

Organisation of an Industrial Potato Peeling Factory

Some Considerations upon the Development of a Modern and Efficient Peeling System for Potatoes and other Tubers and Root Vegetables in an „ Industrial Potato Peeling Factory“. - Location Western Europe -

Firms which start with the peeling of potatoes, or possibly with other tubers and root vegetables, can do this, in order to get a foothold on the market and at a fair price, by using a DORNOW high-quality batch peeler. This can be a carborundum peeling machine (abrasion technique) or a blade peeling machine. By the way, this machine does not require any automation. The place of production can, in the beginning, also be equipped in a simple (but more personnel-intensive) way.

However, such a solution requires more staff than it is the case with a more expensive, but efficiently constructed peeling system.

The user of such a batch peeler within a simple machinery surrounding field will be well advised to boost his turnover by more advertising for his product in order to purchase after that an economically reasonable system.

Nowadays, a medium-sized or bigger peeling system in Western Europe cannot work profitably, in the long run, unless it contains certain machines, features and all economically and technically efficient possibilities:

1. A high-quality **roller peeler working without waste water**, if possible provided with **micro fine-grain** rollers

or

an automatically working **SBS peeling plant**, also provided with **micro fine-grain facility** and operated **without waste water**,
2. a **modern multi-disc peeling machine MSS**. Here, our programme offers a blade and a carborundum machine model in three different sizes. These machines can also be supplied as combined carborundum-blade peeling machines. All these machines can work without producing waste water.
3. The possibility of a **second and third peeling process**,
4. A **roller inspection table**

5. A machine for halving and quartering potatoes (where divided potatoes are required)
6. A preserving and packing station working, if possible, automatically

Reasons for the above-listed 6 points:

As to 1. a) Water and waste water costs have increased considerably and are still soaring. In the region of Leipzig, for example, our roller peeling machine R-OW-110-A (capacity abt. 1 ton per hour of final produce) saves between € 25.000 to € 35.000 per year.

b) The new micro fine finish peeling provides for a surface of the peeled potatoes which is so smooth that in many cases blade peeling can be dispensed with (investment saving).

c) The efficiently constructed DORNOW roller peeling machines and the DORNOW SBS peeling plants do not produce, not even in case of second and third re-peeling, an inefficient, one-sided flat peeling (which is the case with many conventional batch peelers with rotating peeling discs). -The peeled tubers will largely keep their natural form. Oval tubers will also be peeled at their „short ends“, where there are normally the eyes. Thus, these eyes are largely removed, with flat peeling being avoided.

d) Unsorted goods, e. g. from 35 mm or bigger can be peeled, but also the sorting size 28 - 35 mm.

e) When peeling potatoes, for example, the „peeling waste“ only consists of potatoes and can be used for fodder (especially suitable for cows, cattle, bulls etc.).

f) Other tubers and root vegetables can also be peeled with DORNOW roller peelers!

As to 2. If order to achieve a longer durability of the peeled product, we recommend to provide (possibly after the carborundum peeling in a DORNOW roller peeling machine) a multi-disc peeling machine MSS, equipped with blade peeling discs or carborundum fine peeling discs. One can reach a durability (imperishability) of one week or more, if certain arrangements are made.

As to 3. While in earlier times a skilled person managed to inspect and touch up 50 kg of peeled potatoes given a total waste of 30 per cent), we have now capacity rates from 130 to 330 kg/hr per person, provided a second peeling is technically possible (based on an intentionally effected waste rate of 40 to 50 per cent, sorting size from 45 mm or bigger).

As to 4. On a roller inspection table the personnel are able to see the whole potatoes peeled which is not possible on a conveyor belt inspection table. It is not necessary to pick up neatly peeled potatoes by hand. Thus, labour costs between 30 and 50 per cent or even more can be saved!

As to 5. a) You get neatly peeled plate-ready pieces.

b) For the plate-ready dividing of potatoes by hand it takes some 6 to 7 persons per hour and ton, when peeling a sorting size of 40 mm or bigger.

As to 6. The preserving of potatoes with, for instance, DRY-WITE, should be carried out without additional staff; quick packing, too, should be possible with minimum labour.

Final annotation:

Profit cannot be realised, in Western Europe, by merely using conventional circular batch peeling machines for big canteens with medium or higher peeling rates per hour.

Small and very small factories should try and realize - by means of advertisements in newspapers, direct mailings etc. - an increase in their turnover in order to purchase then a highly sophisticated and economically efficient equipment.

Working, for example, exclusively with inadequate machinery will result, sooner or later, on account of the high labour costs and other unnecessary costs, in giving up peeling activities.

The above described is not applicable to countries where potato processing is not yet as developed as in Western Europe.

Retrospect:

Since around 1957 we have been supplying mechanical peeling machines and systems for 40 years.

Around 1970 we started to realize our own designs. Then we built and supplied the first roller peeling machines in Europe!

Around 1980 we developed the first dividing machines for peeled potatoes (quartering and halving). Today we are supplying these machines in well-proved designs.

Also around 1980 we designed and marketed the first roller peeling machines all over the world to be operated without water.



Around 1980 we invented and marketed the first blade peeling machines, which can be operated without waste water. There were no such machines before all over the world.

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, Treatises.

**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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