

CARRONADE

Glenn H Morgan (Member 232)

To many, the word Carronade will bring to mind cannon used in the days of Nelson, while to others it will mean a type of beer, a Heuer watch design, one of many street names worldwide, or even the American warship USS Carronade. However, to members of the Letter Box Study Group it was and always will be remembered as a manufacturer of posting boxes for Royal Mail.

Back in 1986, I was in correspondence with Mr A Matheson, the Managing Director of Carronade and I thought that members might enjoy reading some of his reminiscences about his company and details of the manufacturing process. The text below is primarily in his words, but has been slightly amended / edited to be suitable for reproducing in this edition of the newsletter.



*The logo design from
the company letterhead*

“I started working at Carron as a boy in 1940 and finished up redundant in 1982 after 42 years service, the last 10 years of which I was General Manager of the Engineering Division. My company, Carronade, was born out of necessity and I felt the need of retaining as much of the name Carron as possible, hence the choice of Carronade.

This of course is synonymous with the old cannons which Carron were famous for in the days of Nelson and Wellington. In fact, we made two replicas of the original Carronades used by Nelson at Trafalgar just six months before the Carron Company closed in 1982 and these are now sited in a local shopping precinct. But I digress.



A Carronade cannon

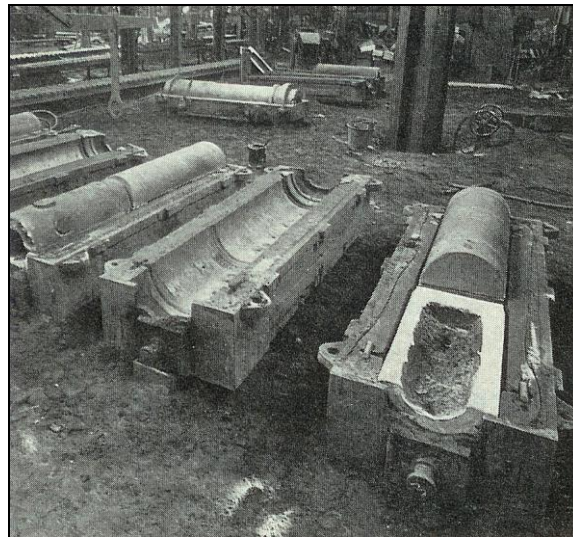
At present I manufacture two types, one is called the lamp letter box which is the small one you will find in many new housing estates and which is mounted on top of a pedestal. The second type is the large free-standing ones called the K type pillar letter box and which can be found in fairly populated areas.

Unlike the old type boxes which were made in cast iron and which are very brittle, the new boxes are made in a special iron called Spheroidal Graphite* (SG). Where cast iron has a tensile strength of approximately 12-15 tons and is very brittle, the SG iron is very tough with a tensile strength of 32 tons. Cast iron, assuming normal wear and tear, has a lifespan of approximately 100 years upwards, whereas SG iron is expected to be more than double that period. One thing that I am sure of is that constant striking with a 56lbs hammer would eventually shatter cast iron, but would do no damage to SG iron.



*(left) Pouring molten iron into a mould
(right) Extracting iron from furnace*

As to the manufacturing process, well you must first make a master pattern, then a working pattern of the shape. You must also make special resin cores and special moulding boxes (a top and a bottom part) into which the working pattern and cores are placed. The moulding boxes are then filled and rammed with sand and the working pattern removed leaving the box shaped inside.



The Mungal Foundry at the Carron factory, circa 1970

You then draw the correct volume of metal from an electric furnace and pour at approximately 1600 degrees Centigrade into gates in the moulding box which has a special venting system to allow gases to escape. The moulding top box part is turned

over to extract the casting and allow same to cool before fettling**. At this point you have a casting ready now for machining and fitting to form a completed letter box.”



Grinding the K box door casting

The company is sadly no longer in existence, but at least we have the manufacturing process described by the man who owned the company and most of his boxes will remain in service for years to come helping to keep alive the name Carronade.

** Spheroidal Graphite: Graphite of spheroidal shape with a polycrystalline radial structure. This structure can be obtained, for example, by adding cerium or magnesium to the melt.*

***Fettling: A form of cleaning-up, i.e. removing the gates and runners which have formed on the casting.*

(750 words)