

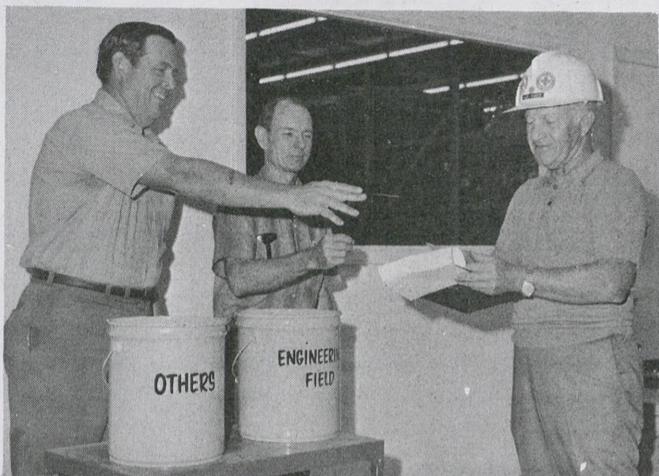


Shellegraph

Houston Refinery

No. 40

Friday, October 9, 1970



H. J. Krebs and J. T. C. Jordy, members of the Safety Committee, draw names of some of the 18 winners in the safety shoe contest and hand the tickets to J. B. Floyd, Safety Department. See story on Page 2.

NEW UTILITIES CONTROL CENTER IS A MODERN SHOWPLACE OF PLANT

As time marches on, innovative developments have been incorporated into Refinery operations such as the Utilities Control Center building which is one of the modern showplaces of the plant located where the original refinery laboratory was built in 1928.

Recently occupied by the Dispatching, Distilling, Gas and Thermal Cracking and Utilities Departments, the spacious building incorporates many new design concepts. The first floor houses the first three departments. The second floor is the home of the Utilities Department, including the Utilities Control Center which will be the distribution, surveillance, operations and communication center for the Refinery and Chemical utilities systems when finished in mid-winter. Monitoring and control facilities for six major Refinery and Chemical utilities--steam, electricity, air, fuel gas, water and nitrogen--will be housed in the control room.

Three-fourths of the second floor will be devoted to the control room and its associated hardware. Eight-by-twelve-foot panels will graphically display schematic "mimic" diagrams of the steam and electricity generation and distribution throughout the complex. (These mimics will be brought in through an opening in the wall which was left unfinished for this purpose.) The mimics will be supplemented by conventional instrument panels.

(Continued on Page 3.)

HOUSTON REFINERY HAS MAJOR ROLE IN PRODUCTION OF SHELL OF FUTURE

Shell's Houston Refinery has played a major role in the recent introduction of the company's new non-leaded Shell of the Future gasoline. The refinery was responsible for manufacturing and moving the new product to marketing terminals in time for the October 1 introduction of the new gasoline.

Even though all the components of Shell's automobile gasoline blends are manufactured essentially lead free, additional steps had to be taken to develop the new blend.

Computers were used to develop a number of potential blends. Then, calling on human judgment and years of experience, Dave Smith, Senior Engineer, Economics & Scheduling selected two formulations for actual blending and further study in the Houston Refinery Laboratory. After exhaustive tests, one blend was found to meet the rigid specifications set out by the Company for the new product.

Since blending systems, including the storage tanks, shipping tanks and pipelines, had been used for leaded gasolines, these facilities had to be flushed out to remove the majority of the remaining lead. Additional sampling stations and tests were set up to assure that the first shipment of product would move from storage to the tanker Valley Forge essentially free of lead.

(Continued on Page 2.)

1800 GUESTS EXPECTED...



In preparation for the Ten and Over Party L. J. Hallmark, Manager Personnel, and Leonard McNeill of the Executive Country Club, inspect grades of meat to be served at the party on Saturday, October 31. More than 1800 guests are expected for the party.

