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## BRASS PRICES CONTINUE SETTING RECORD HIGHS

(Decatur)... The price of copper and brass continued its upward trend into April and was setting all-time records each time it advanced.

In mid-April the price of brass ingot that is used heavily by Mueller Co. rose to  $63\frac{1}{2}$ ¢ a pound, an increase of 7¢ a pound since Nov. 10, 1969.

Mueller Co. uses tons of brass ingot each work day and each price increase pushes the manufactured cost of our products higher and higher.

One of the main reasons for this spiral is the price increase of copper, the ingredient that makes up 85% of the brass ingot that we use.

According to a recent issue of the **Wall Street Journal**, the price of copper by one producer had gone up to  $60 \, cmup$  and if this figure holds for the industry it means that the average price of copper will have risen about 58% during the past two years or since an industry-wide copper strike ended in March, 1968.

What was the price of copper in 1932 as the depression was ending?  $7\frac{1}{2}\phi$  a pound!

# CAFETERIA RENOVATION PLANNED IN DECATUR

(Decatur)... The first phase of a major renovation of the Mueller cafeteria area at Plant 1 has been approved and work will begin as soon as possible.

The first phase includes paneling the walls with a light finished wood, boxing in the windows and covering them with a decorative acrylic material and installing new lights.

A new floor and a new suspended ceiling, plus major reworking of the sprinkler system are involved in the rest of the long range program.

The area has been serving as a cafeteria since 1923 when it was constructed as part of the company's recreational building. In 1958, the gymnasium area and meeting rooms were rebuilt and made into offices for personnel, advertising, plant manager and others.

# COMPANY PAVING DECATUR EMPLOYEE PARKING LOTS

(Decatur)... More than 13,000 square yards of two-inch asphaltic concrete surface will be put down during the next few weeks on four different parking areas at Plants 1 and 4.

The work includes paving employees parking lots at Plant 4 and west of Mercer Street at Plant 1, plus the visitor's lot at the corner of Monroe and Eldorado

Streets and the area around the guard office at Plant 4.

Work extends over a number of weeks because some grading and paving can only take place on Saturdays

The project will improve the appearance of all of the areas as well as keeping employees' cars and the surrounding neighborhood cleaner.

# TEAMSTER STRIKES CAUSING NO MAJOR DELAYS AT MUELLER

when lots are vacant.

(Decatur) . . . The scattered Teamster strikes that occurred against various trucklines around the country have not, generally, caused major delays or tieups of Mueller products going to customers.

Most local carriers serving Mueller continued to operate and material was shipped at a near normal rate at all plants. Trucks were routed around some of the major terminals where delays were experienced and alternate methods of shipping were used.

Some delays of piggyback or trailer-on-flatcar deliveries were encountered when they went through certain terminals. In some specific cases, customer orders were tied up on docks or in trucks because of local disputes.

In many areas around the country, firms laid off thousands of workers and temporarily shut down operations because they were unable to get needed raw materials into their factories or finished goods out their doors. At Mueller, raw material and parts inventory levels were adequate and there were no major supply problems.

#### 14 MILLION HOMES BUILT IN 1960S

Approximately 14.2 million non-farm private and public housing units were started during the 1960s, some six per cent less than the 15.1 million started during the previous decade. According to Public Service Company of Colorado, 9.1 million units were single family homes and the remaining 5.1 million were residential buildings with two or more housing units.

Although single family homes accounted for 64 per cent of the total for the entire decade, their proportion in the annual totals dropped from a high of 77 per cent in 1960 to a low of 54 per cent in 1969, indicating a major shift in building trends. In fact, the number of units in multi-family buildings started during 1969 were greater than in any previous year in history.

A drop of water contains 6,000,000,000,000,000,000,000 atoms. You say it!

#### NATURAL GAS RESERVES DROP FOR SECOND YEAR

(New York)... The urgency of stepping up oil and gas exploration was underscored recently when the American Gas Association (A. G. A.) reported the nation's proved natural gas reserves declined in 1969 for the second year in a row.

The A. G. A. Committee on Natural Gas Reserves estimated year-end proved reserves at 275.1 trillion cubic feet compared with 287.3 at the end of 1968. This sounds like a huge figure, but production last year was 20.7 trillion cubic feet.

