boise, Caldwell, Jerome, Twin Falls, Idaho and Nyssa and Ontario, Oregon.



TRUCK was used for stage, where entertainers performed for the picnickers.



KING-SIZED bottles of pop made the picnic lunch taste really scrumptious.



DENVER PLANT OF AD&MP MAKES ARMCO WATER CONTROL GATES



IRRIGATING the great open spaces of the West requires miles of pipe and many gates to control the flow of water. Here are Armco gates being made.

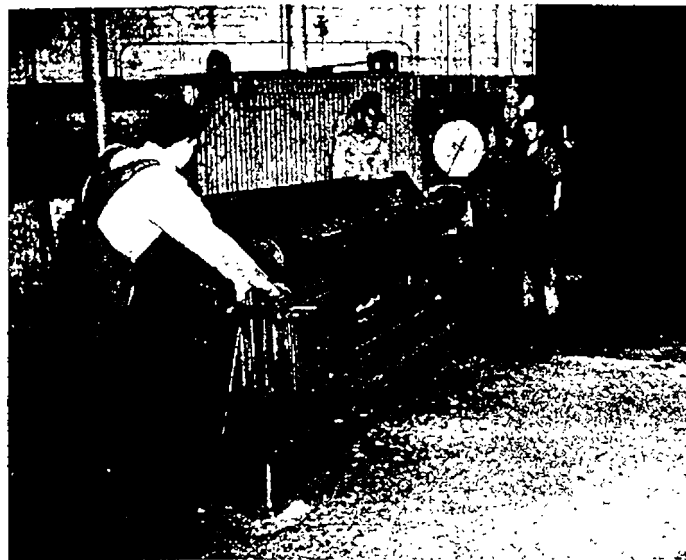


LARGER GATES have cast iron frames. Here, at Denver AD&MP, holes are being bored, fittings placed, to complete assembly on gates ordered by customers.



GRINDER smooths castings for gate frames. Machine shop at Denver AD&MP plant is well equipped to handle tooling work for the plant's many operations.

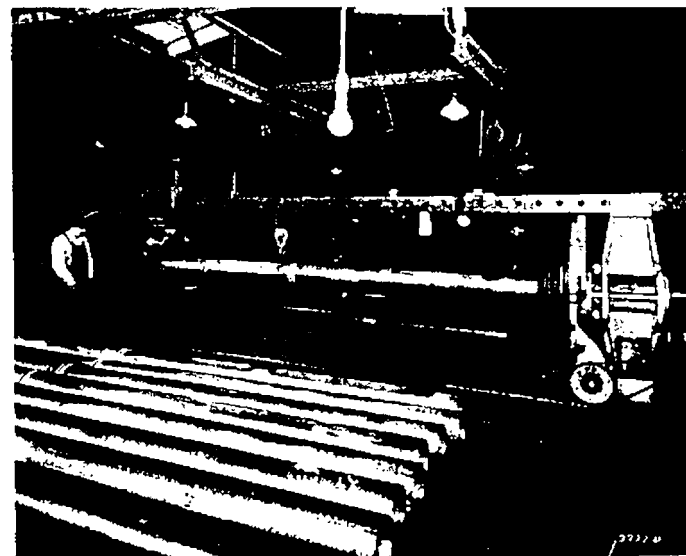
DENVER PLANT OF AD&MP MAKES STRAIGHT SEAM WELDED PIPE



MAKING A PIPE, starts with this forming roll. Steel sheet is formed into pipe shape, with the edges touching. Diameters made at Denver from 6 to 72 inches.