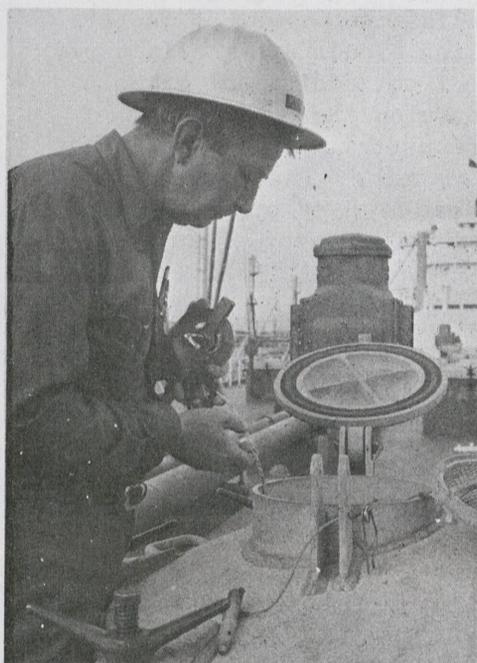
NON-LEADED GASOLINE PRODUCTION REQUIRES SPECIAL PROCEDURES



Mary K. Breaker, Machine Operator, Computer Control Applications, and Dave Smith, Senior Engineer, Economics & Scheduling, work on a formulation for Shell's "Gasoline of the Future" on the Univac 9200 computer.



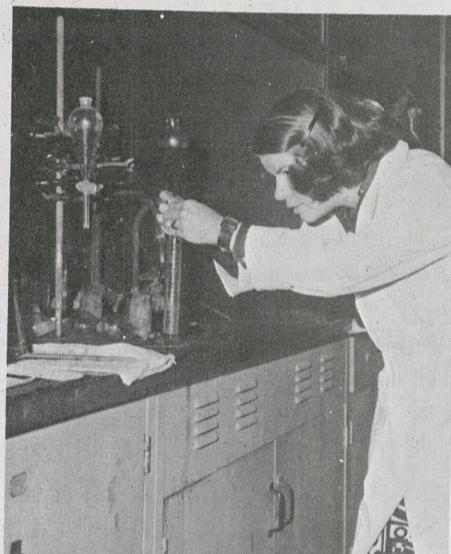
Operators #1.B. Doc Horton and W. P. Polson of the Catalytic Cracking Department increase top temperature in a fractionator column as components are made for Shell's gasolines.



K. P. Kemp, Cargo Inspector, gauges the product as it goes on board the tanker Valley Forge for shipment to Sewaren, New Jersey.



O. G. Green (left), Sample Carrier, Refinery Lab, takes a small sample from the blending tank. The sample was then test-



ed for lead content by Kay Iversen (right). Chemist using several procedures. here she is using the acid extraction process.

(Continued from Page 1.)

In anticipation of expanding needs of non-leaded gasoline for automobiles of the '70's, the Houston Refinery is revising its equipment for handling the new blend to permit movement of larger cargos to pipeline facilities and all four refinery docks.

The new gasoline has a 91-octane number, designed to meet the requirements of most 1971 cars and of about 20 percent of the pre-1971 cars. It requires installation ultimately of more than 30,000 blue gasoline pumps and thousands of underground storage tanks in Shell service stations throughout the country.

18 LUCKY EMPLOYEES WIN PRIZES IN ANNUAL SAFETY SHOE DRAWING

Eighteen lucky safety shoe buyers were rewarded for following safe procedures and purchasing shoes at a drawing Monday.

Any employees who purchased safety shoes during September were eligible for prizes.

Winners of transistor radios were W. J. O'Sullivan, R. L. Hornsby, C. D. Fisher and W. E. Hall.

Winning safety shoes of their choice were Refugio Martinez and Fred Shoemake.

Fire extinguisher recipients were R. E. Seay, C. W. Weaver, J. A. Tolley and E. R. Johnson.

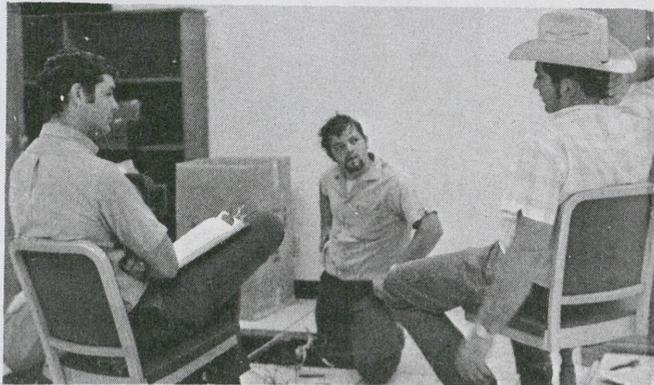
First aid kits were awarded to Jack Mitchell, C. F. Toney, E. M. Ratley and G. R. Buford.

