

LeBaron Foundry Green Sand Casting Streamlined

Members of the Southern New England Chapter toured the LeBaron Foundry in Brockton on May 24. Suitably attired in long-sleeved shirts, hard hats and goggles, we watched workers making "green sand" molds, pouring molten iron, cleanup of finished castings and other foundry techniques. LeBaron, New England's largest man-

ufacturer of municipal castings, has a rich history dating from the mid-19th century. While not familiar to the consumer trade, the LeBaron name is well known among municipal engineers, contractors and public works authorities. They manufacture the manhole frames and covers installed in hundreds of communities. The company began in 1855 in Middleboro, Massachusetts, as a manufacturer of cast iron stoves, sash weights, ornamental iron vases, urns and hitching posts. LeBaron also ran a steamboat excursion service and operated a chain of ice houses. In 1911 LeBaron relocated to Brockton and started making boilers and municipal castings. A group of longtime employees bought the company from the LeBaron family in 1985.

LeBaron operations combine 19th century green sand molding techniques with modern material handling methods and mechanized foundry practice. Mixing of green sand, a blend of damp sand, Bentonite clay and pulverized carbon, is automated. Extensive mechanization and ample use of conveyor belts, roller tables and jib cranes minimized heavy labor. Manpower requirements for handling the heavy flasks, copes, drags and castings were significantly reduced with modern materials handling equipment. The plant melts about 100 tons of scrap iron per day in a cupola. Its scrap storage pile contained old plumbing fixtures, engine blocks, recovered old municipal castings and defective castings. Iron samples are periodically drawn from the cupola and the melt is adjusted to meet an American Society for Testing Materials (ASTM) specification. LeBaron also evaluates test bars for conformance to highway transportation specifications. After cleaning mold sand remains and removing sprues and risers, castings are sandblasted. Some castings undergo machining of mating surfaces. Other castings receive an asphalt coating to resist rust. LeBaron produces every kind of casting seen in the street. The storage yard is filled with finished catch basins, sewerage fittings and pipe fittings. Other finished castings included grids, standard frames, covers, electrical, water and gas box access plates. The tour gave SNEC members an opportunity to

see a modern casting operation "close up and personal." The chapter appreciates LeBaron's hospitality and the opportunity to tour their plant.

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