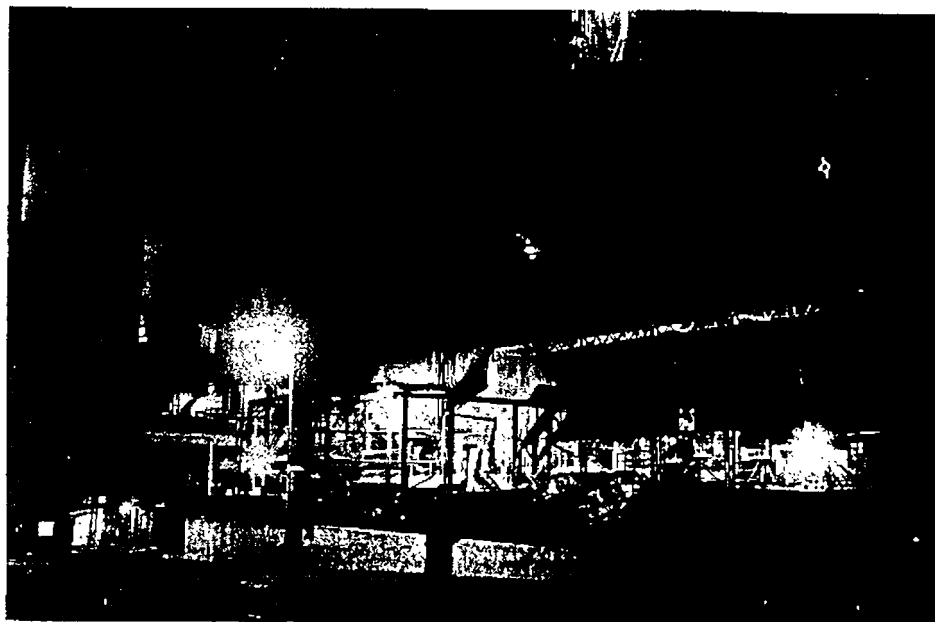
PIPE IS WELDED on this automatic welding machine. Denver plant has 2 such machines; they produce a strong, butt weld which makes the seam secure.



TESTING straight seam welded pipe under water pressure at Denver AD&MP plant. Pictured above is a 20-foot length of the welded pipe being tested.

GETTING MOLTEN PIG IRON FROM OUR BLAST FURNACES
AT HAMILTON, OHIO TO OUR OPEN HEARTH FURNACES AT
MIDDLETOWN, OHIO, 12 MILES AWAY. AN UNUSUAL STORY.

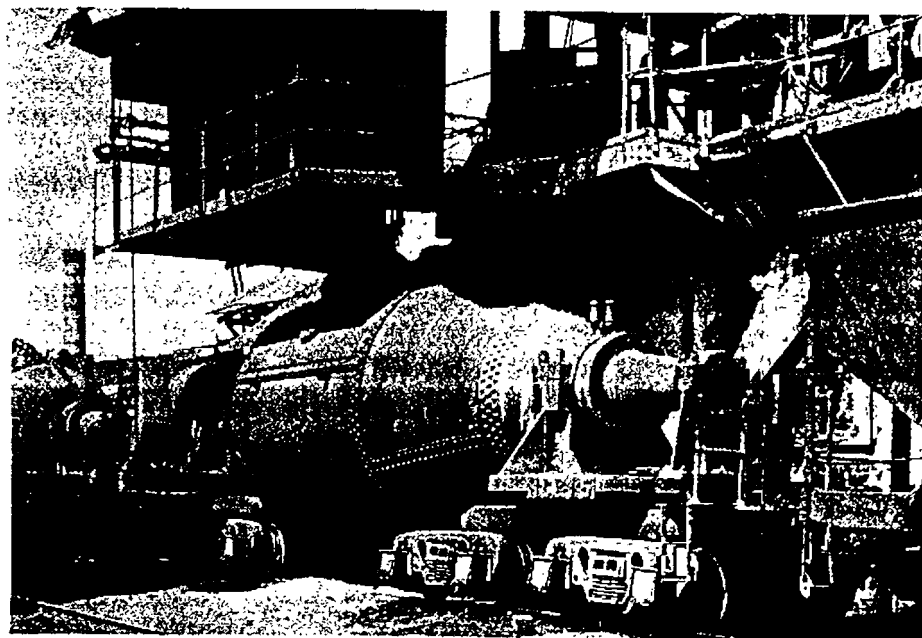
Hot



NIGHT AND DAY, THE HAMILTON PLANT—12-MILES FROM MIDDLETOWN—PRODUCES PIG IRON FOR MIDDLETOWN.



