



ecycling has become a significant issue for more and more industries as they realize the importance of preserving our limited natural resources. Always ahead of the curve, East Penn Manufacturing Company began recycling long before the practice was mandated by federal and state governments.

Since our earliest days in 1946, East Penn, an industry leader of innovative battery manufacturing technology, has made safe recycling an everyday practice. We opened our doors as a battery rebuilding company, cleaning and repairing old batteries for reuse. More than fifty years later, we operate the industry's most technologically advanced recycling facilities.

An EPA permitted secondary lead smelter and refinery, the industry's first acid reclamation plant, and a state-of-the-art water treatment facility are all located at our single-site manufacturing facility. Our on-site **Environmental Health & Safety Center** conducts blood-lead level screenings and air testing, and oversees several safety and conservation programs to ensure the health of our employees and our local community. Surrounded by thousands of acres of fertile farmland, we have a responsibility to preserve our environment. Our modern facilities make East Penn the most environmentally conscious and proactive battery manufacturer in the world.

Let's take a closer look at East Penn's Environmental Protection Plan... **OUR SECONDARY LEAD SMELTER** is in regulatory compliance with the U.S. EPA and the Pennsylvania DEP, and has been chosen as **a model for the lead recycling industry.** In this state-of-the-art facility, we recycle virtually 100 percent of every used lead-acid battery brought to our plant site...over 20 truckloads a day!

The batteries are collected, dismantled and separated. The lead is smelted, then refined. The plastic jars, cases and covers are cleaned, ground, extruded and molded into new plastic parts in our on-site injection molding division.

The acid is reclaimed in our **Acid Reclamation Plant**, the first in the industry. As a matter of fact, East Penn holds the exclusive patents to a unique acid reclamation process. We use millions of gallons of clean, reclaimed acid in our new batteries, avoiding potentially hazardous acid disposal.

We even trap the sulfur fumes created during lead smelting and process them into a liquid fertilizer solution. This solution is shipped to fertilizer manufacturers.

Our closed-loop system is automated and computer-controlled, with no hazardous emissions. We even collect heat from our furnace and use it to warm water. This heated water is used in a radiator system that efficiently heats other areas of the building in cold weather.

East Penn's dedication to safe battery recycling means you don't need to concern yourself with improper battery disposal, now or in the future. Using our recycling facility, you'll never have to worry about hefty fines, penalties or paperwork burdens associated with hazardous waste disposal laws.



RECYCLING DOESN'T JUST GO FOR BATTERIES AT EAST PENN. We also treat and

reuse wastewater from our manufacturing plants in our ultramodern Wastewater Distillation and Treatment Plant. Our exclusively patented system of distillation, reverse osmosis, neutralization, co-precipitation and salt crystalization, produces water that is suitable for 100 percent reuse by our production plants. This system not only reclaims all of our process wastewater, but reduces our groundwater use by over 100,000 gallons per day!

We also collect paper, cardboard, plastic, used oil, aluminum cans and glass bottles generated from our plants, offices and lunchrooms, and properly recycle them. East Penn goes to great lengths in educating and communicating to our employees the importance of recycling and proper recycling methods.



POLLUTION PREVENTION has always been practiced at East Penn. We were one of the first companies in the nation to install a **scrubber unit**, which "scrubs" gases before releasing them into the atmosphere. Our scrubber eliminates sulfur dioxide emissions, which contribute to "acid rain." We also monitor the air around our plant site from six air

testing stations. East Penn's air readings have always been, and continue to be, well below the government-regulated standards. Despite a steady increase in lead consumption, East Penn has taken pride in a continuous decline of our ambient emissions.

Testing our air, keeping our entire site clean, and recycling our waste products are just a few ways
East Penn eliminates pollution and benefits our neighboring community.

While recycling and environmental protection are important, East Penn is equally concerned with the health and safety of our employees. Because of the potential for lead exposure, we constantly **monitor our employee's blood-lead levels** to be sure they remain within healthy parameters. These levels, companywide, are always well below OSHA's maximum allowable standards.

EAST PENN HAS WON SEVERAL AWARDS

for its environmental health & safety efforts. The American Society of Safety Engineers (ASSE)

has awarded East Penn its prestigious Industrial Safety Award. We have also received the Governor's Award for Outstanding Environmental Excellence (property)

Excellence (sponsored by Pennsylvania's Dept. of

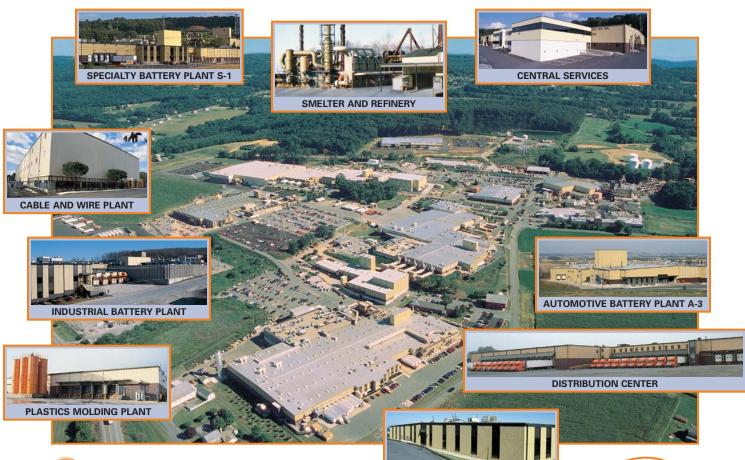
Environmental Protection), and several Manufacturer's Association of Berks County achievement awards.

