PROPUESTAS PARA EL PREMIO DE INOVACION NAM 2021 Q3

Agility & Innovation Award

Nifco America will recognize an individual or group with the Agility and Innovation award for exemplifying Nifco's corporate philosophy. Individuals or groups will be considered for the award when they are proactive in the innovation of new ideas and technologies while challenging and cultivating new methods for inventive corporate growth.

The award is to encourage individuals to be

-Productive and break through

-Communicate and collaborate

-Challenge and innovate new ideas and method

What is the Digi Peca system

Digi Peca is a device that detects the suction pressure generated for transport and volumetric feeding controls of raw materials. This device controls the supply of virgin and milled material. The cost is 2,680.00 dlls

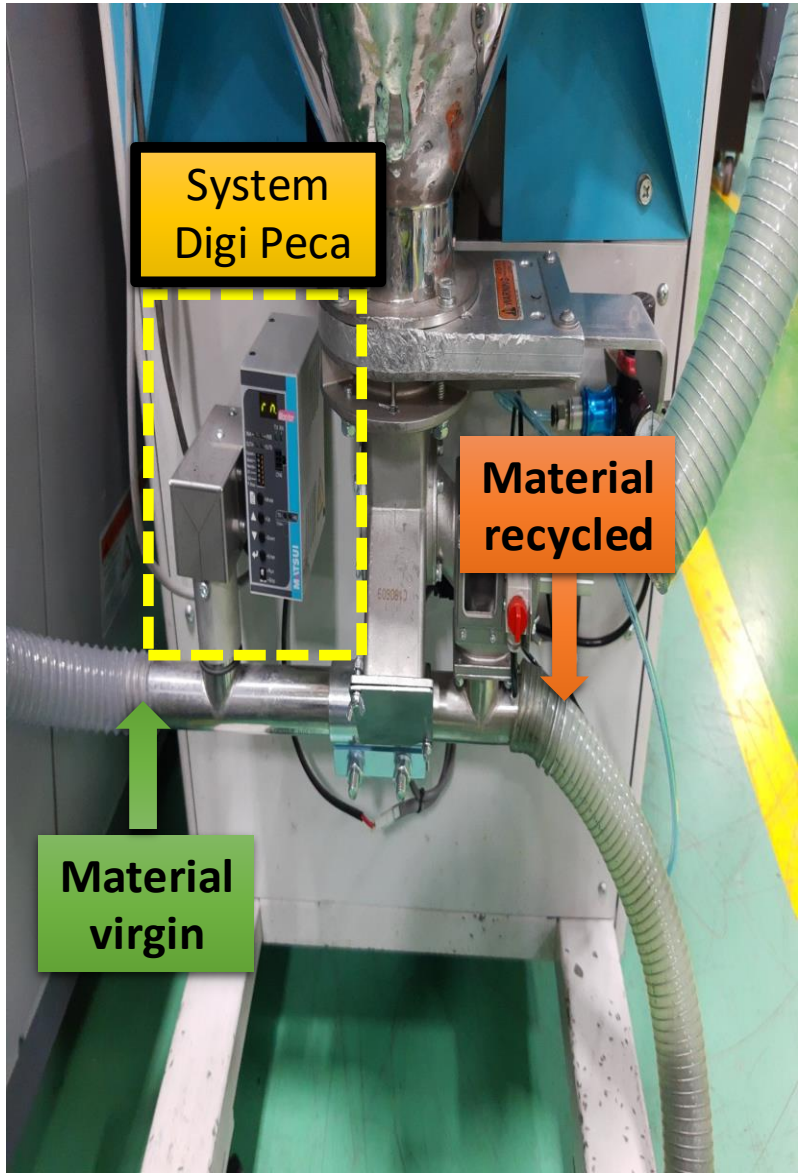

Image 1.- Digi Peca System.

