

Steam Peelers, Combinations of Mechanical and Steam Peelers

Two Possibilities for Economic Optimisation of Steam Peeling Lines for Peeling Root Vegetables and Tubers

Steam peelers generally consist of a steam vessel in which the outer layer of the tubers and root vegetables to be peeled are “parboiled” (slightly steamed) for a short time. After that, the softened outer layer is usually brushed off. This is often followed by a washing machine, in which any parts still clinging to the vegetables are washed off.

Steam peelers are valuable aids in the food manufacturing industry when it comes to removing the peel from larger quantities of tubers and root vegetables.

But steam peelers cannot cope with every situation in most companies – particularly not when there are deep damaged spots, deep-set “eyes”, “scabs”, rotten spots, and diseases on the tubers and root vegetables. The tubers and root vegetables leaving the steam peeler are then not clean enough – even when one steams them longer.

1. Special mechanical DORNOW post-treatment peelers, integrated in steam peeling lines

The above-mentioned damaged or imperfect tubers and root vegetables are sorted electronically or by hand and then peeled again in special mechanical post-treatment peelers (several times if necessary).

Economic Advantages:

1. The steam peelers can be run at maximum capacity. – High capacity of the steam peeler, and add to that the capacity of the post-treatment peelers!
2. The “good” tubers and root vegetables thus don’t stay in the steam vessel any longer than necessary and peeling produces minimum waste. Waste is minimised!
3. Even the “bad” goods are not steamed longer, which wouldn’t make them any cleaner anyway. No unnecessary loss of energy!
4. The goods receiving post-treatment go, after being sorted electronically or by hand, into the special DORNOW roller post-treatment machine, which largely removes the damaged layer in a very short time. – Quality improvement! Higher overall capacity of the combined peeling line!

5. Even goods which one would normally throw away as waste can be sent through the post-treatment machine. By doing this, one can normally “rescue” up to 50% of the very bad waste products and peel them so they become “good produce”. Higher yields!
 6. The post-treatment machines can be adjusted so that the goods leaving them have a **smooth surface**. The visible surface is **comparable to the appearance of steam-peeled goods**. – The steam-peeled or mechanically-peeled goods can be put together again, e.g. for packing in jars. – No loss in quality!
2. **Special Dornow roller peelers at the end of steam peeling lines as an integral component of these plants**

For many products, it makes sense to set up special DORNOW roller peelers as an integral component at the end of steam peeling lines. After the partial removal of the “parboiled” layer (mostly with a machine using brushes), **all** tubers and root vegetables go through a DORNOW roller peeler specially set up for this purpose.

Possibility 1: Good-quality tubers and root vegetables can be quickly sent through the roller peeler (by adjusting the in-built screw conveyer to fast!). One then sets the peeling rollers to slow, so that their mode of operation (= speed) is not aggressive.

Possibility 2: If the tubers or root vegetables have deep damaged spots, deep-set “eyes”, rotten spots or even scabs, they will stay longer in the roller peelers and the peeling effect is adjusted to be more aggressive!

Economic Advantage:

With the combination described above, the percentage of waste and the cleanliness of the end product can be controlled better. What is achieved is a minimum percentage of waste whilst also attaining a high degree of cleanliness! - The inclusion of the post-treatment plant improves these standards!

Capacities of DORNOW Roller Peelers:

There are DORNOW roller peelers with very high capacities: with internal spaces of up to **approx. 2500 mm** in diameter!

A list of interesting articles and essays regarding the topics of the preparation and processing of tubers and vegetables and associated specialist areas can be found at our Internet site at www.dornow.de, eatises.

**Review of your current peeling results or
before the purchase of a peeling machine or system:**

**Realistic test peelings with the most diverse peeling systems,
with the most diverse tubers and root vegetables, some fruit, with your raw
produce are possible in our Peeling Test Center**

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