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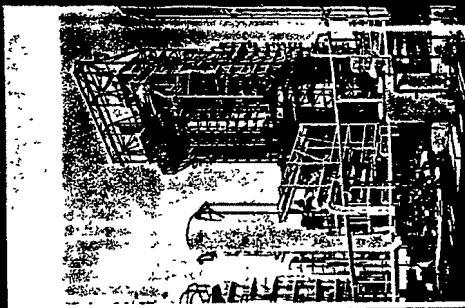
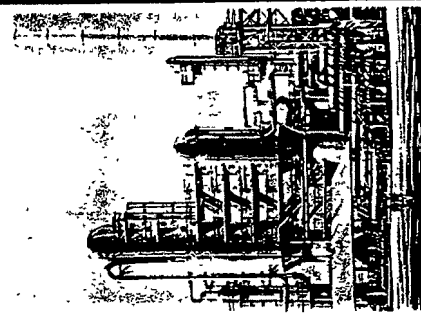
REPINERIES



FROM
PROCESSING

TO
COMPLETION

BECHTEL CORPORATION is
manned and equipped to de-
sign and build refineries of any
size or type the world over.
PROOF—The past performance
of men who are thoroughly ex-
perienced in the many complex
problems that enter into refin-
ery process design, engineering
and construction.



BECHTEL CORPORATION

ENGINEERS AND CONSTRUCTORS

300 CALIFORNIA STREET, SAN FRANCISCO 11, CALIF. NEW YORK



Bechtel Briefs

MARCH

1951

A BUILDER & HIS FAMILY

By ROBERT L. INGRAM

The Power Division

Work of this type, and the engineering and construction of facilities to generate and distribute the additional electric power, later became the function of the firm's Power Division. The concept of this Division grew out of the entire power power development, but oriented specifically with the frequent use of the Power Division, present in the mind of the Power Division, which was the result of the Power Division's chief assistant on its execution was John Kelly, Project Manager. Kelly came from California, where he made an excellent record as Manager of Quality from 1912 on. His "freedom" changes gave a good account of themselves on this three year project, as management expected when Kelly was put in charge of it.

1916: A big year for the process industries

The new year brought heavy activity in construction for industrial chemistry and petroleum refining. By 1916 BBN was well established as one of the major engineering and construction firms in the country, and delivery through process design to construction. In 1916 there were nine new contracts for large chemical plants and refineries, and a number of smaller jobs. The Industrial Division men, fresh from making an excellent record at Tracy, went to work on three major industrial plants. In a return to public concrete attention on the Frisco-Kern Canal, a unit in the (California) Central Valley Project of the United States Bureau of Reclamation. As a group venture through partnership with the J. I. Pomeroy Co., work started on a large break-

water at Coan—Jack Pomeroy's men going back to this old stamping ground where some of their mates had been captured during the war. At Pittsburg, California, the same contractor sponsored group construction of a new impulsive mill and other facilities for Columbia Steel Company where W. Africa had been active earlier.

BBN's process and refinery engineering staff had grown to the point where it was able to handle projects in the petroleum industry with special aid technicians to look them up. Early in 1916 Fred Meyer (whose appointment to the post of Chief Engineer was announced at the close of 1915) returned to the Bechtel organization from Japan. On this trip he headed a team in the Oil Terminal and Refinery Section of the United States Strategic Bombing Survey. (If Fred was BBN's first "refinery" man, the expedition abroad to mark its expansion into and the firm's resources of manpower were continuing to grow.

1946-48: "Gasoline" from coal

From the standpoint of process design, the most interesting 1916 development was contained in a U. S. Bureau of Mines contract. It called for a multimillion dollar demonstration plant to produce synthetic motor fuel from coal. And it was put up at Louisiana, Missouri, where Bechtel-Coups built the war-time Missouri Ordnance Works. During the war, Missouri Ordnance Works was a major engineering work carried out in conjunction with Government specialists. A coal hydrogenation plant never before had been built in this country. There was no precedent for the solution of problems connected with extremely high operating pressures and the flow of liquids and coal paste. Consequently, the design of new and specialized plants reflects credit to engineering and construction experience of Bechtel's Industrial Division.

ently, the design engineers had to develop new equipment. This was a high-powered team of experienced German scientists. Approval of the design was needed to complete the design. Plant construction began in May of 1917, and was carried out under Superintendent Jim Brady. Ray Russell was Project Manager. Some of the equipment was of enormous size, the ninety-ton converter, for instance. A great deal of it required tooling. The plant was its extremely high-pressure (up to 15,000 pounds per square inch) which not only accomplished the necessary process functions but provided a safety margin well above that of European plants.

