

Comming four HYTEM NEWS, we introduce following HYTEM technology including the background of R&D.

1. EFA(Egg Farm Automation) targeting Rats and AI Free
2. Ultimate Zero crack and the most efficient Egg Collecting system in the industry
3. The most advanced manure handling in the industry
4. 24 hours real-time computer system and ventilation control system to support precise automated egg farm management

EFA targeting Rats and AI Free

The system is consisting of 3 parts.

Openings of Windowless house from where rats and vermin coming in are 1. Manure conveyor's opening 2. Egg conveyor's opening and 3. openings for ventilation & openings for workers.

Part 1

The complete closing of Manure conveyor's opening has been a difficult issue to find the exact solution for many years.

Rats are coming in when birds are accommodated and settled in the house where they can live comfortably with feed. Vermin such as weasels stuck with wild birds' droppings are coming in, which, by a recent paper, is reported as critical risk to AI at the well-designed windless house to which wild birds are normally difficult to enter.



□ **Our first approach**



To close small gaps completely was found difficult.
To install an ultra-sonic transmitter was tried in vain.

□ **The second approach**



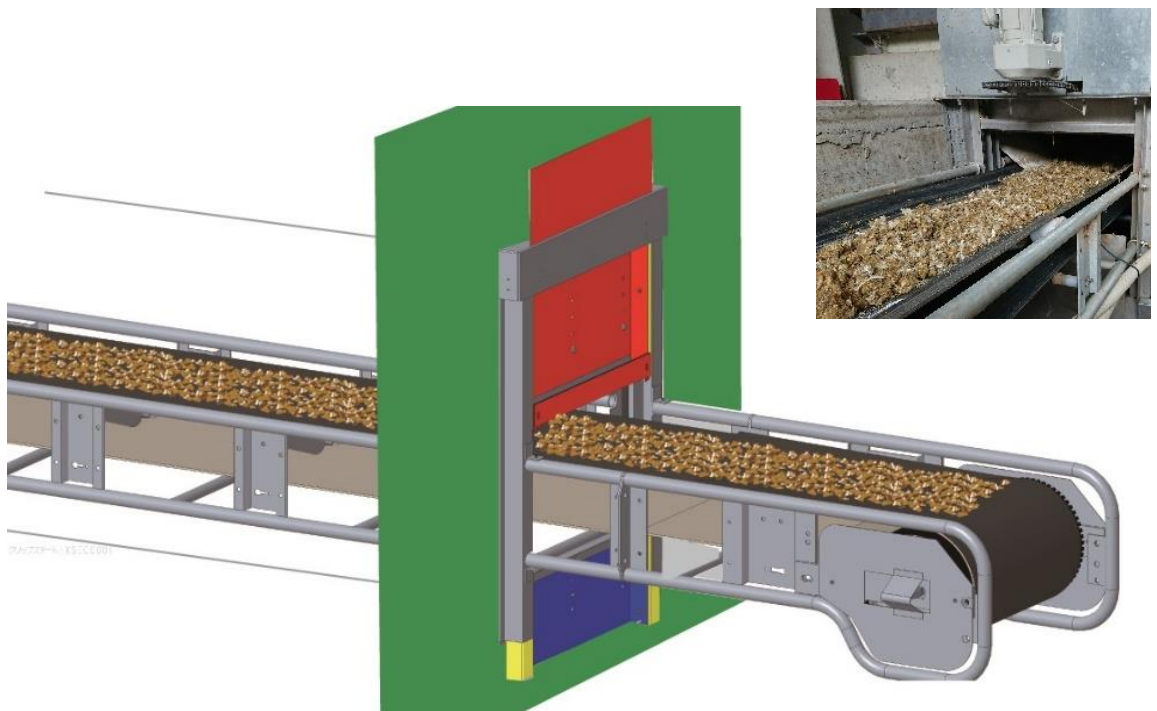
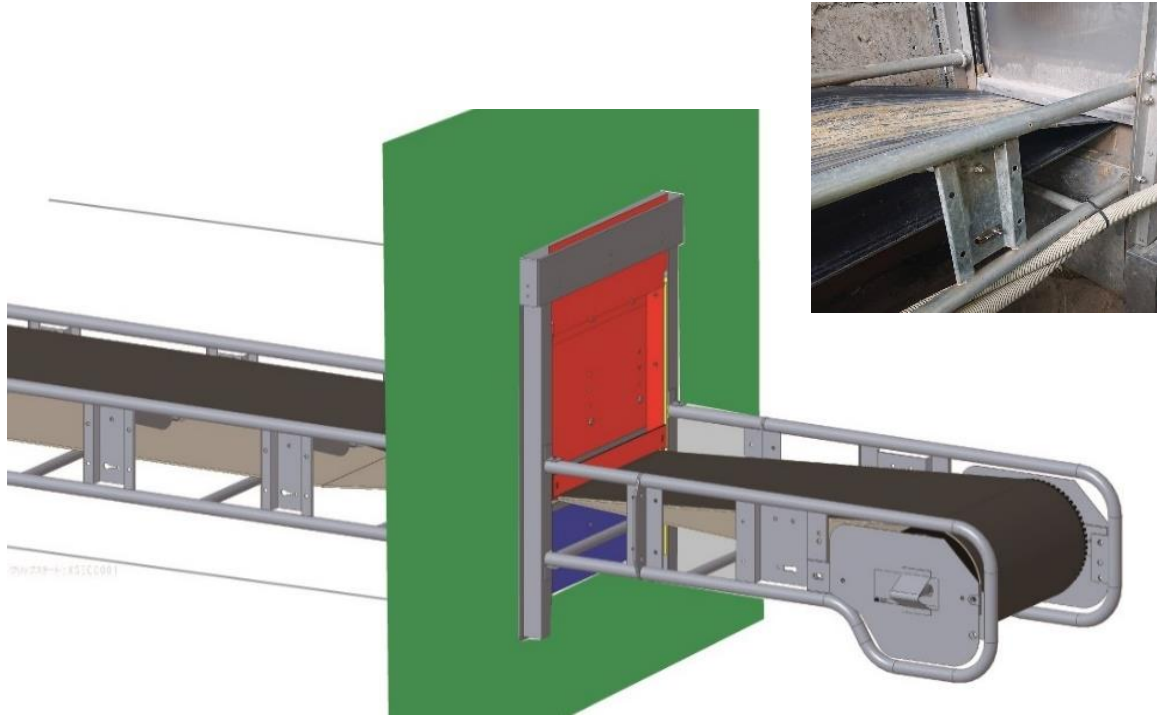
At more than 10 houses, this approach has been installed. But, actually rats are in houses.
There are possibilities that the shutter is sometimes forgotten to close.