John C. Manley, Ivor Watson, D. B. West and Glen Daley won trouble lights.



"Figgy" Ellis didn't expect a Polaroid camera for his retirement, but he certainly was glad to get one. Kirby Henry, right, made some of the presentations.

UP TO THE MINUTE DETAILS INCLUDED IN UTILITIES CONTROL CENTER



Workmen discuss procedures as they install the miles of cable under the floor of the UCC control room.

(Continued from Page 1.)

Although all of the plant instrumentation will be conventional, the operating consoles are of the type used by NASA in their mission control room. These consoles have only recently been placed on the commercial market.

The main control console which is 18 feet long contains instruments that will present detailed information to the operator besides what is highlighted on the two mimics. Five electric generators will be controlled from the console, two more will be monitored, and the Houston Light and Power connections to the complex will also be controlled from there. Four TV screens will display information from a computer which routinely scans about 400 data points throughout the complex, memorizes the information, and summarizes it into intelligible reports either on TV screens or typewriter. A coaxial cable also ties the computer to a TV screen at the Chemical Plant.

The center has incorporated many things to make it simple and straight forward to operate. For instance, none of the control or status indicators will be lighted unless a malfunction occurs. The ceiling lights may be dimmed so that the operator's eyes need not adjust to external brightness when he looks around the control room.

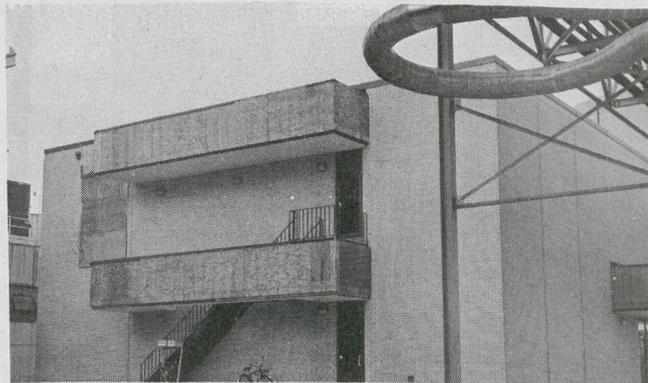
Still under construction, the UCC has required solving some special problems:

1. Miles of cables were installed to the center reaching from the extreme ends of the complex. Some of the cables were as large as 50 pairs and 5,000 feet long while smaller collection cables were as much as 7,000 feet long.

2. Computer experts programmed the XDS Sigma 2 computer to collect and use the vast amount of data on the utilities system and present it on TV screens.

3. Very close cooperation and coordination is required among all departments in both the Chemical Plant and Refinery so that controls of the six utilities can be relocated from the different locations without interrupting the present service.

4. A very comprehensive communications system has been devised for the center. Among its features is the ability to record and transmit automatic taped voice alarm messages for rapid communication. A



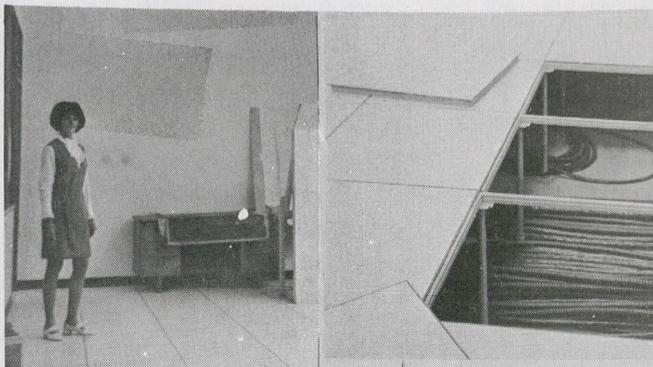
The modern spacious UCC building is the home of four departments. It is located on the site of the old Control Lab. Libby Cassner, Clerk, Treasury, loves to show visitors the modern building with its pastel-colored offices.



single button selection system replaces the present dial system allowing the operator to communicate with 35 different locations rapidly.



Computer expert above ponders the installation of thousands of tiny wires as he programs the XDS computer. Edna Earl Heyen, Senior Analyst, Dispatching, has a new office in UCC.



Renita Preacher, Stenographer, Treasury, says she has done a lot of typing connected with the construction of the modern control room which presently has only mockups of what is to come. At right is a closeup of the cables being installed under the floor.