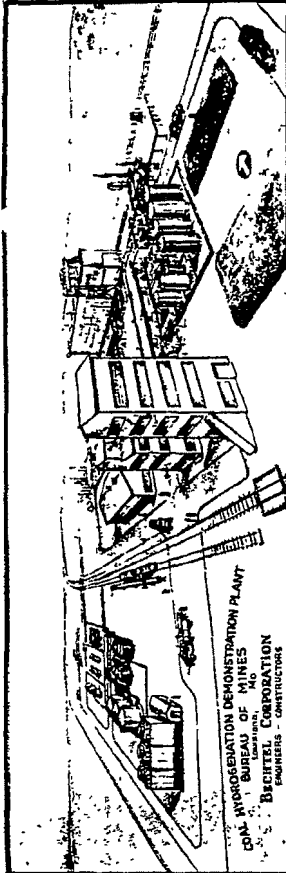
1946: Repeat performance in Missouri

Also at Louisiana, Missouri, but for the Army's enormous ammonia manufacturing facilities at the Missouri Ordnance Works, Bechtel-Coups returned. This was a real convention to peace, enabling a powder-making facility to switch over to the manufacture of agricultural materials.

1916: Action in the Refinery Division

Late in the summer of 1916 work commenced on a sulfonate project for Standard Oil at Richmond. Earlier in the year, an eighteen months program of engineering and construction was undertaken for the same oil company. Captain Lee for Associated at its Ayon, California, refinery; another for Standard at El Segundo, and the third for the same owner at Richmond. Also for Standard, sulphur dioxide and acid treating facilities were built at El Segundo, and extensive alterations made on an alkylate plant near Bakersfield. An alkylate plant near Portland was completed for Shell. For Union Oil, BBN refinery men went where BBN's men before had created one of the earliest refineries. Consequently, why BBN's refinery headquarters in San Francisco took on the appearance of Grand Central Station at five-fifteen.

The industrial men kept pace. On March 15th they received the first contracts for the facilities which manufacture the paper stock and print the Pacific Coast editions of Time, Life and Sunset magazines. These contracts covered precision institutional paper-making equipment in two plants belonging to



COAL HYDROGENATION DEMONSTRATION PLANT
BUREAU OF MINES
BECHTEL CORPORATION
ENGINEERS - CONSTRUCTORS



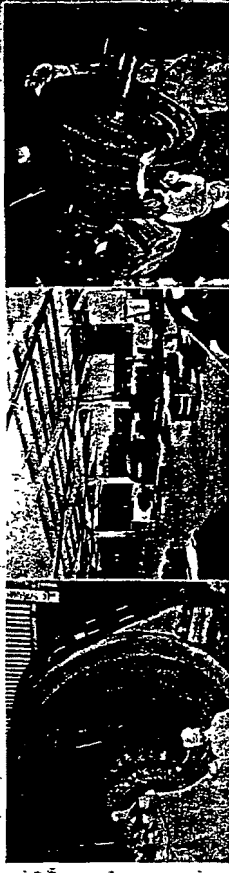
Across these parched hills near Friant, Fresno County, California, will come the 26-ft. concrete inverted siphon to carry water across a canyon for the Central Valley Project. Aerial's lines show approximate location of tube with inlet and outlet. Crew in foreground are blasting.

setting tremendous machinery—problem that yielded to Bechtel experience. When it was complete, a substantial increase had been made in western steel plant capacity.

EDITOR'S NOTE

BECHTEL BROS. is privileged to present in a series of installments "A Builder and His Family," written and copyrighted by Robert L. Ingram.

1945 was another significant year from another standpoint. It ushered in the great expansion program of the first major power contracts in this program for Bechtel Corporation. And the first major power contracts in this program for Bechtel Corporation. And the first major power contracts in this program for Bechtel Corporation. And the first major power contracts in this program for Bechtel Corporation.



