

Elscint Automation

The Elscint Newsletter

1/2008



Topics covered in this Newsletter –

- 1. Selection of correct type of bowl material for a vibratory parts feeder**
- 2. Elscint introduces high performance springs for vibrators**

First of all, we would like to wish you a very happy and prosperous New Year 2008. In this newsletter which is the first one of this New Year, as usual two topics are covered, the first one is a white paper on bowl selection. We hope you find it helpful. The complete text of this information can be downloaded from our website – www.elscintautomation.com. The second topic is about a new type of high performance spring which improves the performance of a vibratory bowl feeder tremendously.

We hope you find this edition of the newsletter informative and useful and would be happy to receive feedback from your end on the same as well on making the newsletter better. In case you do not want to receive this newsletter, please send us a blank mail to sales@elscintautomation.com with “unsubscribe” in the subject line and we will ensure that you are not bothered again.

Selection of correct type of bowl material for a vibratory parts feeder

Vibratory bowls can be made in a variety of material like cast aluminium, mild steel, stainless steel, polyamide, etc. Each of these materials has certain advantages as well as disadvantages. Bowls made of mild steel are not long lasting due to rusting and not so wear resistance. Over time, their performance deteriorates drastically. Aesthetic wise too, it does not look good. Hence, it is not recommended to select mild steel bowls. Polyamide bowls have certain advantages like machining ease and repeatability but the disadvantages are the size (small) and type (conical). Step design bowls, which provide a lot of tooling flexibility, convenience and high loading volumes are not always possible in case of polyamide bowls. These disadvantages are not there in stainless steel and cast aluminum bowls. The advantages of these types of bowls are tooling flexibility, convenience and high loading volume. Secondly, it is possible to provide irregular and complicated bowl tooling and shapes in case of stainless steel fabricated bowls. However,

the biggest advantage of stainless steel bowls is the tooling flexibility they provide. But these are costly as compared to cast aluminum bowls. The advantages of using cast aluminum bowls are the ease and speed of tooling and lower cost. However, proper coating is required for all cast aluminum bowls. Elscinthane spray able polyurethane coating is the best choice for cast aluminum and stainless steel bowls. Not only does the coating reduce the noise level in case of metallic components drastically by eliminating the metal to metal contact, but the life and performance of the bowl improves drastically. The Elscinthane bowl linings are available in various thicknesses ranging from 0.40 mm to even upto 2 mm and above. Elscinthane spray able polyurethane coatings have very high shore hardness and this increases the life of the Bowl tremendously. In case of stainless steel bowls, cylindrical bowls are possible but they have a lot of disadvantages like jamming of components between the track, less area for tooling, low loading capacity etc. Another possibility in case of stainless steel is outer track bowls. These are costlier to make but have a lot of inherent advantages like high loading capacity, optimum area for tooling. In case there is a requirement for high speed and complicated orientation, then outer track bowl is the only solution. However, the disadvantage is the high cost of such bowls. The time taken for making such bowls too is more. Selection of the right type of material and shape for a bowl feeder has repercussions on the continuous maintenance free working of the bowl feeder in the long run and hence the proper material and shape of the bowl is very important. Before ordering a bowl feeder, the customer should discuss with the bowl feeder manufacturer about the shape and the material he has planned for the bowl and the reasons for the same. Though these are usually the prerogative of the bowl feeder manufacturer, the customer, being the user of the bowl, should try to get the reasons behind the same. Secondly, while selecting the type of material and shape for a bowl feeder, one should check whether the bowl feeder manufacturer has the required coating expertise and technology, otherwise, the life of the bowl reduces and feeding too becomes problematic and erratic.



Elscint introduces high performance springs for vibrators

Elscint has introduced a new type of springs for vibrators. These springs are of a very special material and due to certain processes which are made on the same; the fatigue strength is improved tremendously. This results not only in increasing the life of the springs but the performance of the same too improves exponentially. A normal vibrator can achieve a speed of about six meters per minute but with these types of springs, linear speed in excess of

10 meters per minute can be achieved. Additionally, lesser number of these special springs are required in a vibratory bowl feeder as compared to the usual springs. About 30% less springs generate the same amount of linear speed. Elscint will be providing these special springs for all vibrators from 2008 onwards without any extra price!

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