H G Matthews Brick Tour

Hanging on the all the walls were various moulds that have been used throughout the years. All made out of wood in the traditional sense.

In this same space there are skids with bricks ready to be placed into the drying room or have just been taken out and ready to be place in the kiln. The bricks that haven’t been placed in the drying room yet are extremely soft and can crack quite easily and therefore some of them do not make it into the kiln. Therefore transporting the bricks from one space to the next needs extra precaution. The bricks that do crack however can be recycled and remade to try and make new again. These drying rooms are heating and operated by biomass with wood chips. They used to do it by oil but became too expensive. Each drying room has a boiler at the back. The rooms are heated to 60 degrees Celsius or 140 degrees Fahrenheit. They have 8 drying rooms and each holds around 60,000 bricks. It takes a week to set them, a week to fire them, a week to draw them. Once every three months someone comes in to chip wood for the biomass tanks which have to be refilled every day.

Bricks brought into the dryer stay there for a week until they are hard enough to be able to be stacked in the kiln. There are specialized mechanical equipment that wraps around the entire room to ensure the air gets circulated completely and all the moisture is extracted from each brick. There is about one pint of water in each brick.

The area where they are making the bricks handmade bricks, there were about three men making bricks, one man stacking the bricks, and one man on a forklift managing where they went. The area where they make the more “machine made” had two men working, as it takes half the amount of time to create the bricks. They were checking the bricks and stacking them while maintaining the machine.

The clay bed was backed onto this area where they were making the bricks. The clay goes through two processes before being dumped into the machine that carries the clay to the workers. They dig three or four times a year. Before using the clay it has to sit for a period of time before adding the sand. If it’s a multi brick that needs to be made they add Anthracite which is powder coal which makes the brick stronger. Bricks that do not have the Anthracite added are called ‘Breeze Bricks’. Once that is done water is added to mix it and turn it. Sometimes they add broken bricks and crush them to a powder to help strengthen the bricks. Before the clay mix is brought to the workers it is put through a filter that gets rid of all the big stones or flint which can be crushed and recycled.

Slowly over time, the company bought around 1,000 acres of land. When they first started they used to only dig in the winter and would do everything by hand. They did this in the winter because the only time they had to dry the bricks was in the summer. Most of this land is farmed and they use the straw from this farming in their Strock bricks. There were 20 odd brickyards in Buckinghamshire alone back when the company started and now they are the only one. Duntons and Bobbington were the other two remaining in the area and have ceased in the past 5 years.

Before putting the clay in the moulds, the moulds are dumped in sand that is a very fine grain that is sourced locally. The machine that makes the machine made bricks circulates 13 moulds at a time depending on the mould being made each one consists of 4 brick types. They try and do three sessions a day of making the bricks which usually makes 12,000 bricks a day. The difference between the machine made and the handmade brick is the texture. They only do metric machine made bricks but with the hand-made they do both. With the handmade bricks they make around 20,000 bricks a day and if they go over they get a bonus which is an incentive to do more. The clay is constantly pumped onto their working tables by a simple switch.

In the oil fired kilns there are 7 tunnel chambers that help fuel the kiln and circulate the heat. Bricks are stacked around each of these tunnels in an arch. This takes a lot of accuracy and concentration. They also have to make sure the right bricks are placed in the right area in the kiln to produce the right colour. The roofs are taken off during firing and the only thing that saves the bricks from water protection is what they call ‘Splatter bricks’ which are previously fired bricks. There is constant turn around, kilns being loaded and unloaded. Every week a kiln is either firing or empty. And you can fit 60 or 70,000 bricks in each one of the kilns. It takes about 3 for days for the bricks to cool down before being taken out of the kilns. It takes six weeks to make the brick and a week to unload so there is a lot riding on getting it right.

They have the last remaining wood burning kilns in all of Europe. There are 14 fire holes that have to be fed every 45 mins and constantly watched for 5 days and 4 nights while being fired. Wood burning kilns are the only way you can get a natural glaze from the ash of the wood during firing. A lot of the bricks put into these kilns are sold at 2.40 each and mainly for heritage and conservation projects. There is a covered area where they specially stack bricks to match for the heritage and conservation projects to create precise blends.

There is a whole area devoted to experimentation. They are developing various plasters, hemp crete blocks and their strocks. Eventually they want to farm their own hemp to create the blocks so they no longer have to source it elsewhere. Where they make the strocks it’s a very similar machine to the bricks. They make the mortar with mercury mixed with water and clay mix to lay the strocks on. Very few strocks are fired and when used they have a brick placed in front of them to protect from weather but can be used as a structural element.

The ceramic end of things again has its own designated area. This is also quite experimental. They range from doing purely interior tiles to structural ceramic bricks. They import plain white tiles from Germany and create the glazing for them. They also bring in bricks from other manufacturers that the client is using and they glaze them for them. But mainly they use their own bricks to create and experiment. They like to work one on one with clients and the experimentation is just to show them what can be done. They even do hand carving into the bricks to create very custom signs or feature pieces. The ceramic aspect of the company has only been happening for the past 5 or so years. They have 4 massive gas kilns for the ceramics.

There is an area next to the ceramics that do very specific cuts for arches or odd corners and angles where they have special equipment to cut the bricks and blend and bond them with a two part resin. It’s a very specialist skill and service that they provide.