TECHNOLOGY

Study Device for Fumes

A device that goes on the breather pipe of the crankcase in automobiles is expected to cut the total amount of hydrocarbons emitted by about 33% to 40%.

A SIMPLE, inexpensive way to reduce air pollution caused by automobiles has been proposed to a House of Representatives health subcommittee, but it has nothing to do with a car's exhaust system.

The device is a pipe that a handy mechanic could make. It goes on the breather pipe of the crankcase. This breather pipe under the hood had been relatively ignored while engineers sought a way to cut down on unburned hydrocarbons in auto exhausts with experimental after-burners and catalytic converters, see also SNL, 76:70 and 76:233, 1959.

But now the breather pipe has been identified as a major emitter of hydrocarbons from gasoline.

The new pipe returns these hydrocarbons to the engine for burning.

A device the Public Health Service has been testing has been estimated to cost $1.99. Rep. Kenneth Roberts (D.-Ala.) and Senator Richard L. Neuberger (D.-Ore.) have referred to a model that would cost a dollar or less factory-installed in new cars.

The president of the Automobile Manufacturers Association, L. L. Colbert, has indicated the device would be offered as optional equipment on all 1961 cars. An industry spokesman said the device would cost $10 installed, not $1.99.

There are no patent problems because automobile manufacturers have agreed to share all devices to reduce air pollution.

The pipe, however, is only a beginning. It is thought to reduce the total amount of hydrocarbons emitted by an engine by about 33% to 40%. It may have no effect on specific hydrocarbons found in exhaust gases and suspected of producing cancer.

Greater reduction of hydrocarbons—by as much as two-thirds—would result if motorists kept their cars in good running order, a Chrysler Corporation study shows. Chrysler engineers compared the exhaust gases of 300 Los Angeles cars chosen at random with their own fleet of cars, which receive a complete motor tune-up each 5,000 miles.

(The engineers also found that proper maintenance would improve fuel economy from 15% to 20%.)

As for the status of devices that reduce the amount of hydrocarbons from cars' exhaust pipes, some of these are reported to remove from 80% to 90%. But the cost ranges from $100 upwards per unit.

Science News Letter, March 5, 1960

GEOLOGY

Lack of Funds Hampers Mohole

THE FINANCIAL prospects for Mohole—the U.S. project to drill deep into the ocean's floor—are rather grim. A direct appropriation by Congress appears out of the question.

Gordon G. Lill, chairman of the American Miscellaneous Society (AMSOC) committee which is running the Mohole project, told SCIENCE SERVICE that Mohole has enough money to stay in business but will need more money for preparatory work this summer.

Noting that Congressional funds were out of the question, Mr. Lill said, "If we get any money for the summer, it will have to come from the National Science Foundation or from private funds." The Federal NSF, however, has hosts of projects clamoring at its doors for aid and may not be able to deal generously with Mohole.

Mohole is a project to drill through the earth's crust to its plastic core. The crust is thinner under the ocean so the work will be done from a ship.

Two areas are being considered. One is near Puerto Rico; the other is off Mexico's Pacific Coast near the Guadalupe and Clipperton Islands.

It has been noted that experts' references to the site speak more and more of the Pacific. A recent scientific publication speaks of when the Mohole "is drilled through the floor of the Pacific" and does not even mention the Atlantic site.

But Mr. Lill says the committee on site selection has not finished its deliberation. Even then, the decision will be debated by project leaders.

The evolutionist Darwin was perhaps the first man to propose ocean drilling. He hoped to find clues to life's earliest forms.

The present Mohole project, however, was proposed by members of the American Miscellaneous Society, a group formed in 1952.

Because American Miscellaneous Society has scientists representing various disciplines, the society is a fine one for a complicated project like Mohole.

Science News Letter, March 5, 1960

BIOLOGY

Blue Haze Is Petroleum From Living Plants

THE BLUE HAZE seen over vegetated areas on a warm summer day is actually petroleum in the process of formation, Dr. Fritz W. Went of the Missouri Botanical Gardens, St. Louis, reports. The haze is caused by a layer of asphaltic and bituminous particles created by hundreds of millions of tons of volatile hydrocarbons and near-hydrocarbons expelled into the atmosphere annually by living plants. These particles, Dr. Went reported in the Proceedings of the National Academy of Sciences, 46: 212, 1960, eventually rain down on the earth and, in time, form petroleum. Dr. Went suggested that the particles influence the weather and serve to regulate plant growth.

Science News Letter, March 5, 1960

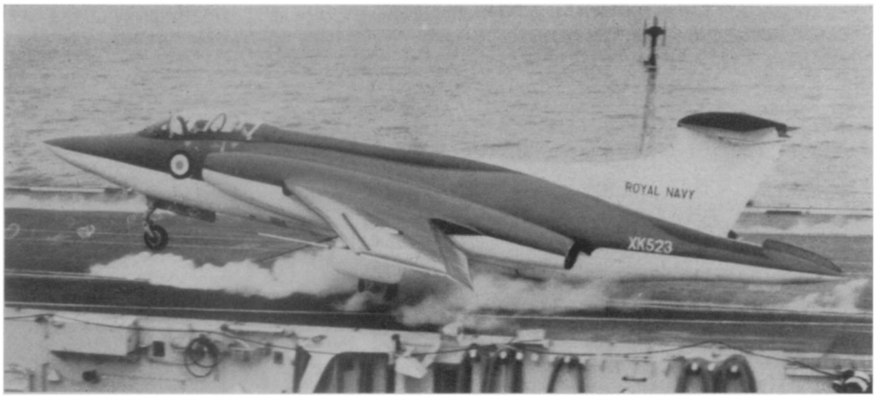
TECHNOLOGY

Antibody Molecules Are Photographed

See Front Cover

AN ELECTRON microscope technique has enabled scientists to take pictures of molecules of antibodies, a substance in the blood that fights disease-produicng bacteria. The photographs were made through the work of Drs. Alfred Nisonoff and David Pressman, both of Roswell Park Memorial Institute, Buffalo, N. Y., and Dr. C. E. Hall and H. S. Slayter, both of the Massachusetts Institute of Technology. A picture of rabbit antibody, as seen on the cover of this week's SCIENCE NEWS LETTER, was obtained by spraying an antibody solution on a mica surface and then treating the surface with platinum, causing the tiny platinum particles to pile up against the antibody molecules like snowdrifts against a fence.

Science News Letter, March 5, 1960



BLACKBURN NA. 39—This British jet plane is making landing trials on the deck of H.M.S. Victorious. It can carry nuclear or conventional weapons. Two de Havilland Gyron Junior jets provide its power.