

Recommendations to the standard ISO 18135

Stakeholders meeting 10.5.2023

Prometec

Recommendations to the point 6 Establishing a sampling scheme (Sampling plan)

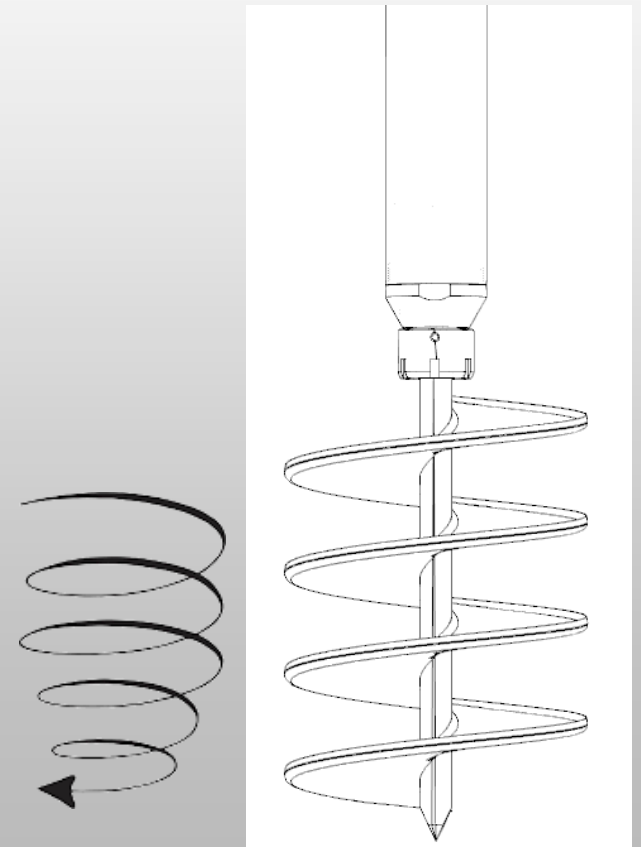
It is recommended that automatic sampling is preferred over manual sampling, as high-quality sampling is difficult, dangerous and unergonomic.

When designing the sampling process, the sampling station or the area and the useable sampling equipment, the following priorities shall be considered:

- 1. Workplace safety comes first. Risks caused by the sampling area shall be analyzed.
- 2. Prefer automatic sampling over manual sampling to maximize sample quality and minimize human error caused by complicated sampling.
- 3. The sampling equipment shall meet the requirements of this standard.
- 4. The sampling situation must be designed in a way that every imaginary particle shall have an equally high chance to be included in the collected sample.
- 5. The risk of contamination of the samples must be minimized.
- 6. Every collected sample must be traceable to its origin (load, lot, etc.).
- 7. The risk of mechanical damage to the material handling equipment shall be minimized.
- Manual sample collection from unloading pits shall be avoided.

Recommendations to the point 11.3.5 Mechanical drills

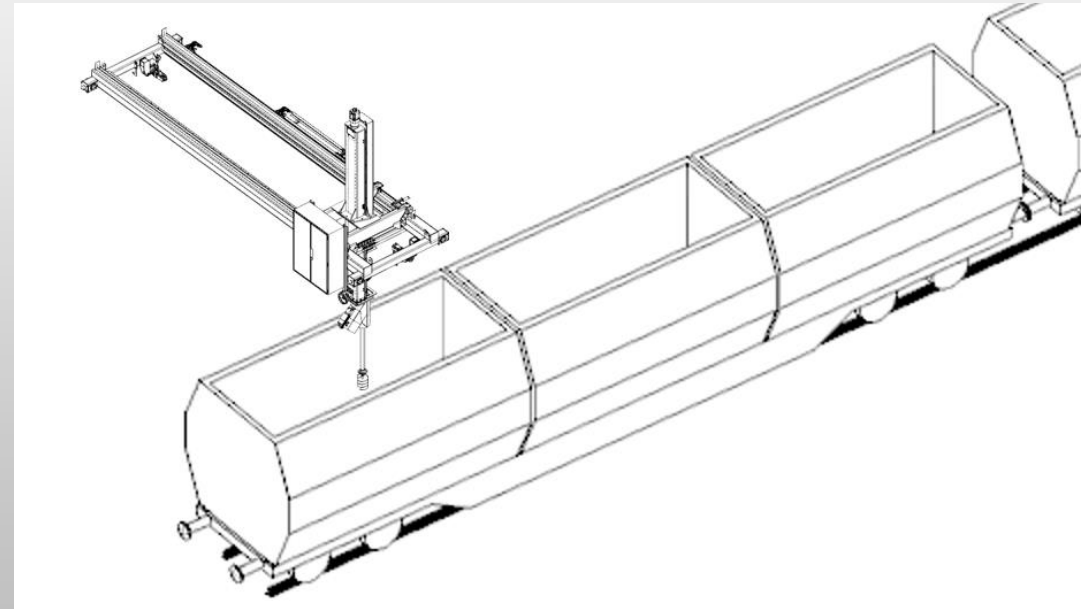
In case of automatized sampling, an open auger can be used when the mechanical solution is sufficiently sturdy. The open auger must be designed so that its diameter is at least 2.5 times the nominal largest piece size of the material to be sampled. The benefit of using an open auger instead of a closed one is that the sample collection requires less power due to less wedging which happens often with wet woodchips and bark. The machine that uses the auger must be designed in such a way that it can be used to take a sample from the top of the stack at a random point, taking operational safety into account. The lifting of the auger must be planned in such a way that the material does not fall off the auger during lifting. In a lifting situation, the top revolution of the auger lifts the material accumulated above the auger away from the front, but the material on the auger blade remains on the auger. The auger must be long enough to collect a sufficient amount of sample material in one drilling motion. Sample collection can be carried out while the borehole is being emptied. The movement speeds and accelerations must be calm and stable in order to avoid shaking. In a drilling situation, the bit is lowered according to the drilling motion, where the bit is rotated around its axis together with the lowering feed motion. During the lifting movement, the auger is lifted without a fast rotation movement, either completely without rotation or assisting the lifting with a slow rotation movement.



Recommendations to the point 12.2.2 Sampling from the containers, lorries and wagons

The following principles shall be followed when taking samples from containers, lorries and wagons:

1. Carry out the sampling before unloading in order to be able to react promptly if the quality of the sample material does not meet the requirements.
2. Portions of the sample shall be taken so that every imaginary particle has an equal chance to be included in the lot specific sample. This means that the coordinates of a single sample are randomized automatically in x-, y- and z- directions, so the operator cannot decide the coordinates.
3. Differently constructed containers, lorries and wagons shall be handled automatically so that collisions between sampling equipment and vehicles are prevented.
4. Measures and gaps of the sampling equipment shall meet the requirements of this standard.



Recommendations to the point 12 Sampling in practice

1. If automatic sampling is not possible, the unloading pits and stations shall be equipped with fixed sampling platforms that are designed according to the EN ISO 14122 series to ensure working safety of the personnel who take samples from the falling stream.