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Portraits

George M. Wood finds his foreign experience with Bechtel constantly valuable in his present duties as office manager. Personnel Department began its education program in the Tule River program in 1947. George started working there with the intention of preparing for a second foreign assignment with Bechtel. As the program grew, however, a need arose for an individual to direct the personnel of prospective employees and assist in maintaining suitable relations with the families of men employed overseas.



GEORGE M. WOOD seas. Having served a 515 miles in, 5 f contact on the SARP job at Bat Tanura, George was well prepared to assume these duties and enjoyed them. Since 1949, there was a period of working interspersed with attendance at University of California at Los Angeles, Long Beach Junior College, and a business course at the College of Commerce. While studying, he met Catherine Gamble, and the need of a permanent job became pressing. He brought George to the SARP office in 1955. He got both the job and the girl.

For the following ten years he was employed by Anne Brewster and, for five of those years, worked simultaneously at the San Francisco Conservatory of Music. Ourselves employed as payroll accountant in both places, with supplementary general accounting and cashiering duties, George soon learned that the absence of a personnel department turned the individual preparing and distributing the pay checks into one.

In 1942 he decided to try to convert his interest in books into a means of livelihood, and changed his status from that of customer to employee at San Francisco's New-begun's Book Shop. A chance meeting with a customer of the shop resulted in the offer of the librarian's job to SARP, and he was in the construction business. Arriving at Bat Tanura in December 1944, George soon had the library in operation, and he was assigned to work in the Personnel Department. In June of 1950 he became secretary to John M. Rogers, who was project manager, and continued in that capacity until the completion of SARP in June 1956.

George's two great enthusiasms are personnel work and the Middle East, happily combined on his present job, his ambition is to return to the Middle East on an assignment which will permit him to accompany him. In the meantime, he finds in his home in Mill Valley the perfect setting for enjoying his hobbies of gardening, reading, and music.

Bechtel Corporation Establishes University Scholarships



Left to Right: Peter Rippe, Univ. of California; Robert Falconer, Stanford University; and Leon Turner, Stanford University.

Five scholarships for the academic year 1950-1951, three for students at the University of California and two for Stanford University students, have been established by the Board of Directors of Bechtel Corporation.

Stephen D. Bechtel, President, is a Member of the Council of the California Alumni Association. Many of the firm's key people were educated at one or the other of the two universities.

The three University of California scholars, including the Bechtel Corporation, will be given to students in the College of Engineering, preferably in the Senior year, one each in the fields of study of Engineering, according to the donor's suggestion would be given to a student specializing in Civil, Electrical or Mechanical Engineering, with preference to Senior candidates.

SOMASTIC DOINGS



Bechtel Somatic Division has just completed a pipe line for the Tule River water project. The photograph on the left shows the somatic pipe before it was launched. The photograph on the right shows a barge in the distance pulling the pipe out from the shore.

Walt Sims Cagers

One of the sharpest basketball teams in the West (according to Walt Sims, job 1609 Supr) is the Bechtel quintet up in Atco. Led by high-spirited Claude Holmes, the boys recently chalked up a 45-43 win over the First Ward five after trailing by 11 points midway in the second half.

Sims' doesn't want to go on board on the Atco backseat, but he does say they're ready to play anybody—anytime and anywhere. He adds that it's better to win, since some of the boys are 1 A and "unt bog for the civilian world."



The Somatic Division of Bechtel Corporation has just completed a pipe line for the Tule River water project. The photograph on the left shows the somatic pipe before it was launched. The photograph on the right shows a barge in the distance pulling the pipe out from the shore.

ELECTS TWO EXECUTIVES

W. C. Mullendorp, president of the Southern California Edison Company, announced today (January 19) the election by the Board of Directors of W. L. Crowder and J. F. Davinport as vice presidents of the company.



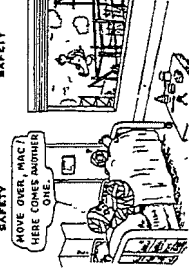
Left: W. L. Crowder, Vice President in charge of engineering and construction, Southern California Edison Company, Los Angeles. Right: J. F. Davinport, Vice President, Southern California Edison Company, Los Angeles.

