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CHEMISTRY

Ways to Save Helium

EVERY DAY millions of cubic feet of helium, one of our most precious natural resources, are wasted, and Congress is considering bills aimed at conserving this basic chemical element.

It has been proposed that 12 new extraction plants be built soon, either by Government or private industry, to begin immediate extraction of helium from natural gas. In this way, it is estimated, 52 billion cubic feet of helium, which otherwise would be wasted, could be saved over the next 25 years. It is proposed that this extracted helium should be stockpiled underground in the Government-owned Cliffside gas field near Amarillo, Texas.

It is also estimated that the conservation project would pay for itself within this period of 25 years.

Suggestions along these lines were made by Secretary of the Interior Fred A. Seaton, and are now incorporated in four bills being studied by the House of Representatives' Committee on Interior and Insular Affairs.

Helium occurs as a minor constituent of natural gas, and when this gas is burned in furnaces and kitchen stoves, the helium is lost to the atmosphere. The natural gas from the Texas and Oklahoma panhandle regions and from Kansas contains up to two percent of helium. This has been the source of helium for the Western world since World War I, and is still the only large-scale source in the Western world. The demand for helium is increasing day by day, and it has become clear that the

U.S. must act quickly to conserve what reserves there are.

Helium production now is about 635,000,000 cubic feet a year. This presently exceeds the demand, but the demand is expected to rise and overtake the present supply by 1962.

Helium is used in balloons, in shielded arc welding, and in missile research mainly, although there are many other smaller scale uses. However, helium gas is especially suitable for use in gas-cooled atomic reactors, and the demand is expected to rise rapidly when these are operational in the U.S.

Helium is extracted from natural gas by a freezing process which liquefies everything except helium, the lowest boiling point gas of all, followed by a scrubbing process using liquid nitrogen.

Science News Letter, April 30, 1960

CHEMISTRY

Oil Can Be Stored Five Years in Tropics

A SYNTHETIC jet plane oil that can be stored in tropical areas for five years without deteriorating has been developed.

It is believed to have the highest storage stability of any jet oil ever developed and is now being supplied to the military in large quantities.

Developed by Esso Research and Engineering Co., Linden, N.J., the new oil not only conforms with current military specifications but is expected to meet even more stringent requirements now being established.

The Air Force requires that an oil retain fluidity and ability to lubricate at engine temperatures averaging around 300 degrees Fahrenheit. The oils must also function properly when a plane's engine is started in the arctic at 65 degrees below zero Fahrenheit.

In addition to remaining stable at extremes of temperature, jet oils must be non-corrosive to the variety of metals used in today's turbine engines, including copper, steel, silver, lead, aluminum alloy and magnesium alloy.

Science News Letter, April 30, 1960

MEDICINE

Congenital Heart Defects May Be Aided by Surgery

EACH YEAR an estimated 30,000 to 40,000 American children are born with congenital heart defects. Thanks to rapid advances in heart surgery, four out of five such children can now be helped by various operations. In its new booklet, "If Your Child Has A Congenital Heart Defect," the American Heart Association tells parents that many congenital heart defects are neither as rare nor as hopeless as they were once thought to be.

Science News Letter, April 30, 1960