



Practical Exercise 6

Study of can washer

Objective

To know working of rotary and straight through can washer

Requirements

Can washer, cans

Can washer

Raw milk is brought to the chilling centre or processing plants in cans. Can are made of aluminium, stainless steel or plastics. For a small capacity plant cleaning of cans is done manually. But in a large plant cans are cleaned by automatic system. In a milk collection cum chilling centre of capacity 20,000 litres milk per day, the number of cans handled will be around 500. Thus automatic system will be required. Methods of can washing are:

- a. Manual
- b. Rotary can washer (100-200 cans/h)
- c. Straight through can washer
 - Single track (600-900 cans/h)
 - Double track (1200-1800 cans/h)



Types of can washer

1. Rotary can washer

Rotary can washers are semi automatic type having washing capacity of 100-200 cans/h. The equipment has a rotating disc partitioned into different segments for cleaning (Fig. 6.1). Cans are loaded inverted on the rotating disc.

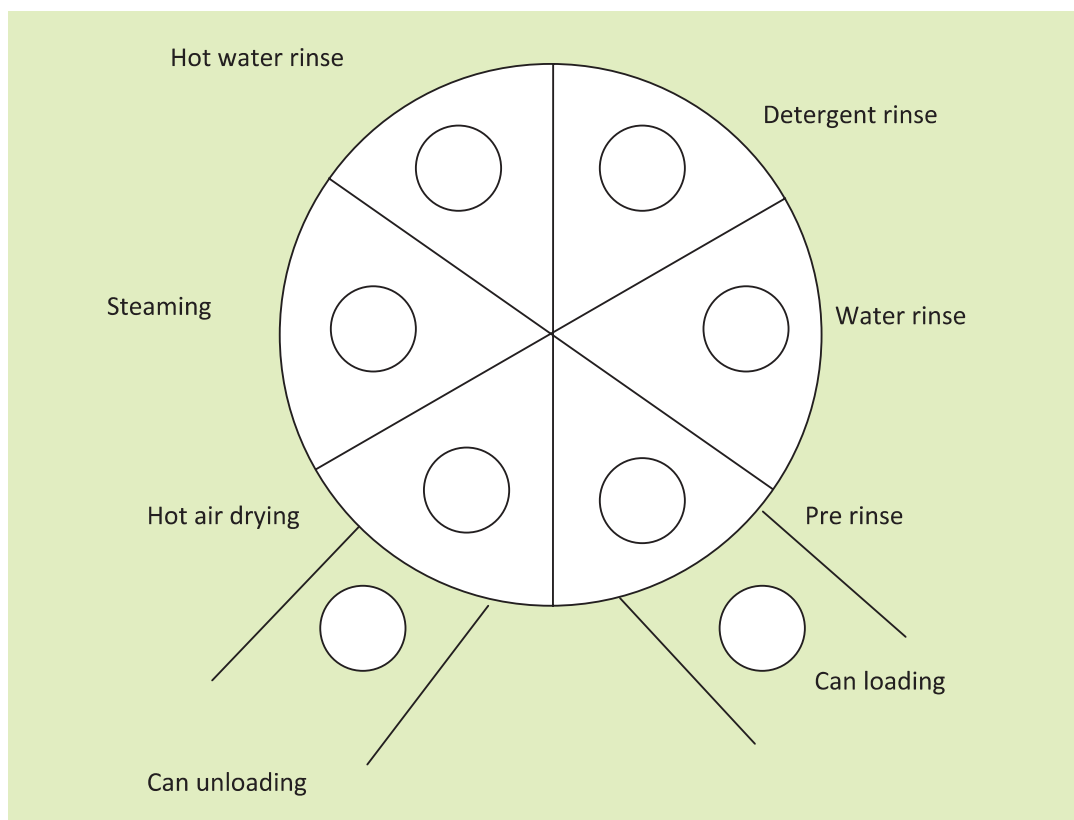


Fig.6.1. Rotary can washer

2. Straight through can washer

It is called “straight through” because washing of cans takes place in a straight line on a conveyor. The cans enter the washer in inverted position and cleaning is done by jet nozzles at various section of the washer. The washer has provision for washing of can lids. The sequence of cleaning is as follows:

1. **Loading:** cans are loaded into washer by conveyor
2. **Pre-rinse:** Water is sprayed through jets into cans to remove traces of milk

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3. **Detergent rinse:** Detergent (Alkali/acid) solution is circulated at 65 – 70°C
 4. **Hot water rinse:** Hot water at 80-90°C is sprayed in the cans.
 5. **Steam sterilization:** Steam is injected into cans for sterilization
 6. **Hot air drying:** Drying of cans is by blowing hot air (120-130°C)
 7. **Inverting of can:** At the end of the washer a mechanical system inverts the cans to straight position.

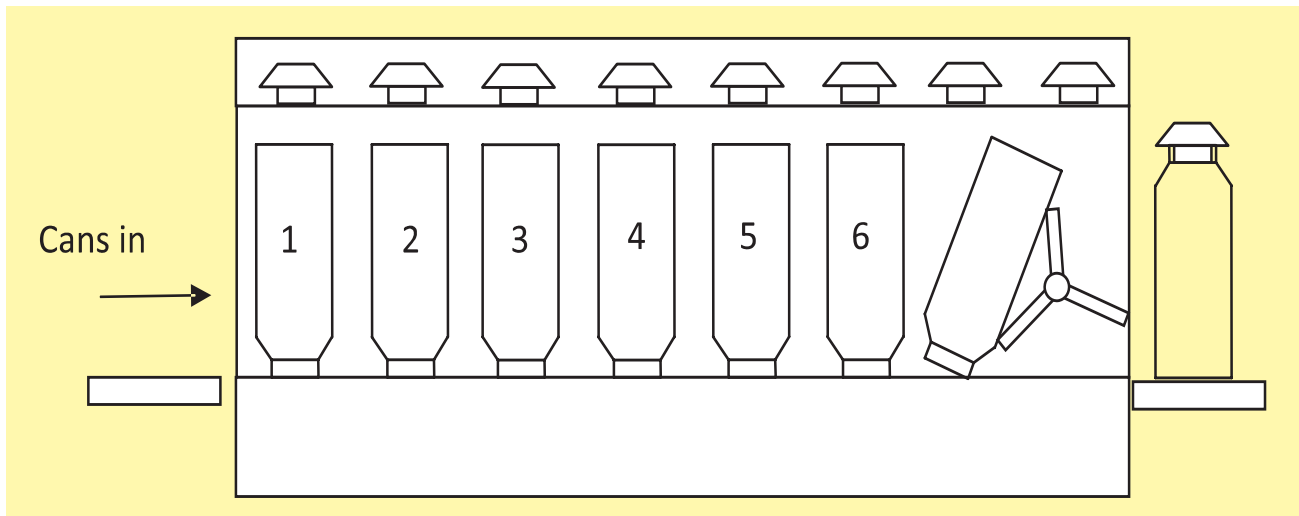


Fig.6.2. Straight through can washer

REVIEW QUESTIONS

1. With a neat diagram explain rotary type can washer?
2. Briefly describe working of straight through can washer?
3. Differentiate between rotary and straight through can washer?
4. What is the procedure for sterilization of cans?