

BULLETIN NO. 174

October 6, 1967

ANTI-KNOCK COMPOUNDS AT PORTO VESME -- AMMI Metallurgica Sarda will participate in the establishment of a tetraethyl and tetramethyl anti-knock additive plant on the Sardinian coast it was announced in the August 21, 1967 issue of Metal Bulletin. The project will provide a local outlet for lead produced in Sarda's new Imperial Smelting Furnace at San Antioco. No consumption figures have been released, but a similar project at Thessalonika, Greece, was expected to consume some 5,000 tons of lead yearly. This will be the second anti-knock compound plant in the Eastern Mediterranean area according to the report.

METALLIC FUME DETECTOR -- Mr. H. J. Lucan-Tooth, Managing Director, Telsec Instruments, Ltd., Sandy Lane West, Littlemore, Oxford, England, has announced the availability of a portable instrument which will measure traces of lead, cadmium, chromium and other metals down to 0.05 mg. per cubic meter of air. Light beam from a hollow cathode lamp supplies an ultra violet light characteristic of the metal to be analyzed. The beam is chopped and directed through a gas flame to a monochromator and photomultiplier which measures the light intensity. If any atoms of the metal to be checked are in the flame, they will attenuate the light beam, and attenuation is directly proportional to concentration. The instrument was developed by the British Non-Ferrous Metals Research Association to detect lead or cadmium in foundry atmospheres, however, the detector can be adapted to measure traces of numerous other metals.

LEAD AND ZINC FROM THE YUKON -- Anvil Mining Corporation, Ltd., jointly owned by Cyprus Mining Corp. & Dynasty Explorations Ltd., has announced its intent to proceed with a \$56,000,000 construction program to produce lead and zinc concentrates from its mine in the Yukon territory of Canada, says American Metal Market of Tuesday, August 29, 1967. First delivery of concentrates are scheduled for late 1969. The lead/zinc ore will be mined by open pit method. Anvil has signed sales contracts with Mitsui Mining and Smelting Co. Ltd., and Toho Zinc Co. Ltd., in Japan for the total mine output over an 8 year period.

MOTHERS' LITTLE HELPER -- According to an article in the August 29, 1967 issue of American Metal Market, lead bismuth alloys are employed in a pop-up cooking timer that visually indicates when meat is cooked to its succulent best. When the breast meat in a turkey for example reaches the melting temperature of the alloy, the meat is cooked. The alloy then releases a spring and up pops a red indicator signaling that the turkey is ready to be served. Called the Dun-Rite Timer, it has been tested and approved for use by the Department of Agriculture.

METAL POWDER INFORMATION -- Franklin Institute has announced the formation of a Metal Powder Technical Information Center according to an article in the Sept. 1, 1967 issue of American Metal Market. The object of the information center is to gather, organize, and transmit useful technical literature in response to inquiries.

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submitted by firms engaged in that industry. The service is provided at no cost.

TRYING TO MAKE IT LOOK LIKE LEAD?? -- Alcoa has recently announced a new cable coatings development according to the September 1, 1967 issue of American Metal Market. They are going that "extra mile" to support the utility industry and the Government in the beautification of overhead electric facilities. Alcoa's contribution is a polyvinyl chloride insulation which they call "sky gray". Reportedly, the shade was carefully selected to blend into the sky and enhance appearance of overhead wires. Perhaps they should try lead.

ETHYL AROUND THE WORLD -- An interesting article in the summer issue of Ethyl News describes a new multi million dollar tetraethyl and tetramethyl manufacturing plant under construction at Tokuyama, a petrochemical manufacturing seaport in Southwestern Japan. When completed in early 1969, the plant will supply anti-knock needs for gasoline for some of the 8,000,000 gasoline powered vehicles estimated to travel on the highways and roads of Japan.

THE PLACE OF THE IMPERIAL SMELTING PROCESS IN NON-FERROUS METALLURGY -- An interesting article under this title appears in the August 1967 Journal of Metals. It states that last year the Imperial Smelting Furnace accounted for 25% of world lead production. Location of the 9 ISF's is given and their operations are described individually. A look is taken at future development in the process, and use of computerized controls.

ROLLING WITH ULTRASONICS -- The Westinghouse Research Laboratories at Pittsburgh have found that ultrasonics considerably reduce the load needed to roll metals. Using frequencies around 20,000 cycles per second, they report reduction in rolling force of up to 65% have been accomplished with metals such as lead, aluminum, and copper. A brief announcement of this development appears in the September 1, 1967 issue of Industrial Research.

NEW TERNE FACILITIES ANNOUNCED BY APPALACHIAN STEEL CORP. -- An article in the September 11, 1967 issue of American Metal Market states that Appalachian Steel Corp. has acquired additional equipment and new facilities at its Elizabeth, New Jersey plant for the production of hot dipped terne plate. It will produce various coating thicknesses of terne plate of commercial grade including Special Coated Manufacturing Ternes, a product which U. S. Steel and Wheeling recently discontinued.

THE BATTLE FOR THE RADIATOR -- An article in the June 5, 1967 issue of Steel says the copper industry is not about to turn the automotive radiator market over to aluminum without a fight. Indeed, many new radiator designs and fabrication techniques are being tested by the International Copper Research Association, Inc. (INCRA). Lead alloy solder is necessarily involved in this fight too. An aluminum radiator would, in all likelihood, not use solder in its construction. Steel says other means for joining copper radiators are also being explored. INCRA is hopeful of retaining the copper radiator and some progress is reported in development of lead-tin solders with better creep properties at elevated temperatures.