ON TEL-AUTO-GRAPH, Hamilton analyst receives order from Middletown Open Hearth for cast of pig iron



FURNACE CREWS AT HAMILTON COMPLETE THE CAST, POUR MOLTEN PIG IRON INTO THE SPECIAL THERMOS CAR.



WEIGHING the car of hot metal requires a special scale. This car and contents weighed 615,500 pounds.

(BELOW) ON ITS WAY FROM HAMILTON TO MIDDLETOWN, THE HOT METAL TRAIN IS AN ODD SIGHT. TRACKS ARE A DIVISION OF THE B & O RAILROAD, BUILT FOR THIS JOB.

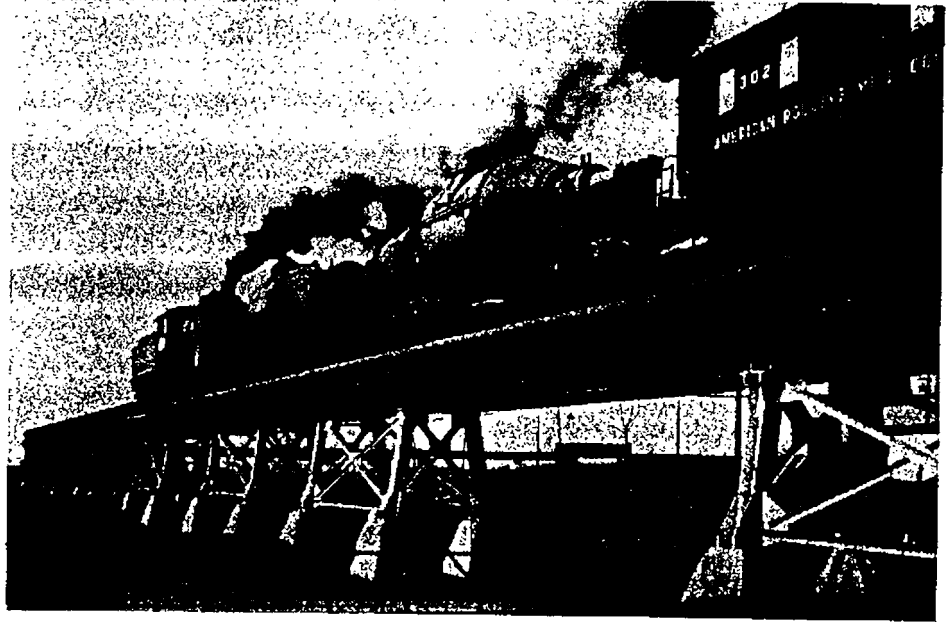


Metal!

THE 12-MILE JOURNEY OF MOLTEN PIG IRON FROM HAMILTON TO MIDDLETOWN IS ONE OF THE ODDEST, HEAVIEST TRIPS IN RAILROAD HISTORY. PICTURES TELL THE STORY.



HAMILTON roundhouse man inspects ladle car before each trip, uses 2½ gallons journal oil each trip.



TRACKS, TRESTLES, ALL RAIL EQUIPMENT HAD TO BE SPECIALLY CONSTRUCTED TO SUPPORT HEAVY WHEEL LOAD.



MIDDLETOWN Open Hearth gets phone call from along the route: "There's a load on the way; Coming in!"



ARRIVAL AT MIDDLETOWN OPEN HEARTH; END OF 12-MILE TRIP; IRON STILL LIQUID. IT REQUIRED COOPERATION.

(BELOW) BACK TO HAMILTON, ACROSS GREAT MIAMI RIVER, GOES THE EMPTY "HOT METAL" TRAIN. EACH CAR HAS DELIVERED ITS 125 TONS OF VALUABLE PIG IRON.





SOUTH AFRICANS

ANOTHER group of South African steel men have arrived in Middletown for training. They are from the Iscor firm there; they are learning more about steelmaking. Above, with the Armco Iron Man.



NEW LOOK

ASHLAND'S Diesel Engine No. 47 was completely rebuilt by Armco men from the Weld, Rigger, Pipe

and Round House Shops. Six-weeks job cost \$23,000. Picture shows No. 47 and crews who worked on her.



