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LEAD INDUSTRIES ASSOCIATION
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FOR IMMEDIATE RELEASE

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SPARKS TO FLY IN LEAD DEMONSTRATION
AT DESIGN ENGINEERING SHOW

Flying sparks, silent sound, and "free" electrical power from waste heat will be three of the attractions at the Lead Industries Association exhibit (booth 111) at the Design Engineering Show and ASME Conference at Detroit's Cobo Hall on May 22-25, 1961.

The flying sparks will come from a candy-bar-size device called a "spark pump." Built around two small pellets of lead silicate-titanate, this piezoelectric generator produces a 20,000 volt spark when its actuating lever is depressed. Design specialists in gasoline engines will be interested to know that the device is already at work replacing the magneto, coil, points and condenser in small engines.

The same versatile piezoelectric ceramic material can be used to change electric power to mechanical power as well. This will be shown with "silent" sound -- waves of ultrasound pitched so high that the ear can not detect them. A small ultrasonic cleaning device, similar to those used industrially, will be in operation at the booth. Its leaded ceramic transducers will make 200 watts of sound power available to clean eyeglasses, jewelry, and small precision parts.

Another sort of generator will convert heat to electric power directly, without any moving parts. This is a lead-telluride thermoelectric device which can be used to derive power from waste heat sources such as furnace flues, automobile exhaust manifolds, etc. Such power is essentially free since the heat in the source would ordinarily go to waste.

Still other features of the exhibit will be a bucket of noise - a lead enclosure containing a noise source to show lead's sound stopping power. The raucous buzz drops to barely audible levels as soon as the lead container's lid is replaced.

Other lead products and recent developments of lead technology will be available for inspection and study by design engineers too. These include leaded ceramic finishes for glass, steel, magnesium and aluminum, lead nuclear shielding, data concerning lead's acoustical properties, samples of and data about lead anodes for corrosion protection, lead-acid storage batteries, and two novel dry bearings employing leaded Teflon and lead monoxide ceramics.