

ROLLS

THE EFFECT OF A GOOD ROLL IN A FLOURMILL

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Quality, yield and capacity in a flourmill are directly related with the crushing and milling operations of the rolls.

The main point of a good roll production is the casting. It is very important to put the right elements with the correct ratios to obtain the right hardness of a roll. We at

Entil have formulas to produce rolls to reach the hardness we are targeting, we believe leaving this to chance could have an adverse effect on our quality control and subsequently our customers – ‘it is a power which cannot be controlled and power without control is not power.’

The cracking rolls have to be durable, abrasion resistant and easy to be fluted with the hardness of 500 – 550 Brinell and the smooth rolls must have a balanced crown cambering with a good sand blasting with a proper hardness - which is a necessity.

The life or longevity of a roll, or when a cracking roll will need to be refluted, all depends on a good casting and good corrugation, which has a knock on effect on the costs of the flourmill as well, as stopping the production to send the rolls for refluting means costs in finance, production and workmanship and customer dissatisfaction because of late delivery of the product.

Entil, with 52 years experience of casting and 42 years experience in roll production, manufactures rolls for flour and feed mills, as well as for chocolate, oilseed and coffee industries, boasting a 20, 000 rolls per annum production capacity.

The crushing and milling technique in mills have different

characteristics according to the passages. So it is better to manufacture rolls according to the passages in order to achieve the quality, yield and capacity at the requested levels.

The most important factors that should be considered when choosing a good roll is to take care that it is abrasion resistant and that it is performing standard grinding for long time at the requested tonnage in one fluting.

The lifetime of a roll is related to its chemical alloy and physical values. The hardness value is not enough to say that the roll is good or not. Rolls that are worn out in a short space of time can cause quality problems in the flour resulting in customer and market losses.

For cracking rolls, single grinding life changes according to the quantity of roller mills in the flourmill, how many shifts and days a week the mill is working.

Smooth rolls must have different alloy specifications. They are crown cambered against thermal exposure because of their alloy features. Their duty in the production is to bring the flour to the desired micron by grinding the product coming from the crushing passages in the system.

Smooth rolls which are not sand blasted well can cause problems in production as well because the product will not come through the roll and will accumulate on the surface of the roll. This will cause poor quality products, vibration on the roller mill and noise in the production area.

Entil gives importance to its Quality Control and R&D Departments. Rolls are controlled in each step. Starting from the casting till shipping to the customer. Even after 10 years, it is possible for us to find all technical specifications of the roll which was shipped to the customer. ☺