

CAST IRON AND ITS QUALITIES.

The strength of cast iron has recently been the subject of a discussion by the Birmingham Association of Mechanical Engineers. To some engineers all cast iron is alike; but, as Mr. F. J. Cook, who introduced the subject, showed, those who are brought much into contact with foundry work know that the strength, hardness, and ability of cast iron to resist corrosion vary enormously. Much depends upon the conditions attending the casting, and in particular upon the rate of cooling after running the molten metal. It is a matter of common knowledge that cast iron can be made exceedingly hard and strong by casting it in an iron mould, the

iron of which acts as a chill. The rate of cooling, and hence also the hardness and strength of a casting, is greatly influenced by the shape and thickness of the metal, and in general a heavy casting is weaker than a fairly small one run from the same metal. The amount of carbon present in the iron is of importance, and especially so the form in which it exists, whether combined or in the separated (graphitic) form. The latter iron is the softer and easier to work. Silicon up to about 2 per cent. has a marked effect on iron, increasing the strength. Sulphur tends to make iron hard but brittle by increasing the combined carbon. Manganese has a somewhat similar effect. Either too high or too low

a casting temperature leads to weak castings, whatever the quality of the iron used.—The Building News.

REINFORCED CONCRETE TESTS.

Reinforced concrete tests made at the University of Wisconsin testing laboratories during the past four years indicate that concrete cracks before evidences of the break can be detected by the eye, and that after it has cracked, though only minutely, its strength in tension is zero. Comparative tests of reinforced and plain concrete bars made at the university show that the first indication of cracking appears on the reinforced

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The Same Old Story

Yes, we are free to admit that we have to tell it over again, but, as we will have to pay for the space anyway and positively refuse to tell anything but the truth, how can we avoid becoming somewhat chestnutty in telling the merits of Mimico Red Pressed Brick.

If you know, be good enough to tell us and we'll pay you for the time, trouble and postage.

Till you do, we'll have to keep on telling "the same old story":—that Mimico Red Pressed Brick is the best in Canada.

We are somewhat inclined to that opinion ourselves and can scarcely be blamed when out of 30 architects seen in five Ontario cities outside of Toronto, 26 volunteered the opinion that Mimico Brick was the best they had seen "made in Canada."

The others had only light breakfasts before seeing the brick and were not quite so strong as they might have been otherwise, as all they said, (without being asked) was that ours was "a very fine brick."

To our mind, that appears to be a pretty good average of opinion in our favor.

If in doubt, don't take our word but ask the architects—or, better still, see the brick yourself: then YOU'LL KNOW.

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