□ **The third approach**



This approach is working at 2 farms, where no rats are observed.
However it is some work to push in and out the conveyor.

□ Now, the innovative invention !! **HYTEM Manure Conveyor Shutter**



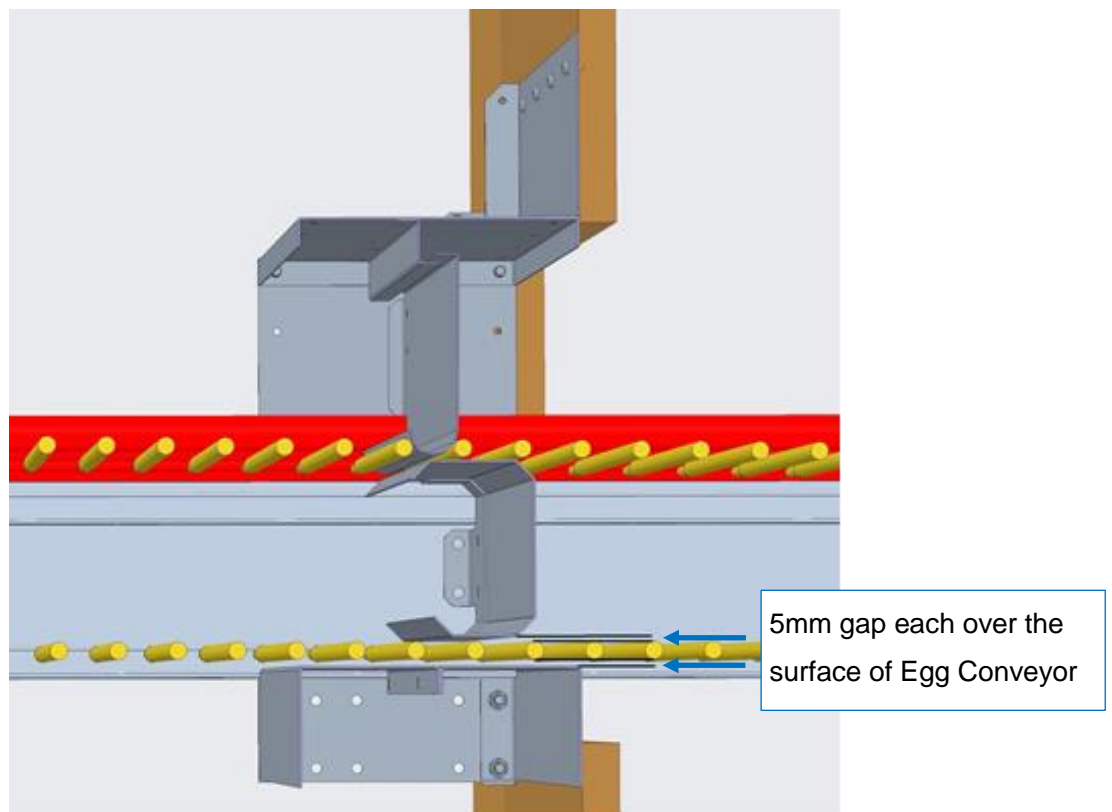
Part 2

The major necessity to close the opening of Egg conveyor is to prevent rats moving from a certain house to another house.