COMES OF AGE

NOW IN its 21st. year, Zanesville's Boy Scout Troop

Armco Association. The Scoutmaster of this pro-



NEWMAN EBERSOLE

"BUD" EBERSOLE DIES . . .

Death claimed Newman Ebersole on September 22, 1948 at the age of 61. He was Armco's Director of Purchases, and one of Middletown's outstanding industrial and civic leaders. Armco men in all Armco plants knew him as "Bud".

Mr. Ebersole became associated with Armco in 1911 as a weighmaster in the East Works Bar Mill. Later, he was promoted to Assistant to Purchasing Agent, and in 1937 was named General Purchasing Agent. He was advanced to Director of Purchases in 1944.

Before the entrance of the United States in World War I, Ebersole headed a group of Armco men which served as a volunteer ambulance corps in France. The unit was outfitted by Armco. When America entered the war, the unit was taken into the United States Army. He served in the Army until March 1919; the group engaged in many campaigns. Ebersole received decorations for bravery.

He was sent to Europe by our government after World War II as a member of a six-man commission to study the return of scrap metal from battlefields.

He was prominent in civic activities in Middletown. For 17 years, he was a member of Middletown Hospital's Board of Trustees; second Commander of Middletown's American Legion Post 218; active in local Red Cross work. He was a member of the National Association of Purchasing Agents and member of the American Iron and Steel Institute. He was born in Cincinnati, attended school in Avondale, Ohio and graduated from Cornell University in 1910.

Armco will miss "Bud".

FAMOUS QUOTATIONS



"THANK YOU SO MUCH" Says outgoing President Helen Bissell (right) to the newly-installed President Jean Croll (left) of the Butler Armco Girls Club.



"YIPE-E-E!" says Doug Ross, Ashland Metallurgical department. It was at the Rodeo held at Ashland, sponsored by Boyd County Saddle Horse Association.



"LET'S TRY FOR A NO ACCIDENT MONTH in December", say members of Butler's Central Safety Committee. They investigate accident causes, study remedies.



"FOR 20 YEARS WE'VE HAD NO ACCIDENTS" say members of Zanesville Masonry section. William Norman is General Foreman. They're now on the second twenty



"SNAP UP YOUR GAME with a parade", said girls of the Rustless Division before the girls soft-

ball teams had a game. "The Ancient Burlaps" played the "Bobby Saxers". At left, the Lil' Abner

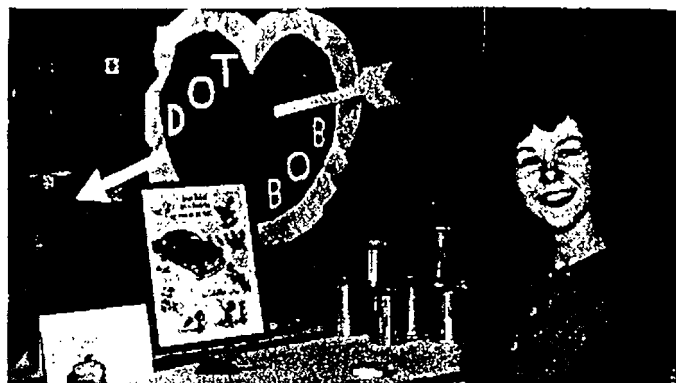


outfit. At right, Rustless Medical Director Dr. W. E. Fleischer stands by with crutches, splints, first aid.

DESKORATIONS



ROBERT FORD'S buddies in Ind. Eng. Fabricating Division groomed up his desk.



MRS. FORD'S desk, Personal Relations, General Office, was brightened up also.



ABOVE is new groom, John Klesewetter, Cold Strip Processing, East Works.



PRODUCTION OFFICE, Butler, had household gadgets for groom Ray Huntsman.



MAGDALEN FARIES, East Works, got flowers on her 25th Armco Anniversary.



ASHLAND'S Maxine Muncy is now Mrs. John Chinn; both Blas Furnace folks.