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ELECTRIC CARS--HOPE SPRINGS ETERNAL -- This is the appropriate title of a comprehensive piece done on the subject in the April edition of IEEE Spectrum, official organ of The Institute of Electrical and Electronics Engineers. Of the thousands of words written on electric cars in recent months, we think this article is one of the most objective and best documented that we have read. Some of our praise lies in the fact, no doubt, that our staff was the first consulted by the writer when he began to research for the story; thus, we were able to influence the direction along rational lines, and credit is given at the end of the article. We can furnish a copy upon request.

ELECTRIC TRUCK RODEOS -- are still kicking up dust, and the latest was in Akron, Ohio, on May 23 and 24. The four electric utilities serving northern Ohio sponsored the affair held in Ohio Edison's Fairlawn Service Center, and more than 800 decision-maker industrialists attended. Thousands of dollars worth of battery-powered vehicles were sold right on the floor and many solid prospects gained. Show business, if done properly, is still hard to beat!

THE MUCH-HERALDED FORD ELECTRIC CAR -- made its debut in England on June 8 -- powered by lead-acid batteries. Called the "Comuta," the car is not intended as a production model for marketing purposes, but will be used in extensive tests in England and at the Ford Research Center in Dearborn, Michigan. Four conventional 12 volt lead-acid batteries power the two 5 hp motors, one on each rear wheel. Reaction to the announcement was somewhat mixed here and abroad, since not much mention was made of the exotic sodium-sulfur battery so highly touted in Ford's sensational news release at a meeting of government officials in Washington a year or so ago. The statement was simply made that when more sophisticated batteries become available they will be adapted to the vehicle, or its successor. Other electrics recently announced in the U.S. as being produced for testing are the Westinghouse "Markette" and Electric Fuel Propulsions' "Mars II."

MACHINABILITY--OLD STORY, NEW ALLOY -- Addition of small quantities of lead to alloys to enhance their machinability is an old story, but is still making news. Latest material to profit by lead's internal lubrication is beryllium-copper. The Beryllium Corporation has announced a new alloy with 0.07 to 1.0 per cent lead, according to American Metal Market of June 7, which is not only more machinable, but can be extruded without cracking. High speed production potential for the new alloy has found it a place in manufacture of the ball point holder of ball point pens.

MOTIVE POWER BATTERY CAMPAIGN -- Recent activities by L.I.A.'s staff in this campaign include a paper given on "Batteries and Battery Uses" at the Power Use Section of the Tennessee Valley Public Power Association, in Memphis, an exhibit of lead-acid battery-powered farm machinery at the Annual Conference of the Farm Electrification Council at Dallas, and participation in three fork-truck demonstrations in the San Francisco Bay area. Incidentally, the Dallas exhibit included three electric cars: the Westinghouse "Markete", Electric Fuel Propulsion's "Mars II", and West Penn Power's "Allectric".

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American Metal Market, 525 W. 42nd Street, New York 10036	\$36.00 yearly
Ethyl News, Ethyl Corporation, 100 Park Avenue, New York 10017	no charge quarterly
IEEE Spectrum, Institute of Electrical and Electronics Engineers 345 E. 47th Street, New York	\$18.00 non-members
Industrial Research 9 E. 41st Street, New York City	\$14.00 yearly
Journal of Metals 345 E. 47th Street, New York 10017	\$ 1.50 yearly
Metals Bulletin, Metal Bulletin Ltd., 46 Wigmore St. London, W.1	\$12 10s. yearly
Steel, The Penton Publishing Co., Penton Bldg., Cleveland, Ohio	\$.50

<u>MEETING OR SHOW</u>	<u>LOCATION AND DATE</u>	<u>SPONSORING ORGANIZATION</u>
Fall Meeting of the Electrochemical Society	October 8-13 Phoenix, Arizona Sheraton Towers Hotel	Electrochemical Society 30 East 42nd Street New York, New York
Non-Ferrous Founders Society	October 11-13 The Greenbrier White Sulphur Springs West Virginia	Non-Ferrous Founders Soc. 14600 Detroit Ave. Cleveland, Ohio 44107
Nat'l. Metal Exposition	October 16-19 Cleveland, Ohio Cleveland Convention Ctr.	American Society for Metals Metals Park, Ohio
Annual Fall Meeting of the Metallurgical Society of A.I.M.E.	October 16-20	Metallurgical Society of the Amer. Institute of Mining, Metallurgical & Petroleum Engineers 345 E. 47th St., N.Y.C.
American Ceramic Society 20th Pacific Coast Regional Meeting	November 1-4 San Francisco Hilton	American Ceramic Soc. High Street Columbus, Ohio
Joint Meeting of the Amer. Nuclear Society and the Atomic Industrial Forum	November 5-9 Chicago, Illinois Conrad Hilton Hotel	American Nuclear Soc. 244 East Ogden Avenue Hinsdale, Illinois
Exposition of Chemical Industries	Nov. 27- Dec. 1 New York, New York	Internat'l. Exposition Co. 200 Park Avenue New York, New York
National Die Casting Exposition & Congress	November 4-7, 1968 Detroit, Michigan	American Die Casting Inst. 366 Madison Avenue New York, New York 10017

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