The practically enough closing system developed several years, and HYTEM Egg Conveyor Shutter is being installed at the most of recent EFA(Egg Farm Automation) installations.

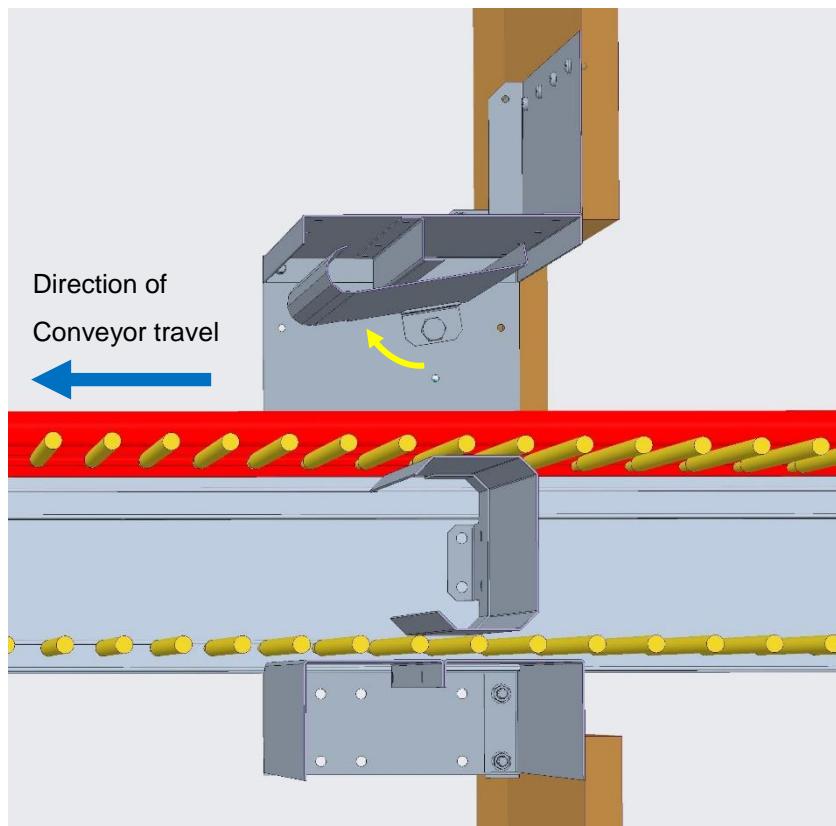


Close the shutter by manual when egg collection finished





Open automatically when egg collection started



Part 3

Points to be watched in building construction.

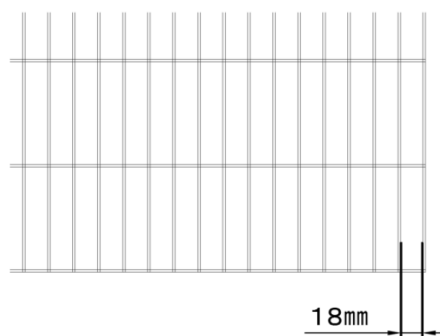
To follow following HYTEM Sheet Rats & AI Free Layer House will be important.

HYTEM

HYTEM SHEET HS10441SE

Rats & AI Free Layer House Points to note in Construction

1. Doors for daily management are to be Door with Door Closer.
Sliding Door should be avoided.
Note: Optional parts to alarm Closing Failure by Patright with Buzzer available.
2. No any small opening around Large opening for birds transportation.
3. No any small opening around Fans and Cooling Pad/Right Trap.
4. No any small opening around Drainage.
5. No any small opening at joints between Roof & Wall panels.
6. No any small opening at joints between Wall panels & Post.
7. No any small opening at joints between Wall panels & Foundation.
8. Plan to install Install HYTEM Manure Conveyor Shutter when manure taking out planned by the belt conveyor.
9. Plan to install HYTEM Egg Conveyor Shutter when Egg Cross Conveyor planned.
10. No any small opening where Feed delivery line, Power line, Water pipe and Gas pipe(Rearing house) go through the building wall.
11. The position of winter air inlet is preferred at eaves to minimize AI risk, and the mesh by mesh size along following diagram is required.



12. Conduct Small Opening Total Checking when the building construction finished.

- Besides Rats & AI Free, Item 2~10 are critically important to get Aisles' air speed and Cooling pad's cooling effect against summer heat.

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