7,000,000 LONG TONS BY 1970

Company Planning Expanded Facilities To Help Meet World Demand For Rubber

Higher standards of living and increasing population will push world rubber consumption to seven million long tons by 1970, industry economists have predicted.

And unless the production of both natural and synthetic rubber is increased sharply by that time, a serious shortage of this vital material could develop.

Shortly after these predictions were made public, president Raymond C. Firestone observed:

"On the basis of these estimates and to help meet the growing demands, our company —one of the world's largest producers of rubber—plans to continue its expansion of both natural and synthetic rubber production facilities."

The company president added that the organization had also developed a new synthetic which could make the United States entirely independent of natural rubber if the need arises.

"Firestone's Coral rubber duplicates the molecular structure of natural rubber and our Diene is an extender which can be used to supplant a large portion of the natural rubber used in tire production."

Analysis of rubber consumption and production over the next ten years indicates that natural rubber production will level off at about two million long tons per year.

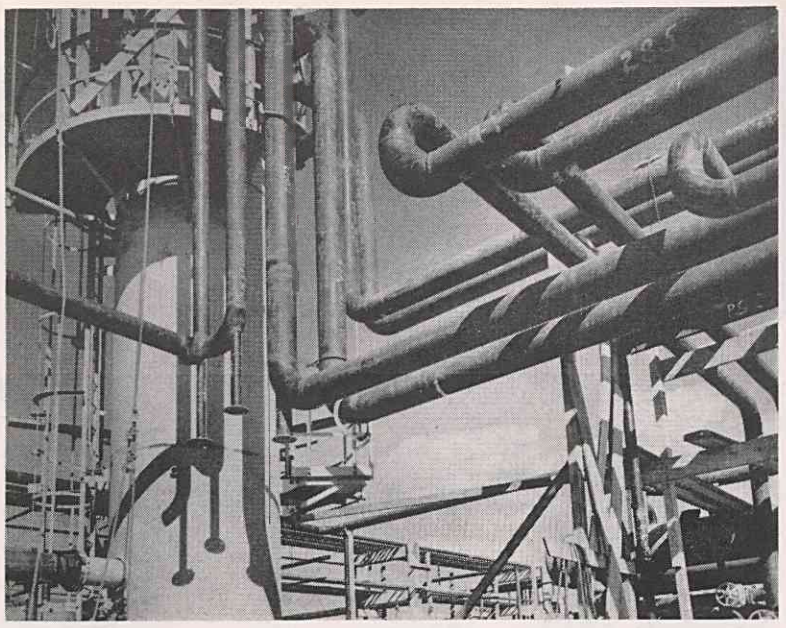
Liberia First Venture In Rubber Production

Firestone, which started its 90,000-acre rubber plantations in Liberia in 1924, has started new plantations in Brazil, Gautemala and the Philippines. Besides this, an extensive replanting program, designed to replace older trees with high-yielding stock, is nearing completion on the Liberian plantations. Firestone last year produced 84 million pounds of rubber from its own plantations in Liberia.

Other American interests now have started plantations to help protect the vital supplies of natural rubber. But, rubber trees require seven to eight years to reach tapping age. It will be that long, in most instances, before the effect of new plantings will be felt in the world rubber markets. These plantations, then, will only partially meet the demand for rubber which will be created in the next ten years.

The gap between consumption and natural rubber production must be filled with synthetic rubber. Production of synthetic will likely more than double during this period.

In 1955, 58.5 per cent of the total rubber consumed in the United States was synthetic. To supply more and better products for expanding markets, the U. S. consumption of synthetic jumped to 66 per cent last year.



PIPES form an unusual pattern at Firestone's Orange (Texas) butadiene plant which supplies butadiene, a liquid gas, for production of synthetic rubber. The multi-million-dollar structure at Orange was completed in 1957.

Synthetic Rubber Output Growing With Firestone

Firestone plants at Lake Charles, La., and Akron, Ohio, have stepped up production capacities to 230,000 long tons of styrene-butadiene type rubber per year. These two installations and the company's butadiene plant at Orange, Texas comprise the most highly-developed synthetic rubber operation of a single company.

Styrene-butadiene rubber has proved superior to natural rubber in passenger car tires. But natural rubber or its equivalent synthetic proves most effective in heavy-duty tires. To fill this need, Firestone scientists during the past ten years developed the two new synthetics, Coral and Diene.

These will play an important role in Firestone's program to increase rubber production during the 1960s. Coral, developed in 1954, is a replacement for natural rubber. Development of a synthetic with the essential properties of natural rubber that could be used for heavy-duty truck tires had been one of the major goals of rubber research for many years. Truck tires made of this synthetic were tested by U. S. Army Ordnance, and met or exceeded all military requirements.

These results were significant because they prove that the nation no longer need be dependent on imported natural rubber in an emergency.

Diene, developed by Firestone research in 1958, is a rubber extender. Tests show it has improved crack resistance, satisfactory running temperatures and greatly improved skid resistance.

