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▶ FEEDING IN THE LATEST

▶ VIBRATORY BOWL FEEDER FOR FEEDING SMALL BALLS

▶ FEEDING & SORTING OF THORIUM PALLETS

Components for which systems are available

Elscint Ahead

Feeding In The Latest . . .

Monish Shete

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The summer heat is upon us. It has reached 41 C here in Pune! Coming to this edition of Elscint Ahead Newsletter, as usual it contains two recently completed applications, one for feeding of small balls while the other is of a specially manufactured equipment for feeding and sorting of thorium pallets for a nuclear application. Hope you find these interesting. As usual, you can write to us with your feedback and also download the back copies of the [Elscint Ahead Newsletter](#) and the [pdf version](#) of this newsletter.

Vibratory Bowl Feeder for feeding Small Balls

[Elscint](#) recently manufactured a special and small vibratory bowl feeder for feeding of small balls having diameter dia 4.76 mm. The customer required three outlets with gravity tubes for each of them. Balls have a tendency to roll back in a bowl feeder and do not move up the track. However, in the special type of bowl designed by Elscint, this does not take place. A bowl having diameter 250 mm was fabricated and a speed of 200 balls per minute per outlet was achieved. There being 3 outlets, proper overflow was required for each of the outlets and the same was provided by making a special arrangement. The tooling ensured that even the last ball got fed. Flexible tubes of 1 mtr. Length were attached to each of the outlets for connection to the customer fixture.



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Feeding & Sorting of Thorium Pellets

[Elscont](#) recently manufactured a vibratory feeding & sorting system for feeding of thorium pellets. The pellets had a diameter of dia 9.74 x 14 mm length. However, pellets came in sizes wherein the diameter varied from dia 9.6 mm to dia 10 mm. Feeding on only the correct size of pellet was critical as the pellets had to be inserted in a tube wherein the internal diameter did not have much clearance. Hence, Elscint provided a sorting equipment with two motorized counter rotating rollers to ensure that the incorrect pellets were sorted as per their diameter. Elscint provided an accuracy of 40 microns. The minus and plus pellets were then collected in separate bins, while the correct pellets were collected in another smaller vibratory bowl feeder, which oriented the pellets once again and took them forward in a tube, further Singulating them with the help of an electric actuator so that they would be kept ready for pick up by the customer's robot. No pneumatics was to be used. Elscint used an 24 V Electric Actuator for the singulator. As the equipment was to be placed in a separate cell with no operator access, it was imperative that not a single pellet stayed in the unit and even the last one was removed without any manual intervention. The special bowl manufactured by Elscint ensured this.

The thorium pellets being radioactive, it was ensured that no operator interface was required for any maintenance. The pellets also being brittle, it was important that their fall in the bowl feeder as well as after sorting was reduced to the maximum extent possible. The electrical panel was housed in a separate control box and kept at a distance of 15 mtrs.



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