"We are disappointed but not surprised by the reserves figures," said J. W. Heiney, A. G. A. president. "Unless this situation is corrected, the natural gas industry will be severely hampered in its efforts to expand output to meet the rapidly growing demand."

Mr. Heiney, president of Indiana Gas Co., Inc., Indianapolis, emphasized that such a brake on the industry's ability to play its full part in the energy economy would be an artificially-induced shortage.

Although proved gas reserves have declined, potential gas reserves—that is, gas believed to be in the ground but yet to be discovered—are larger now than ever before.

The potential gas reserves seem to be sufficient to meet indicated needs into the 21st century, according to estimates by the A. G. A.'s Potential Gas Committee.

What's it worth? If you're working an average day of eight hours, 244 days a year and make \$10,000, your time is worth \$5.21 an hour, or about  $8\frac{1}{2}$ ¢ a minute.

# MEN "KEEP THEIR COOL" WITH PORTABLE SYSTEM

(Decatur)... The silver hood with its clear plastic front is placed over the man's head. His heavy, insulated boots are on firmly. His special coverall uniform is zipped and his heavy, specially designed gloves are on. The door opens and he enters a simulator where temperatures are 20 degrees below zero. A hose is affixed to the small packet on his belt and the built-in air conditioning system begins to function.

Sound like something from Houston and the National Aviation and Space Administration lab there? Perhaps, but the description was one of a scene in the Mueller Test Lab in Decatur.

In many cases, Mueller products are tested in conditions which are highly exaggerated from typical situations so that we can determine the strengths and limits of our products. Some of these testing extremes include operating products under pressure in very high or low temperatures.

In order to do this the company has installed a ''hot box'' and a ''cold box'' which resemble walk-in coolers or freezers. These test chambers are lined with shelves, have air pressure available and contain other test equipment and delicate controls which regulate temperatures closely. The cold chamber has a temperature range of from room temperature to minus 20 and the ''hot room'' temperature can run up to 150 degrees.

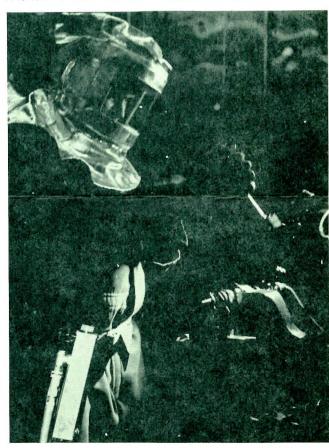
Performing the rigorous tests under these simulated or extreme conditions, requires technicians and in order to protect the man from these surroundings the company has purchased a self-contained, portable, heating and cooling system.

The system runs on the same compressed air that is piped throughout the factory. The air goes into a purifier at from 90 to 100 psi, then into a packet weighing about 22 ounces that hangs on the workman's belt. The air spins cyclonically at high speeds in the packet, causing it to change temperature. A set of controls allows the worker to determine the temperature most comfortable for him.

A set of tubes distributes the controlled air down the worker's legs and arms and into the head cover,

allowing him to work in comfort although surrounding temperatures may be 150 above or 20 degrees below zero. Special coveralls act as an insulator between the air of the system and the chamber's temperature.

After two hours of testing corporation stops in a chamber set at 105 degrees, Technician Gerald Nicholls emerged saying he had been "very comfortable." There were no signs of perspiration on his clothes and after a brief break, he again donned the hood and returned to the "hot box" to work in comfort.



Test Lab Technician Gerald Nicholls works on a Mueller corporation stop in an Engineering test chamber. The room is 105 degrees, but he works in comfort for hours, thanks to the packet on his belt that sends cool air through his suit and into the hood.

# **News Briefs**

(Chattanooga) . . . C.B. (Jack) Barker, purchasing agent for Mueller Co. here, was among four prominent local leaders honored by the Pi Kappa Alpha fraternity at its recent annual founder's day banquet and dance. About 300 attended the program which cited the men for their contributions to the community. Jack, honored for his work in the field of arts, is a member and a former singer with the Chattanooga Opera Association, singer and member of the former Chattanooga Civic Chorus, actor with the Chattanooga Little Theatre and director of congregational singing at the Central Church of Christ in Chattanooga.