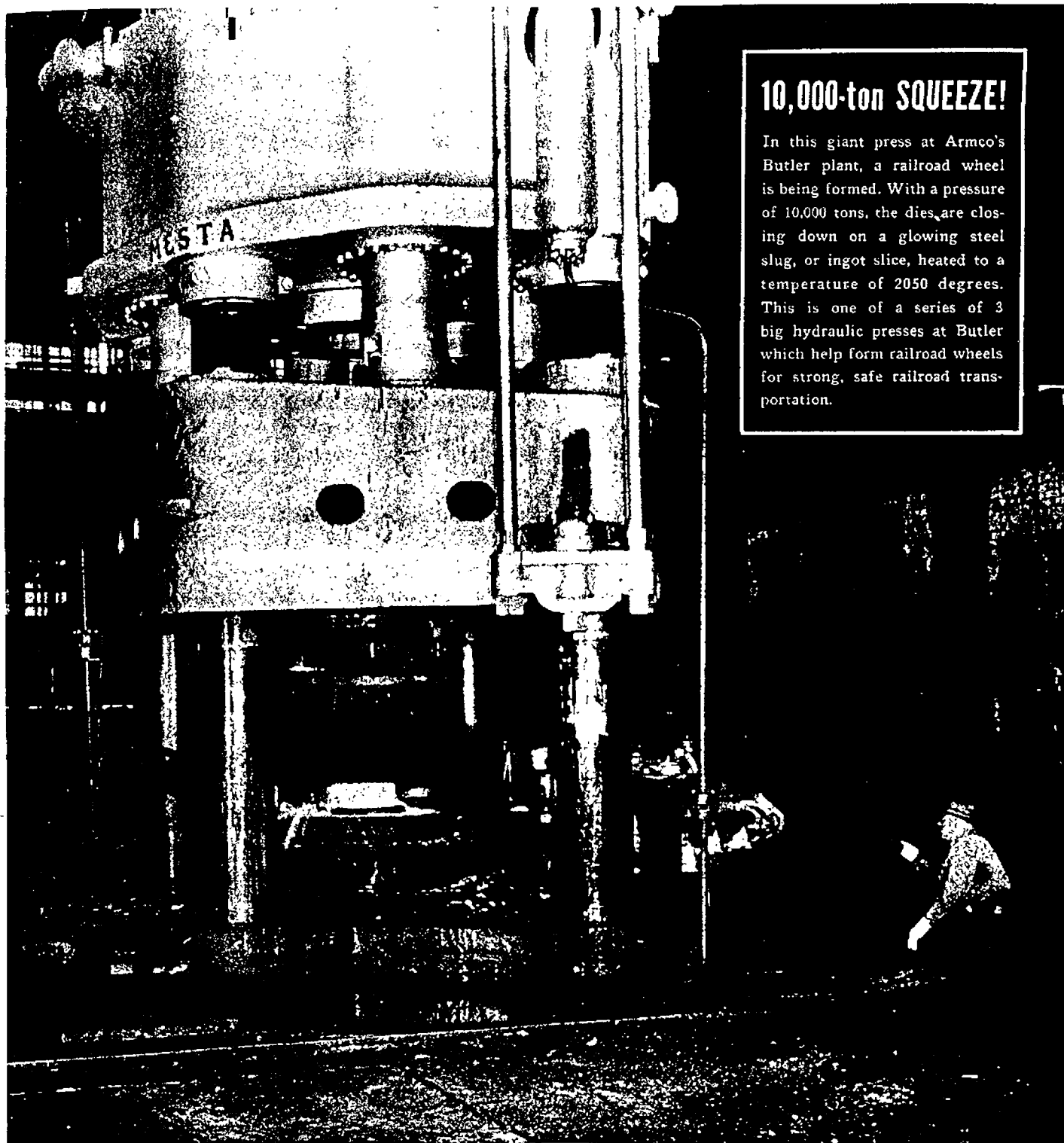
Volley Ball and Croquet at Baltimore—Football at Middletown



RUSTLESS DIVISION supervisors took their wives to their annual outdoor party.



ARMCO WAR VETERANS at Middletown sponsored a football team arranged



10,000-ton SQUEEZE!

In this giant press at Armco's Butler plant, a railroad wheel is being formed. With a pressure of 10,000 tons, the dies are closing down on a glowing steel slug, or ingot slice, heated to a temperature of 2050 degrees. This is one of a series of 3 big hydraulic presses at Butler which help form railroad wheels for strong, safe railroad transportation.

