

Iron

Useful?

Iron mined in Britain since Iron Age times for weapons, tools, etc but not used in any quantity until Darbys developed use of **coke** (baked coal) instead of **charcoal** (wood) in 1709. Early areas of production were Sussex, Gloucestershire, Kent.

It became increasingly important as the Industrial Revolution developed. It was needed to make cylinders for steam engines, rails and engines for railways, machine parts as well as the usual weapons and tools.

The Darbys

Abraham Darby I, Abraham Darby II, Abraham Darby III worked in Coalbrookdale area of Shropshire, on River Severn.

Family were responsible for use of coke in smelting (which saved the industry because stocks of timber for charcoal were exhausted) and for being the first to produce pig iron in quantity and to produce large cast iron items, eg iron rails for primitive 'railways' and the Ironbridge over the River Severn.

Henry Cort

Henry Cort worked in Hampshire (near Portsmouth) where he grappled with need to produce wrought iron in quantity for use in naval ships. In 1784 he produced his puddling furnace which was so shaped as to allow heat from a raw coal fire to bounce off the roof of the furnace and so be hot enough to turn pig iron into a semi-molten state. Puddlers could then reach through doors, using rods to stir the iron and force impurities off. Remaining iron was wrought iron, suitable for use in machine parts and for weight bearing rails, etc. Previously this would have been done painfully slowly by a blacksmith.

See also the work of Wilkinson (accurately bored cylinders), Neilson (hot blast furnace which saved fuel) and Nasmyth (steam hammer for forging).

Main iron producing areas were where coal and iron ore could easily be mined – the Midlands, north, Scotland.