Mr. Crowder, manager of engineering since 1945, was elected vice president in 1947. He began his career with the Edison Electric Company in 1922 as a draftsman at the famous Edison, Big Creek hydroelectric project in the High Sierra. He became division engineer there in 1924, and came to the general office in Los Angeles in 1928 as transmission engineer. From 1931 to 1937 Mr. Crowder was engineer and senior engineer, Metropolitan Water District. He rejoined the Edison Company in 1937 as a civil engineer and served as chief civil engineer until his appointment as manager of engineering in 1945.

Mr. Davinport has been associated with the company since 1926. In 1929 he became hydro engineer, and in 1931 was appointed superintendent of hydroelectric generation for the company. He was named superintendent of generation in 1937, and assistant manager of operation in 1940.

Following more than four years of military service with the Air Corps in the fields of communications and the U. S. Army, Mr. Davinport returned to the Edison Company as assistant vice president on February 14, 1946.

Mr. W. C. Mullendorp is president of the P. B. Peacock as Assistant Manager of Engineering, Southern California Edison Company. Peacock was project engineer on Big Creek No. 4, and a graduate of Tennessee Polytechnic Institute. He has been with Southern California Edison since 1926, and is a graduate of the University of Washington and has been with Southern California Edison since 1940.



SAFETY MOVE OVER, HERE COME THE BOATS



A former Bechtel office manager, Melrose Capital Frank Perry, who has just returned from Korea for a little holiday check-up, is discussing the landing of the Lumbermen in Inchon with Administrative Manager, Bill Ayres and his former superior, Field Office Administrator, Gene Lepore.

Soho Cat Cracker at No. 1 Refinery Goes on Stream

CLEVELAND OHIO JAN 29 1951 1046A BECHTEL CORP. ATIN HINDMARSH AND ORSELLI EAST UNIT ON STREAM 426 AM TODAY EXPECT TO SUBSTANTIALLY REDUCE SHEA'S ASPHIN QUOTA.

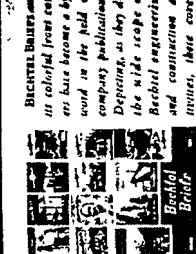
BECHTEL CONSTRUCTORS

JIM BRADY

Thermostatic cracking plant went on stream on January 29. Expanding catalytic cracking capacity to 18,000 barrels of feed stock per day, the new construction is a major step forward in Soho's ability to meet military needs. Part of a company-wide \$100,000,000 expansion and modernization program underway since 1948, modernization of No. 1 Refinery's cat cracking facilities cost \$4,000,000. Began in March 1948, the new plant was completed in March 1951. The plant was 9,000 barrels per day. Thermostatic cracking units into refinery equipment which was originally built in 1944 to produce aviation gasoline for war-time use. Existing fractionating facilities have been revamped and incorporated with the new units. The control room was modernized to meet instrumentation needs, and pumps and exchangers replaced with new units. TCC construction began in March 1948, and was completed in March 1951. The plant, which is operated in conjunction with the catalytic cracking facilities, was modernized by No. 1 Refinery maintenance crews.

Working in excess of three quarters of a million pounds of steel and concrete, the new TCC plant was constructed by Bechtel Constructors, which employed 200 to 300 men on the project. The plant is the nation's largest concrete foundation 70 feet wide by 81 feet long by 5 feet thick. This foundation lies atop a similar mat of concrete formerly placed by the new construction. In construction of the foundation, part was supported on new piling, which creeps to the Jim Brady and his gang, headed by General Superintendent John Sheehan, J. Patton, J. Wolfson, G. Bruno and W. Wilton. Directing the job from San Francisco is Al Orselli, Refinery Division Manager, under V. G. Hindmarsh, Vice President, Refinery Division.

THIS MONTH'S COVER



BECHTEL BUILDERS and their subsidiaries have become a byword in the field of company publication. The wide scope of Bechtel engineering and construction activities, these covers highlight scenes of company construction endeavors. This month, part of a remodeler and for old times sake, Bechtel's covered in film and presents in two parts from a group of its only and most interesting covers of the past three years.

Vol. VI

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