NEW LIFE FOR GIANT PRESS

Believe it or not, the big press pictured above is a delicate piece of machinery. Keeping it in first class working condition is a constant job of maintenance. Recently, the Butler Wheel Works maintenance crews gave it a complete overhaul — and that's a mighty big job. Before the press was dismantled, there were days of planning. The "cap" or top of the press, weighing 94 tons, was removed and shipped by a special railroad car to the manufacturer for machining. A "branch machine shop" was set up in our Wheel Works for the precision machining of the 60-ton base and 75-ton platen. The big press rises 21 feet above floor level, but there is a base which extends 17 feet underground. It took thousands of Armco dollars, and more thousands of man-hours of work to get Old Number 1 in tip-top condition. Now completely rejuvenated, it tackles its job with new life.



MAINTENANCE crew at Butler happy with success of their press-repair job

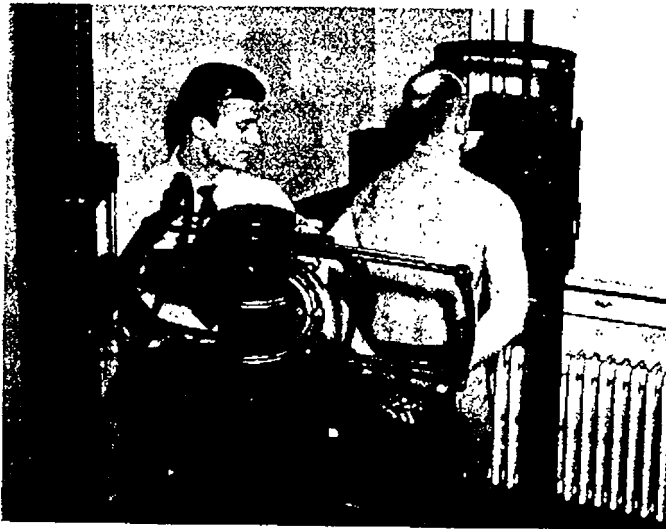
INSIDE STORY

How the wonders of X-Ray guard our health at Armco

Taking an "inside look" with an X-Ray machine isn't a new idea. But it isn't generally known that Armco has had this type of equipment at several plants for many years. At our Butler plant, for example, they installed new equipment earlier this year. It cost \$18,000. But its use in the plant hospital has been a tremendous help in treating ailments or injuries of Butler Armco folks. Dr. J. A. Llewellyn and his Assistant Dr. J. Van Donaldson at the Butler plant use X-Ray for pre-employment examination of prospective employees, general chest surveys to detect early presence of tuberculosis, and routine diagnostic work in the plant hospital. Butler is proud of its well-equipped hospital. Pictures on this page show the X-Ray apparatus in use at their plant.



"READING" THE X-RAY FILM IS MOST IMPORTANT. ABOVE, DR. J. A. LLEWELLYN, BUTLER, READS A CHEST FILM.



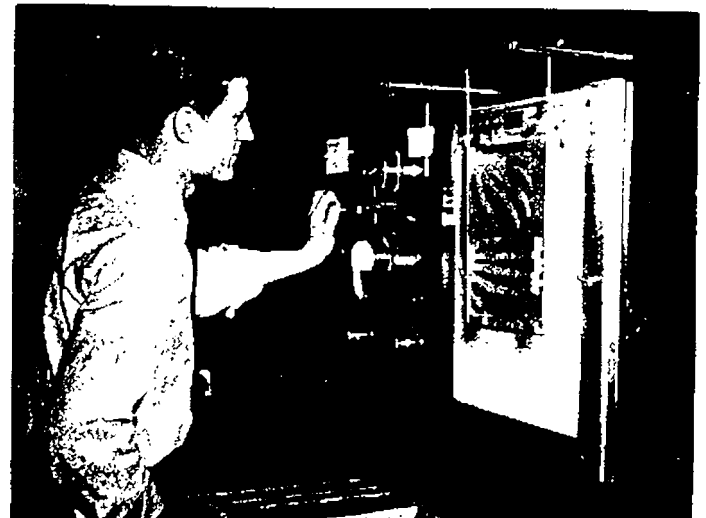
1. IN BUTLER Armco's plant hospital is a modern Photo-Roentgen (X-Ray) unit. Here a Butler Armco man is having a chest picture taken with the "camera".