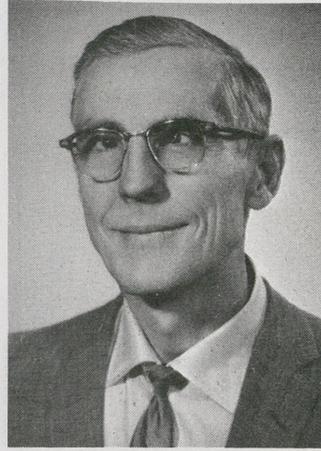
SERVICE ANNIVERSARIES



35 Years
G. Ehrensberger
Expansion Construction



30 Years
R. H. Zapp
Engineering Field



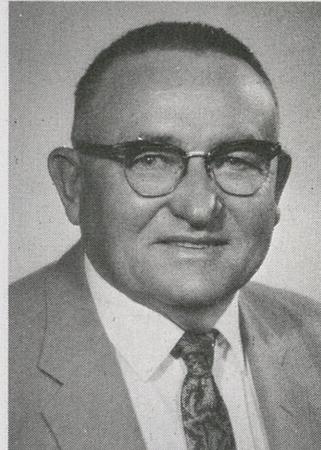
25 Years
T. A. Hiatt
Refinery Lab



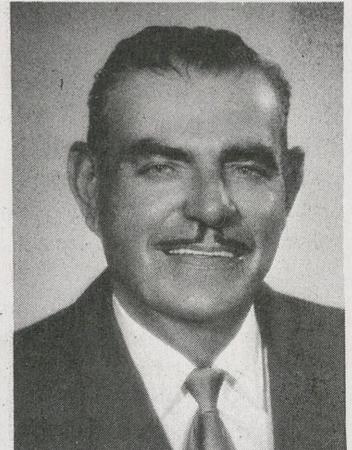
25 Years
S. J. Kent
Research Lab



25 Years
T. H. Lockler
Engineering Field



25 Years
W. F. Mooneyham
Aromatics



25 Years
J. J. Thompson
Engineering Field

CLASSIFIEDS

FOR SALE

WEEKENDER--2-bedroom house completely furnished (all utilities) on beautiful wooded lot. Ninety miles northeast of Houston on private lake near Lake Livingston; excellent fishing; boat included.
Telephone: 473-7357

1962 Dodge station wagon V8, automatic transmission, air conditioned, fair tires, first \$100 takes it.
Telephone: 479-1383

Frigidaire air conditioner, 18,000 BTU (ton & 1/4), 2 1/2 years old. Excellent condition, \$125.
Telephone: 477-5338 after 5 & weekends

3 mud grip tires with wheels, 700x15, in good condition.
Telephone: 645-1155

Pontiac '65 Catalina 2 dr. hardtop, automatic V8, power, good condition. Original owner. \$495.
Telephone: 472-7286

1967 Ken Craft travel trailer, 8'x30', excellent condition, electric brakes, central air and heat, carpeting, easy lift trailer hitch, sway bar, full bath, Frigidaire appliances. \$4200 or \$1500 equity take up payments of \$76.92 a month.
Telephone: Lufkin 854-2216 or Baytown 424-7698

Saddle, 17" padded seat, full double rigging with quick change stirrups, excellent

condition. Cost \$225, sell for \$90.
Telephone: 941-4191

4 black mini-toy poodles, AKC, \$50 each.
Telephone: GR 3-6833

Sears rotary lawnmower, 3 hp 3 cycle engine, runs but needs repair.
Telephone: 944-8845

'70 Bonneville, 455 Braun, all power, automatic transmission, air, radio, 4-dr. hardtop, mag wheels, 1500 miles, \$4400 or \$300 equity and take up \$149.10 monthly payments.
Telephone: Lufkin 854-2216 or Baytown 424-7698

'63 Rambler Ambassador, good tires, air conditioned, radio, heater, V8, red & white, \$600.
Telephone: 479-7394

1963 4-dr. Buick Special V6 (52,000 actual miles), radio, heater, nearly new tires, excellent engine, good condition. Asking \$350, will negotiate.
Telephone: 747-5767

1968 Fabuglas Trident 154, 40 hp Evinrude motor, large wheel trailer, asking price--\$1300.
Telephone: 1-591-4065

GARAGE SALE

Garage sale, October 9-10, 3306 Lafferty, Pasadena, encyclopedias, piano, guns, clothes, dishes, etc.
Telephone: 946-3326