~~Amendments under Article 34 PCT~~

~~PCT/EP2020/053808~~

CLAIMS

1. Trench wall cutting device, comprising
   - a trench cutter (30) which is constructed from at least two cutter modules (40, 50) and comprises cutting wheels (42), and
   - a supporting structure (20) for suspending and moving the trench cutter (30) in a vertical direction in order to form a cut trench in the ground,

   characterized in that
   - the supporting structure (20) has a guide apparatus (24), which is configured to supply the separated cutter modules (40, 50) to a working region at which the cut trench is to be created, wherein the cutter modules (40, 50) can be assembled at the working region to form the trench cutter (30), and
   - the supporting structure (20) comprises at least one guide rail (25), along which the individual cutter modules (40, 50) are mounted so as to be shiftable transversely to the cut trench.

2. Trench wall cutting device according to claim 1,
   characterised in that
   a first cutter module (40) having cutting wheels (42) is provided, and a second cutter module (50) having at least one drive unit (52) and/or a guide frame (54) is provided.

3. Trench wall cutting device according to claim 2,
   characterised in that
   a pump that can be driven by the drive unit (52) is provided in the second cutter module (50).

4. Trench wall cutting device according to any of claims 1 to 3,
characterised in that
at least one further cutter module comprising a guide frame (54) is provided.

5. Trench wall cutting device according to claim 1,
characterised in that
a shifting apparatus (26) having a traversing drive for shifting the cutter modules (40, 50) is provided.

6. Trench wall cutting device according to any of claims 1 to 5,
characterised in that
the cutter modules (40, 50) have connection surfaces (48, 58) on which releasable connection apparatuses are arranged.

7. Trench wall cutting device according to any of claims 1 to 6,
characterised in that
the supporting structure (20) extends along ~~a~~ the working region in which adjacent cut trenches are made.

8. Trench wall cutting device according to any of claims 1 to 7,
characterised in that
at least one lifting unit (60) for vertically moving the trench cutter (30) is arranged on the supporting structure (20).

9. Trench wall cutting device according to any of claims 1 to 8,
characterised in that
at least one supply unit (70, 80) having at least one hose reel and/or cable reel (72, 73, 82) is arranged on the supporting structure (20).

10. Trench wall cutting device (10) according to any of claims 1 to 9,
characterised in that
the trench cutter (30) is constructed from at least two cutter modules (40, 50), which are of substantially the same height.

11. Trench wall cutting device (10) according to any of claims ~~1~~2 to ~~10~~3,
characterised in that
the trench cutter (30) is constructed from at least two cutter modules (40, 50), which are releasably mechanically interconnected, wherein ~~a~~ the first cutter module (40), having the cutting wheels (42), is directly connected to a first supply unit (80) for a power supply, independently of the second cutter module (50).

12. Method for cutting a cut trench in the ground using a trench wall cutting device (10), in particular according to any of claims 1 to 11, in which
- a supporting structure (20) having a guide apparatus (24) is arranged, and
- a trench cutter (30) with cutting wheels (42) is arranged on the supporting structure (20) and is lowered into the ground in a vertical direction, wherein ground material is cut away in a working region, thus forming the cut trench,
characterized in that
- the trench cutter (30) is constructed from at least two cutter modules (40, 50) which are supplied to the working region in a manner separated from one another by means of the guide apparatus (24) and are connected to one another at the working region in order to form the trench cutter (30), and
- the supporting structure (20) comprises at least one guide rail (25), along which the individual cutter modules (40, 50) are mounted so as to be shiftable transversely to the cut trench.

13. Method according to claim 12,
characterised in that
at least two adjacent cut trenches are created, wherein, once a first cut trench

has been created, the trench cutter (30) is retracted out of the first cut trench while separating the cutter modules (40, 50), and
in that, to form a further cut trench, the cutter modules (40, 50) are moved along the guide apparatus (24) and reconnected to form the trench cutter (30), which is then lowered into the ground while cutting away ground material.

14. Method according to ~~either~~ claim 12 ~~or claim 13~~,
characterised in that
to form a trench wall in the ground, the ~~at least one~~ cut trench is filled with a settable suspension, which hardens to form the trench wall.

15. Method according to claim 13,
characterised in that
to form a trench wall in the ground, the at least two adjacent cut trenches are filled with a settable suspension, which hardens to form the trench wall.