2. IT'S AN ELBOW this time, being photographed. The patient may have had an elbow injury; the X-Ray will discover if there was any damage to the bones.

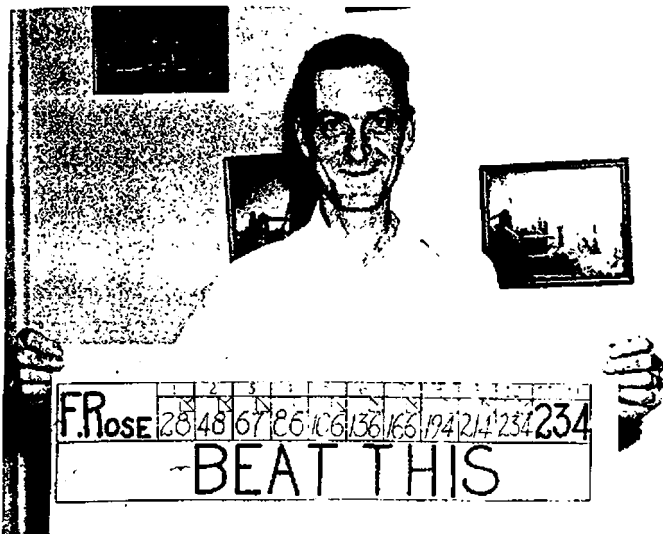


3. IN CONTROL BOOTH, Technician Wallace Billek operates the mechanism that sends electric power into the X-Ray tube. The rays will penetrate the skin.



4. EIGHT MINUTES after exposing the film to the rays, the Doctor has a picture to look at. Latest darkroom and development methods are used at Butler.

INTERESTING PEOPLE



NECK STICKER-OUTER

FRANK ROSE, bowling his first game of the season with Hamilton's Blast Furnace teams, scored 234. His "BEAT THIS" challenge pepped up the league



FUN PLANNERS

BOWLING LEAGUE OFFICIALS at Butler are deep in plans for Armco's Inter-plant Bowling Tournament next Spring. Butler will be the host. Left to right, Ken Robb, League President; C. E. Leasure, Vice Pres; Victor Shoup, Sec.-Treas



UNDERGROUNDERS

ARMCO OFFICIALS went everywhere, saw everything at our Montcoal mines recently. Identifiable here, left to right, are: H. W. Wright, Staff Supervisor Public Relations; C. W. Connor, Manager Mining Division; C. H. Murray, Vice President; W. W. Sebald, President; and F. E. Vigor, Vice President



THE FIRST \$100...

HENRY KLAUS, Butler Weld Shop, made a suggestion which has estimated savings of \$5,400. Under Armco's new Suggestion Plan, Henry got \$100 (note smile); gets \$440 more in a year if actual savings prove estimate was correct.



TRIPLE THREAT MAN

RUSSELL BROWN, Butler Maintenance dept. is proud of his ability to cut meat loaf at an Armco Park party. He is President of the Butler Foremen's Club. Brown is also the President of Butler's Civil Control, Training & Safety Committee.

Baby, you've got a future at Armco!

PRETTY YOUNG to be thinking about your future!
But we're planning right now to have a job for
you at Armco when you're old enough.

MANY AN ARMCO MAN of today was still wear-
ing three-cornered pants when his present job
was being created. Years ago, we were planning,
working, building for the Armco we have today.
And today we are planning, working, building for
the years ahead. That means security for our
present jobs. It is also the reason why we can con-
fidently tell the babies of today that they can ex-
pect a future with Armco some day.

DURING THE GOOD YEARS—the profitable ones—
we add more jobs, we expand, we build, we grow.
In profitable years, we can plan a future that is
stronger, more dependable for all of us. Today's
profits become future Job Insurance for us and
Opportunity Insurance for our children.



WE ALL GROW WITH ARMCO