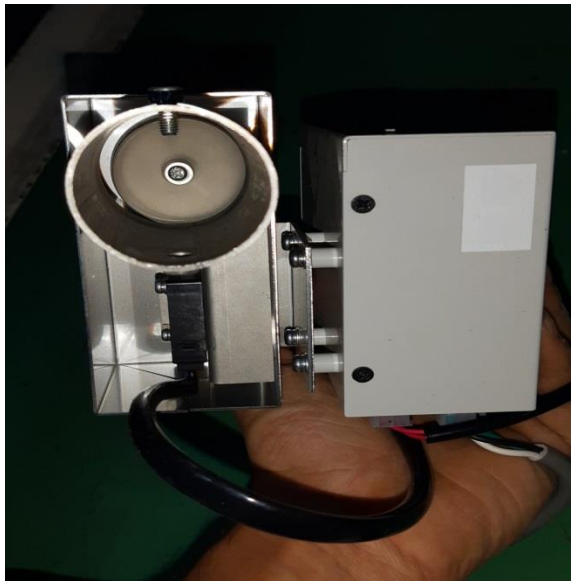

Image 2.- Pressure sensor.

Image 3.- Mixing hopper.

Digi Peca system replica

A replica of the Digi Peca system was made in the U21 molding area. How was it done? The virgin resin feeding system and ground material from the harmo were connected, a time-based control was carried out on the loads of the dryer and the opening and closing of the feeding piston, which is explained in the following slide which has us generated great benefits and savings to the area.

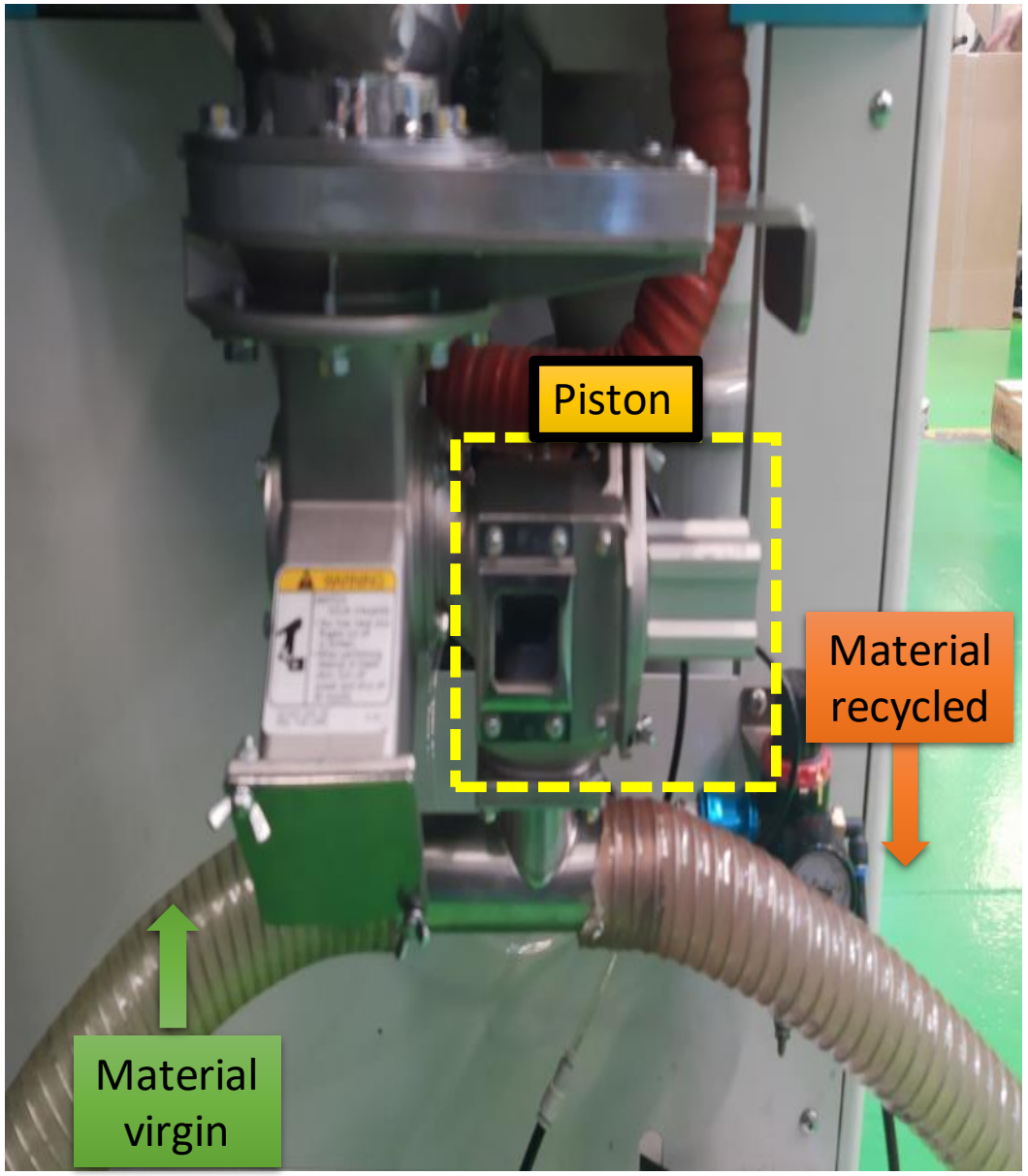

Image 4.- Replica Digi Peca

Digi Peca system replica control

He passed:

1.-The amount of virgin material that is supplied in 1 second and the amount of ground material that is supplied in 1 second is weighed

Image 5.- Weighing of material

Digi Peca system replica control

He passed:

2.- The loading time is calculated considering that the capacity of the hopper is 6 pounds and that the proportion is 70% virgin for 30% ground material.

Machine hopper capacity	Percentage of virgin material	Percentage of recycled materia
6 pouns	4.2 pouns	1.8 pouns
Ratio 70% virgin material 30% recycled	Times to be programmed for loading	
	Material virgin (feeder 2)	Material recycled (bt2)
	4 seg	2 seg

Image 5.- Calculation of assortment times.

Digi Peca system replica control

He passed:

3.- This ratio is converted into seconds and the times of the loading system dryer are programmed

Feeder2 (Charging time)

Bt2 (virgin material supply piston)

Machine hopper capacity	Percentage of virgin material	Percentage of recycled materia
6 pouns	4.2 pouns	1.8 pouns
Ratio 70% virgin material 30% recycled	Times to be programmed for loading	
	Material virgin (feeder 2)	Material recycled (bt2)
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Image 5.- Calculation of assortment times

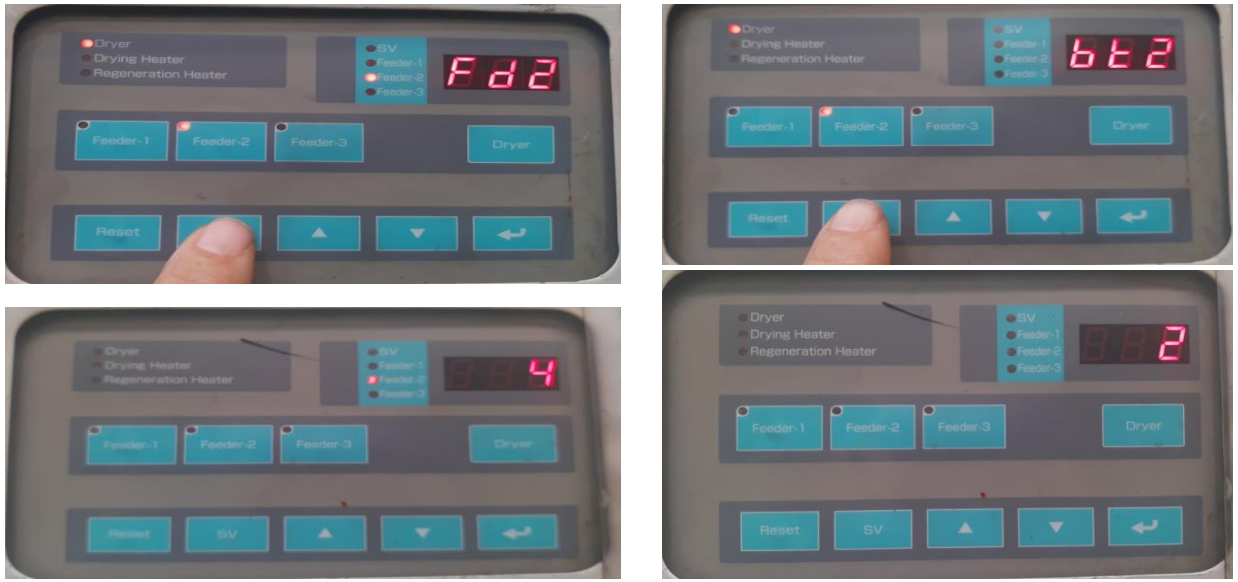

Image 6.- Adjustment of assortment times.

Digi Peca system replica control

He passed:

4.- A mixing hopper is placed. The function of this hopper is to mix the material before entering the throat of the machine.

