SCIENCE NEWS

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GASOLINE AND DIESEL OIL OBTAINED FROM NATURAL GAS

GASOLINE and other liquid hydrocarbons may be made from natural gas at a manufacturing cost, for the gasoline, of approximately five cents a gallon, by the so-called Synthol process, according to a statement made by Paul Ryan, of the M. W. Kellogg Company of Jersey City, N. J., in which he described the various technical steps of the process. The natural gas, he states, costs about five cents a thousand cubic feet. Diesel fuel and various chemical compounds are obtained at the same time.

Seven major steps are involved in the process. They are purification, synthesis gas preparation, synthesis reaction, condensation, gas separation, stabilization and fractionation of the liquid hydrocarbon products into gasoline and diesel oil, and the separation and recovery of the liquid chemical compounds.

Sulfur and other deleterious compounds are removed in the purification, the natural gas is converted to carbon monoxide and hydrogen in the synthesis gas preparation step, and in the next step these are converted, in the presence of a selected catalyst under controlled conditions, into the desired hydrocarbons and chemical compounds.

These must be condensed into liquid form in condensers, and in the gas separator the oil layer containing the liquid hydrocarbons is removed from the water layer containing the chemical compounds. The various liquid hydrocarbons are stabilized and fractionated into gasoline and diesel oil in the last step in the process.

The plant to make the liquid hydrocarbons from natural gas should be near large gas reserves because approximately 11,000 cubic feet of gas are required to produce one barrel of liquid hydrocarbons. He stated that the Synthol process of the Kellogg Company presents for some oil companies "interesting postwar possibilities for the economic and profitable development of new uses for an old natural resource."

ITEMS

EVERY one who saw the big meteor flash across the sky on the evening of April 19 is asked to report what they saw so that astronomers can determine how large the fireball was and where the fragments, if it fell to earth, can probably be found. Reports should be sent to Dr. Charles P. Olivier, president of the American Meteor Society, Flower Observatory, Upper Darby, Pa. Each report should tell from where the person saw it, where in the sky the meteor was first seen and last seen, stating how high in the sky and direction, so that its altitude and azimuth or bearing can be calculated. Information on the meteor's train or smoke trail is particularly desired, especially its shape, changes which occurred, and which way it drifted. If any sound was heard which might have come from the meteor, please also report that.

AFTER seeing the miracle which has been performed by American industry during this war, South American young men are turning to the United States rather than Europe for engineering education, according to Anibal Santos, formerly mechanical engineer of Empresa Electrich del Ecuador, Inc., Guayaquil, Ecuador, and now associated with the Combustion Engineering Company, speaking before the American Society of Mechanical Engineers. Only recently have South Americans begun to study engineering in North America. The problems faced by American engineers in Latin America are complicated by the fact that there are relatively few technical men there, as compared with the legal and medical professions.

A NEW aluminum lifeboat that weighs less than a wood boat and only half the weight of a steel boat of the same capacity has been approved by the U. S. Coast Guard for use on American merchant ships. It is resistant to action of such corrosive agents as salt spray, and because of its lightness reduces the weight installed on the upper decks, thereby improving the stability of the ship. Lighter-weight davits may be employed to handle the aluminum boat than those required for a steel or wood boat of the same capacity, since when loaded with the same sea rescue equipment, it weighs less than two and one-half tons. Most standard lifeboats weigh more. The equipment carried includes oars, seats for a large number of men, an axe, provisions for sustaining survivors until they are rescued, and may have an inboard motor.

ALTERNATING current electric motors of small size but tremendous strength which perform heavy-duty control jobs aboard aircraft, such as pumping fuel and air, operating propeller-feathering and wheel-retracting mechanisms, were described here to-day by Ray G. Holt, of Pesco Products Co., Cleveland, at a meeting of the Society of Automotive Engineers. The motors he referred to are three-phase 400-cycle 208-volt. Power packages consisting of small electric motors and attached mechanisms, some of "flea power" size and only an inch in diameter, have been made available for use both with electric and hydraulic aircraft control systems. The power packages are located near the devices they provide the power to operate and help to solve the serious engineering problem of transmitting great power over long distances in military aircraft.

THAT the first section of the Society of Automotive Engineers to be organized outside continental North America has been established in the Hawaiian Islands, has been reported by John A. C. Warner, general manager of the society. The Hawaiian section will be comprised of automotive engineers on Oahu and neighboring islands and active professionally in an area regarded as an important Pacific route junction of postwar air travel. The Society of Automotive Engineers was organized in 1905 to represent the interests of all automotive engineers. The activities encompass design, production and operation of vehicles and aircraft in peacetime, and in wartime the developmental research needed for military materiel produced by the automotive industry.