(Decatur)... The Tool Engineers bowling team edged out Ground Key to win first place in the 12-team Mueller Bowling League in Decatur. Members of the winning team are: Bert Flaugher, Dale Flaugher, Dale Wilkins, Buddy Grossman, Paul Hawbaker and Del Bagenski. The runnerup team had: Paul Funk, Larry Malloy, Harlan Rhodes, Lloyd Huffman, Mike O'Neill and Harlow Oyler. Individual honors went to: Ed Hartwig, whose 185 season average was tops; Bert Flaugher, who had the top series with 649; and Henry Stratman, who rolled the top individual game with a score of 257.

(Decatur)...Jack Parsons, chief chemist, has been named a director of the Central Illinois Chapter of the American Foundrymen's Society. The group is made up of about 300 foundrymen representing firms in central Illinois. Jack has been a member since 1958.

(Decatur)... Gene Hullinger, senior industrial engineer, has been elected president of the Mueller Golf League in Decatur. John Kirk, catalog compiler, is secretary and Rex Camfield, quality control technician, is treasurer.

(Decatur)... Our most recent international visitor was A. Tahmasebi of Teheran, Iran. He is an engineer in charge of the Mueller line of products handled by Nivand Co., Ltd., our representatives in Teheran.

# Retirements

The following list gives the retiree's job at time of retirement and years of service.

#### Chattanooga

Melvin Conner, Shipping and Warehousing Dept., 28 years and 1 day, April 17.

Recent retirees at Mueller, Limited are:

**Leroy** "Roy" Barnes, Goss machine operator,  $28\frac{1}{2}$ 

John Mullen, stop grinder, 28 years, 3 months.

# FAMILIAR FACES IN NEW PLACES

(Chattanooga)... **Walter E. King, Jr.,** has rejoined Mueller Co., succeeding Earl Underhill, who resigned as general accountant.

(Decatur)... Effective April 1, the following promotions were announced: Joseph A. Sepich, Jr., formerly industrial technician in Industrial Engineering Department, has been promoted to the new position of purchasing assistant. James R. Kissell, also an industrial technician, has been promoted to methods and cost estimator in Industrial Engineering. Larry E. Warfield, tool design draftsman, has been promoted to industrial technician.

Effective April 13, **Charles J. Monroe**, division inspector, was promoted to section foreman in the Ground Key Division.

Effective April 15, the following promotions occurred in the Production and Inventory Control Department: Carl C. Wilhelm, formerly inventory analyst, was appointed senior inventory analyst. Paul Dean Ater and Max B. Justice, formerly finished stock cycle counters, have been promoted to inventory analysts.

(Brea)... Edgar L. Bradley, sales service correspondent in the Brea Sales Office, has been promoted to junior market research analyst in the Headquarters Sales Division, Decatur. Russell K. Luttrell, Sales Department assistant for water in Decatur, is going to Brea to succeed Bradley.

# STORM CLAIMS EMPLOYEE'S SECOND MOBILE HOME

(Decatur)... Windstorms are supposed to be like lightening--they don't strike twice in the same place.

If you were to make this statement to Industrial Engineering Draftsman Dave Dunnaway, he would surely reply, "Don't you believe it."

Twice within six months and in the same location, the Dunnaways have had their mobile homes overturned and demolished by high winds.

The first time it happened, the young couple was visiting next door and watched their home smashed. This last time they weren't as lucky. On the night of April 12, they were in their home when it was overturned and Mrs. Dunnaway sustained a broken back and broken ribs. Dave was not injured.

Following the storm Dave said, ''We haven't been married a year and already we have lost two homes.'' He added that he was apartment hunting and that they were through with mobile home living.

During the storm that ripped up the Dunnaway's first home six months ago, another Mueller employee, Bill Lindgren, had his mobile home tipped over and heavily damaged. Bill, computer operator on the third shift, was working at the time but his wife and family were inside. Fortunately, no one was seriously injured. The Lindgren's bought another home (not mobile) a few weeks later.

### 43,000 WAYS TO MAKE AN ADAMS REPAIR CLAMP

(Decatur)... The ''Adams'' Pipe Repair Clamp looks like a relatively simple product, but there are 43,000 ways to make one.

Agreed, ''only'' about 2,200 of these variations have been manufactured to fill requests from customers representing industry, or water and gas systems. Through multiplication of all possible variations and combinations dealing with length, diameter, bolts, gaskets and types, we find that we actually offer slightly more than 43,000 different ''Adams'' Clamps.