In a 1999 safety audit, our smelter became the first in the nation to be accredited STAR status, through OSHA's Voluntary Protection Program. This demonstrates our commitment to recycling and workplace safety. Protecting the health and safety of its employees and surrounding community is a responsibility that East Penn does not take lightly. We believe that it is the skill and ingenuity of our people that keep our company on the global threshold of the battery market, manufacturing the quality products you trust and depend on.

Establishing and maintaining the highest level of quality products and service to keep our customers coming back, year after year is what East Penn's people do best.



World's Largest and Most Modern Single-Site Battery Manufacturing Facility



ince 1946, East Penn has been producing high quality batteries and battery accessories for the automotive, commercial, marine, industrial, stationary and specialty markets. A progressive company committed to the future, East Penn operates the largest single-site manufacturing facility in the industry. To keep up with the increasing demand for our high quality products, East Penn is pursuing an aggressive expansion plan. In fact, our new high-tech facilities and computer monitoring and control systems have made us the industry's most technologically advanced battery manufacturer. Deka batteries and accessories are produced at a huge single-site manufacturing plant, pictured above. Facilities at this over 480-acre site include a wire, cable and diversified products plant, three automotive battery plants, an industrial battery plant, a specialty battery plant, a state-of-the-art oxide facility, an acid reclamation plant, a modern technical center, an

EPA permitted lead smelter and refinery, a pilot plant, two water purification plants, a fully equipped machine shop, a fleet repair and maintenance garage, plus dozens of other support facilities.

KELLER TECHNICAL CENTER

East Penn's innovative computerintegrated manufacturing techniques, combined with more than 250 quality assurance checks, ensure that every QUALITY SYSTEM CERTIFIED:
ISO 9001
QS 9000
WIRE & CABLE DIVISION:
ISO 14001

Deka battery and accessory meets our rigid quality and performance standards. Staffed with a long-term management team, East Penn is an independent company dedicated to producing world-class products, delivered on time when and where they're needed for complete customer satisfaction.

"POWERED FOR PERFORMANCE"TM

EAST PENN manufacturing co., inc.

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EAST PENN'S CLOSED LOOP APPROACH TO ENVIRONMENTAL PROTECTION



pent lead-acid batteries are fed into a massive battery breaker which separates the used lead, plastic

USED LEAD

USED **PLASTIC** PLASTIC

RECLAMATION

USED ACID



E.P.A.-permitted facility.







PARTICLES

SULFUR

FUMES

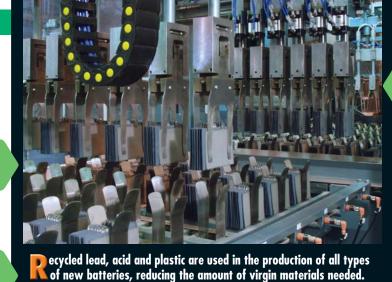
LEAD

Inder tight computer controls, the smelted lead goes to the refinery where it is placed in kettles, combined with reagents, and alloyed into lead for use in new batteries.



LEAD

PARTICLES



STATIONARY USER

sed plastic is reclaimed and molded into cases

and parts for new batteries.

INDUSTRIAL USER

CONSUMER

AGENT DISTRIBUTOR

INDUSTRIAL

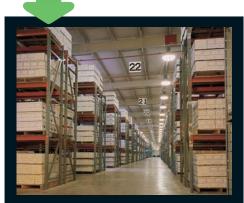
RESELLER



ast Penn produces liquid fertilizer from the sulfur fumes trapped during lead smelting. This fertilizer is shipped to fertilizer manufacturers.

LIQUID **FERTILIZER** STORAGE

FERTILIZER MANUFACTURER



east Penn is a leading manufacturer of batteries and accessories for the stationary, standby, automotive, industrial, commercial, marine and specialty markets. ur distribution center holds over half a million lead-acid batteries. We use sophisticated "real-time" order processing computers, laser scanning and bar code technology to track inventory.

HARD AND

SOFT LEAD

through various manufacturing processes everyday. Much of this wastewater contains lead, oil,

WATER PURIFICATION CYCLE

housands of gallons of wastewater are chemically treated each day to neutralize the acid and separate the solids.



WASTE-

WATER

🍞 ecycled materials, such as lead , account for a significant percentage of raw material in East Penn's product line.

WATER FOR

his purified water is ideal for reuse in our battery acid

WATER TO



mixing process where pure water

lean water is further purified by reverse osmosis. The water passes through a membrane which separates and removes any remaining solids. The purified water is cleaner



olids are removed from the wastewater, smelted and refined for lead recovery.



retreated wastewater is distilled and recovered. Distillation allows for the removal of dissolved solids, in the form of crystallized salt.
The recovered water is clean, containin no harmful contaminants.

TEXTILE, DETERGENT & PAPER MANUFACTURER