SHOW BRASS TO BE RADIOACTIVE

Common brass is radioactive matter, according to Dr. Robert A. Millikan, director of the Norman Bridge Laboratory of Physics of the California Institute of Technology, in a statement following recent scientific experiments conducted in brass apparatus placed several fathoms deep in alpine lake waters. This conclusion comes as a by-product of the epochal discoveries of the activities of high-frequency cosmic rays. Incidentally, Dr. Millikan suspects that all matter is capable of spontaneous breakdown, or radioactive decomposition, though evidence in most cases is naturally lacking.

By immersing electroscopes shielded by brass and zinc containers, far down in the icy waters of Muir Lake in the high Sierras, Dr. Millikan was able to shut out even the highly penetrant cosmic rays then under observation. In spite of the reasonable assurance that the lake water, which is merely pure melted snow, contained no radium, it was found that the electroscopes were slowly discharged, showing that both the copper and the zinc in the instruments were slowly disintegrating at a rate fast enough to emit electromagnetic energy in the form needed to effect the electroscope.

Radioactivity - or the transformation of matter into a new species of matter plus new energy - has been considered a special prerogative of a few freak elements, notably radium, uranium and thorium. It now appears probable that the whele gamut of elements carries such possibilities within one grand system of evolution of matter.

CADMIUM PLATING PROTECTS STEEL

Cadium plating is as effective in preserving iron and steel from corrosion as zinc, metallurgists at the U. S. Bureau of Standards find.

Zinc plating or "electrogalvanizing" is especially valuable in commercial processes because it continues to act as a protection to the underlying iron or steel even when partially worn away. This is the result of an electro-chemical reaction between the base metal and the coating. The two in contact with a liquid such as a water solution of any chemical salt act like a wet battery. Automobile parts subject to corrosion, such as rims, nuts and bolts, are common examples of electrogalvanized iron.

Cadmium has been suggested for use in this way but it was not previously known just how it would react. The experiments carried out in the metallurgical division by H. S. Rawdon have demonstrated that it behaves in much the same way as zinc, with some advantages and some drawbacks.

It is less readily attacked by air and moisture and in consequence stays bright longer than zinc. It could suitably replace nickel plating in many places and it would give much more lasting protection to the iron or steel base. Likewise a coating of cadmium will last longer than a coating of zinc of the same thickness. It has, however, the serious disadvantage of being expensive to prepare. It is possible that it may be made more cheaply if the demand is ever sufficient to stimulate large quantity production.

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