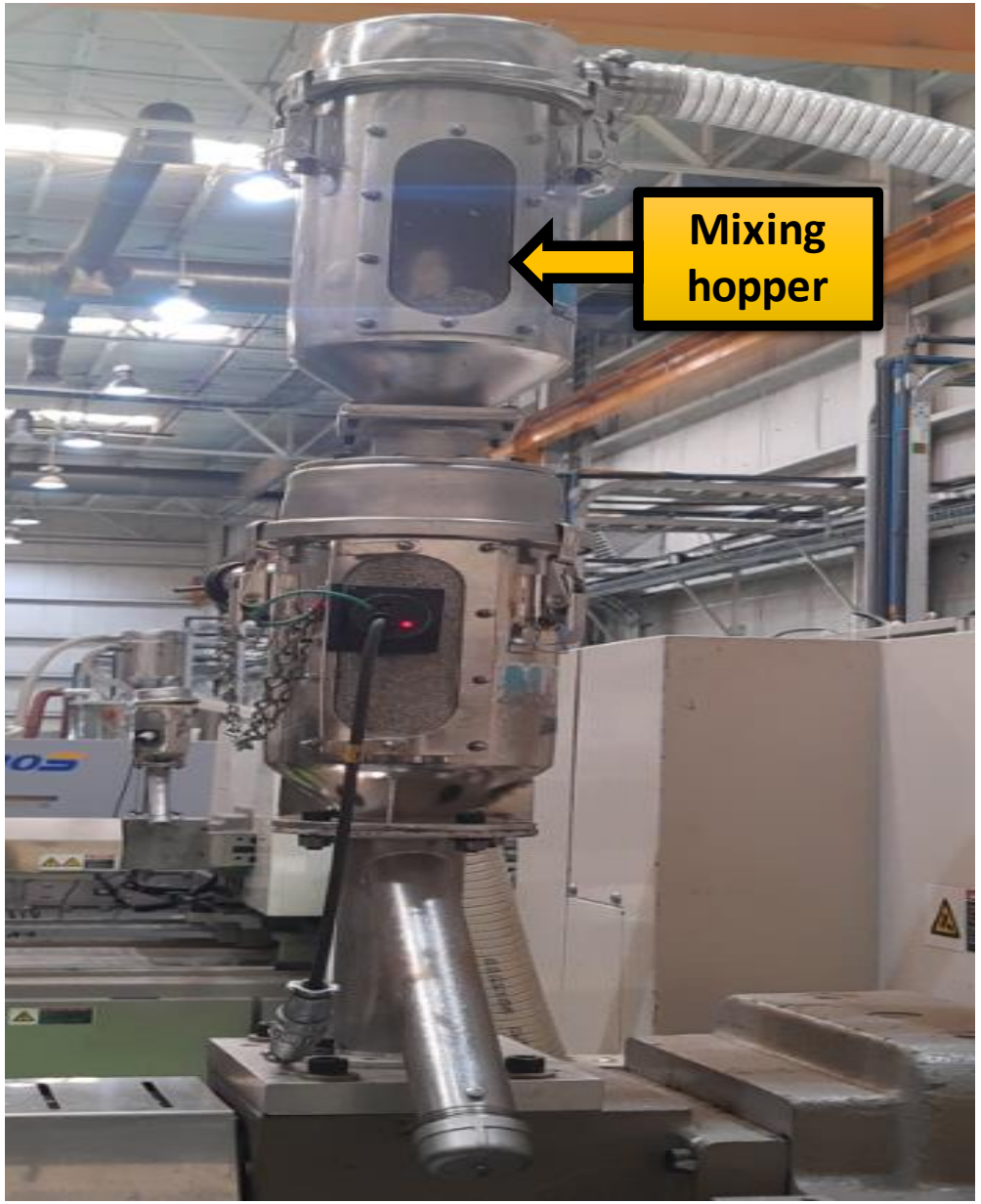

Image 7.- Mixing hopper.

Calculation of savings by implementation of Digi Peca replica

Digi Peca system implementation cost simulation in U21

Description	Costs	Quantity	Total
System Digi Peca	2 680.00 dlls	33 parts	$88, 440.00 dlls
Mixing hopper	620 dlls	33 parts	$20, 460.00 dlls

Digi Peca system replication implementation cost

Descriptión	Costs	Quantity	Total
Mixing hopper	**620 dlls**	**33 parts**	**$20, 460.00 dlls**