Industrial engineers in Decatur have been working on a method to consolidate and reduce some of the paperwork related to this long product line. Currently there are about 750,000 operation cards and 200,000 routing sheets used in Industrial Engineering to provide information necessary to manufacture and to figure costs on the clamps.

We won't go into all of the calculations and details needed to come up with our figure of 43,000 variations, but mull over a few of the following facts.

There are three basic types of Adams Repair Clamps. The 220 Pipe Saver is used for small leaks and splits in pipes. The Full-Seal is used to repair long cracks, major leaks and circumferential breaks. The Servi-Seal repairs bad taps for service connections or provides a means to replace a service pulled out at the corporation stop.

In the Full-Seal line we make clamps that range in length from six inches to 32 inches and there are 285 variations in diameters within the eight lengths. Each of these 285 can have four variations depending on whether we furnish stainless steel or cadmium plated bolts, and finger type or lapped type gaskets. Four times 285 comes out to 1,140. We triple this number because of the "add-on" features that are available that allows a number of clamps to be used in tandem to repair a long break, or the bonding device option for thawing or cathodic protection. Now we have 3,420 in one basic type.

These same 3,420 options are available in the Servi-Seal but you multiply that by 10, because each can have an outlet for a corporation stop that can range in size from 3/4 of an inch through two inches and come with either iron pipe size tapped outlet or Mueller (AWWA) threaded service outlet. So we have 34,200 possibilities in the Servi-Seal.

When we get to the 220 Series we make it in lengths of 3, 6, 9, 12, 15, and 18 inches and each length has 90 different diameters available to fit various sizes of steel, cast iron, and asbestos-cement pipe. Each has five different options of gaskets and two types of bolts for a total of 5,400 varities in the 220 Series.

We add these three totals and arrive at our 43,000. These are 43,000 reasons we must be careful handling, interpreting and filling orders for "Adams" products.

In 1963 Mueller Co. purchased Adams Pipe Repair Products, Inc., of South El Monte, Calif., to complement the Mueller line, and in 1965 the operation was moved from California to Decatur.

The Adams Division of Mueller Co. has only about a dozen men working in it under Assistant Department

Foreman Ted Suhomske and Department Foreman Ed Hartwig, but they certainly have variety in their work. It is a small part of the Specialty Department but it has a big line.

# Service Awards

The following Mueller employees received service awards during April.

#### Mueller, Limited

5 Years: Alan Buchanan

15 Years: George Sazanov, Raymond Shepley

30 Years: Clyde Smith, Otto Foster

Brea

5 Years: Matthew Lynch

35 Years: Lacy Mayfield, Ida Lou Hughes, Vance

Ziebarth

#### Decatur

10 Years: Larry L. Collins

20 Years: Clifford L. Hammel, Leonard J. Burton,

Benjamin C. Carter

35 Years: Cecil E. Coffin

### Chattanooga

5 Years: John R. Ford, Charles L. Kelley, Ray-

mond M. Morton

10 Years: C. David Sentell

15 Years: Terrell F. Gray, Clabon Fairbanks, Homer

Green, Talmadge Pittman, Nehemiah J.

Jones

20 Years: Milton Miller, Joseph Racz, Martin Gwin,

Marcus R. Daniel, Jr., Luther Hill, Sherman Mathews, Johnie Johnson, Will D.

Moore, Larry Watson

#### SARNIA SETS PLANT VACATION

(Sarnia)... The Mueller, Limited plant in Sarnia will be closed for vacations for two weeks beginning July 27 and reopening Aug. 7. All production departments will be shut down, but other sections will be operating.

#### SALES TRAINEE NAMED

(Decatur)... Lloyd E. Murphy, Jr., former molder in the Decatur Brass Foundry, entered the company's sales training program about April 1, and during succeeding months will become familiar with Mueller products and sales procedures.

Lloyd started with the company in 1961 and, except for about two years on military leave, has worked as a molder at Plant 4 most of the time.

### RETIREE'S MEETING

Sixty-two retired men from Mueller Co. in Decatur met last month at the House of Plenty--a record attendance for this organization that was formed about a year ago. All men retirees from Mueller Co. are invited to attend the next meeting at noon, May 14, House of Plenty, King and Monroe Streets, Decatur.