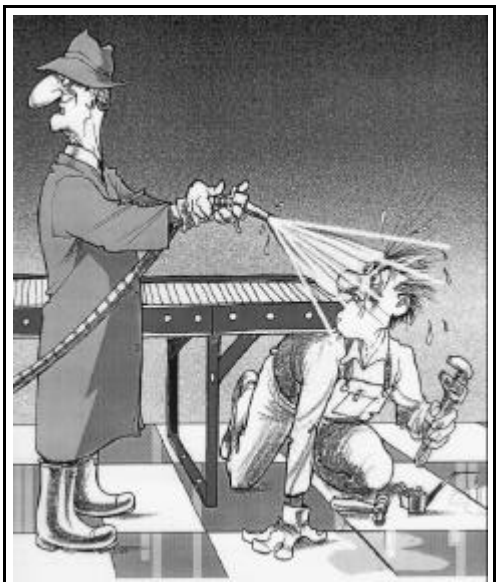
Fish Processing

Technical Information Sheet No. 1996/01/FT

Water Usage



Water is essential for fish processing, for good hygiene and the production of a safe product. It is recommended in the Seafish Processor Guidelines that "the regular washing down with copious quantities of water is the key to maintaining cleanliness."

“Keep all facilities and equipment clean and maintain high standards of personal hygiene” (Fig. 1).

- Fish processors use between 1 to 12 m^3 per tonne of raw material.
- Water costs 28p/m^3 to 75p/m^3 and the effluent disposal costs can be up to £1/m^3.
- Effluent disposal charges are calculated on strength, volume and level of effluent treatment carried out on the effluent discharged.
- If there is no treatment, with effluent being pumped directly to sea the costs are low. This practice will stop as more effluent treatment plants are being built around the coast.

The cost of water and disposal of effluent is increasing, so its use must be examined. This information leaflet gives some ideas on water saving techniques and how to go about reducing water and effluent costs.

What Can be Done to Reduce Costs?

Undertake water and waste audits to determine :

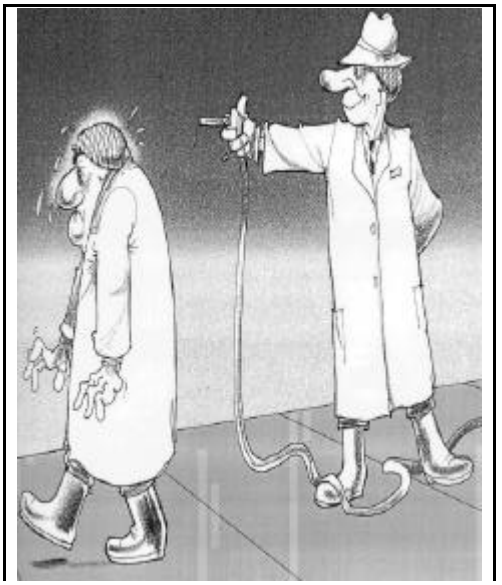
- Water consumption and cost
- Where the water is used
- Strength and volume of effluent discharged and its cost

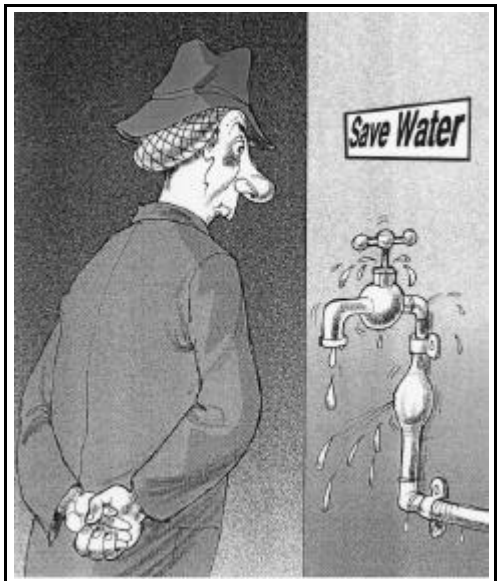
From such audits, losses and savings can be identified, water can be used more efficiently and ways to minimize and recover waste can be identified. The reduction of water at source by simple water saving techniques should also be undertaken e.g. good housekeeping and staff training. A few ideas are given overleaf:

Water Saving Techniques

Equipment

- Check that all water using facilities are working efficiently. (Fig. 2).
- Install meters in all sections of the processing plant to improve monitoring of water usage. They can also help identify the presence of leaks that might not otherwise be noticed and can further encourage employee awareness.
- Fit hoses with trigger action shut off devices which can achieve water savings of up to 50% and fit equipment with nozzles which can reduce water usage by 30% compared to standard hoses. (Fig. 3).
- Repair dripping taps



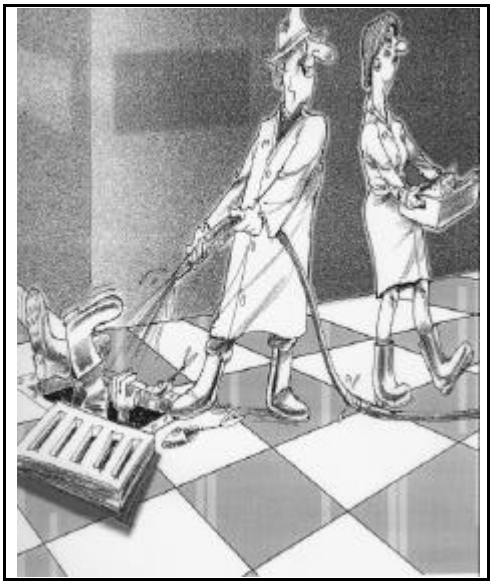


Domestic Usage

The domestic usage is low compared to process usage but savings can still be made:

- Adjust WC cistern water levels down to correct level shown inside the cistern.
- Use automated devices to reduce the frequency of flush at WC's, or even to turn off overnight to prevent needless flushing throughout the night.
- Reduce toilet cistern volumes by inserting a heavy object in the cistern (bricks may be used).

Practices



- Ensure all water using equipment is switched off when not in use. (Fig. 4).
- Avoid running taps by: keep plugs in sinks, use of "press" taps or self closing taps.
- Don't do unnecessary hosing down.
- Check for leaks by reading your meter at night. (Fig. 5).

- Note the time it takes for the system to refill when the supply is turned back on. A lengthy filling period may indicate that the system has drained down through a leak or open tap.

- All leaks should be attended to promptly. Not only do lea contribute to increased water costs and possible effluent costs, but t also contravene Water Supply Byelaws.

- Do not dump waste products and prevent solid materials from going down the drain. (Fig 6).
- Staff on site should be informed about water wastage and the resulting increase in treatment charges.

Recycling and Effluent Treatment Equipment

It is not recommended to directly recycle water for food safety reasons but all recirculation and recycli opportunities, including new equipment should be investigated e.g. a recycling unit in equipment for thawing in one case reduced daily water consumption by 60%.

Equipment is available to remove solids and other contamination from effluent to reduce costs and to comply any legislative requirements. These range from simple screens to full treatment systems.

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