CLAIMS

1. Method for producing a cut trench in the ground by means of a trench cutting device (10) having a trench cutter (30) and a supporting means (20) which is designed for lifting and lowering the trench cutter (30),
wherein the trench cutter (30) is connected at its upper end to the supporting means (20) and at its lower end has at least one cutting wheel (34) which is rotatably supported and can be driven in a rotating manner via a rotary drive (36) in order to remove ground material,
wherein a target value for an advancing speed of the trench cutter (30) during removal of the ground material can be preset in a control unit, through which a lowering of the trench cutter (30) by the supporting means (20) into the ground is controlled,
characterized in that
the advancing speed is controlled by means of the control unit depending on a rotational speed and/or a torque of the at least one cutting wheel (34), wherein on reaching a preset limit value for the rotational speed and/or for the torque, the advancing speed of the trench cutter (30) is changed, in particular reduced, with respect to the target value for the advancing speed.

2. The method according to claim 1,
characterized in that
on reaching the limit value for the rotational speed or the torque, the advancing speed of the trench cutter (30) is reduced until the rotational speed is again above a preset rotational speed limit value or the torque is below a preset torque limit value.

3. The method according to claim 2,
characterized in that
the advancing speed of the trench cutter (30) is increased up to the target value for the advancing speed if the rotational speed is above the rotational speed limit value or the torque is below the torque limit value.

4. The method according to any one of claims 1 to 3,
characterized in that
the advancing speed is furthermore controlled depending on a load of the trench cutter (30).

5. The method according to any one of claims 1 to 4,
characterized in that
the rotational speed or the torque is detected in a direct manner and a related measured value is forwarded to the control unit.

6. The method according to claim 5,
characterized in that
the rotational speed is detected by means of a rotational speed pickup or the torque is detected by means of a torque pickup.

7. The method according to any one of claims 1 to 6,
characterized in that
the rotational speed and/or the torque are detected in an indirect manner.

8. The method according to claim 7,
characterized in that
to detect the rotational speed and/or the torque a power consumption of the rotary drive (36) is measured.

9. The method according to claim 8,
characterized in that
the rotary drive (36) is operated hydraulically with a hydraulic circuit, wherein a pressure or a pressure change is detected in the hydraulic circuit.

10. Trench cutting device, for producing a cut trench in the ground, having a trench cutter (30), a supporting means (20) which is designed for lifting and lowering the trench cutter (30), and a control unit,
wherein the trench cutter (30) is connected at its upper end to the supporting means (20) and at its lower end has at least one cutting wheel (34) which is rotatably supported and can be driven in a rotating manner via a rotary drive (36) in order to remove ground material,

wherein a target value for an advancing speed of the trench cutter (30) during removal of ground material can be preset into the control unit, through which a lowering of the trench cutter (30) by the supporting means (20) into the ground is controlled,

characterized in that

the advancing speed is controlled by means of the control unit depending on a rotational speed and/or a torque of the at least one cutting wheel (34), wherein on reaching a preset limit value for the rotational speed and/or for the torque, the advancing speed of the trench cutter (30) is changed, in particular reduced with respect to the target value for the advancing speed.

11. The trench cutting device according to claim 10,

characterized in that

the supporting means (20) is a carrier implement (22) with a supporting rope (26) or a supporting rod, wherein the trench cutter (30) is suspended in a vertically adjustable manner on the supporting rope (26) or the supporting rod.

12. The trench cutting device according to claim 10 or 11,

characterized in that

a total of four cutting wheels (34) are provided which are arranged in pairs next to each other.