To produce these types of rubber, Firestone recently announced plans to build a new plant in Orange, Texas, site of the company's Petrochemical Center. The plant will be able to produce either Coral or Diene rubber—switching from one to the other, as demand requires.

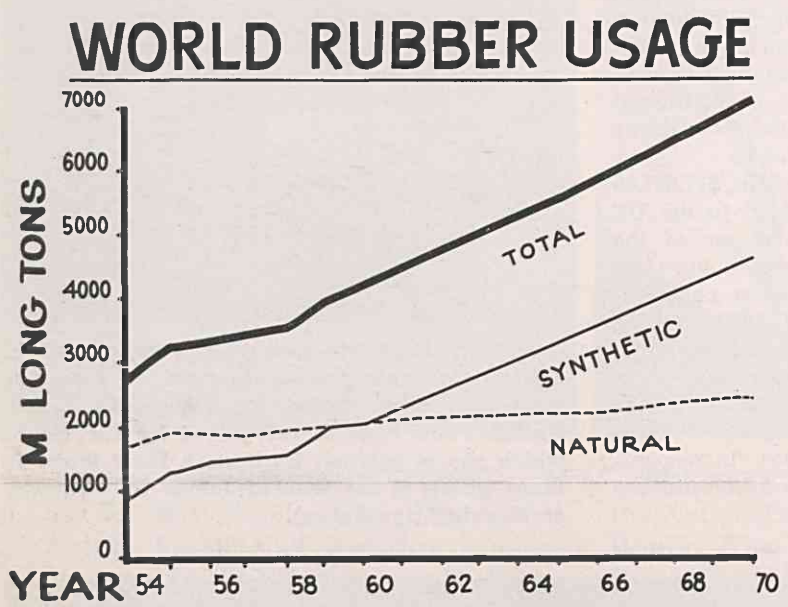


CHART shows forecast demand for rubber. To meet this demand, Firestone continues expansion of its rubber plantations and synthetic rubber-producing facilities.

Booklet On Water Available Free

"Our Growing Water Problems", a publication which deals with the complex issues of public water resource management for diverse and conflicting needs, may be obtained in single copies free from Educational Servicing, National Wildlife Federation, 1412 Sixteenth Street NW, Washington 12, D. C.

FIRESTONE TIRES, WHEELS

Pioneering Jet-Racing Car Out For Record In August

Ray Brock, designer of the world's first jet-driven race car, has announced plans for a try at breaking the British-held land speed record of 394.2 miles an hour. This record was established in 1947 by John Cobb of England, at the Booneville (Utah) Salt Flats.

Mr. Brock, technical director of Hot Rod magazine, said that Dr. Nathan Ostich, Los Angeles physician, would drive the jet car at attempted speeds beyond 500 mph.

The record run will be made at Bonneville in August.

Specially-designed tires and wheels have been developed by the Firestone company for the jet-powered vehicle. Its tires are capable of speeds up to 600 mph.

THE OSTICH machine, in construction since late 1958, has a design capability speed of more than 500 miles an hour. Its engine is a GE turbojet of the type used in B-36 bomber planes.

Streamlined body of the car is 28.5 feet long and 4 feet in diameter. The tube, covered with aluminum, fits snugly around a cage-like steel framework which houses the power plant.

Dr. Ostich, a speed hobbyist with 10 years of driving experience on the Salt Flats, will ride in a cockpit between the front of the engine and the nose cone.

Brock pointed out that jet power alone makes possible speeds of which the turbo car is capable.

"To attempt such speeds with the conventional piston engine is impractical," he said. "A piston-type engine with power of the jet would need to be much larger and vastly more complex."

Tires are the most critical components of the American challenger car. Builders of the jet machine conferred with Firestone in 1958, inquiring if tires could be made to withstand speeds of 500 mph and more.

COMPANY engineers, drawing on Firestone's 50 years of racing experience, went to work to design a tire for speeds up to 600 miles an hour. In late January, these tires were undergoing study in the company's tire-test laboratory. They are 48 inches in diameter, with a 9-inch cross section.

The tires are of nylon cord construction.

Wheels are designed and fabricated from aluminum forgings by Firestone Steel Products Company.

Disc brakes will be used on all four wheels for slowing the car from speeds under 175 mph. High-speed braking will be accomplished by a ribbon-type parachute housed in the tail-section of the vehicle.

MODEL—Brice Warren of Twisting (synthetics) shows a photographed model of the Ostich machine which is constructed around a surplus jet engine from a B-36 bomber. Car has Firestone-built wheels and tires. Brice, one of Gastonia's leading hot-rodders, is president of the local Road Angels club.

JET SEAT—Dr. Nathan Ostich of Los Angeles sits in the driver's compartment of the partially-assembled race car with which he hopes to break the world's land speed record this summer. Ray Brock (right), technical editor of Hot Rod magazine, is the driver's advisor for the racing project.