

★★★ <第6回知的財産翻訳検定【和文英訳】試験>標準解答★★★

《1級 -機械工学-》

[1]

Related Art

Known soil stabilization techniques wherein a hardening agent is injected into the ground have made progress through much trial and error. Particularly, conventional techniques, though imaginative, have not used drilling blades or stirring blades, as can be seen in Japanese Unexamined Patent Application Publication No. 5-9923. To improve the efficiency of such techniques, the Present Inventor has developed a soil stabilization apparatus provided with stirring blades, and has further developed an apparatus having, in addition to stirring functions of the stirring blades, drilling functions realized by way of drilling blades, which discharge a hardening agent from the tips thereof. The Present Inventor has thus been able to solve the problems and inadequacies of the conventional art, and to realize a revolutionary stabilized soil with very hard consistency. The Present Inventor has already filed for each of these techniques.

[2]

According to a first embodiment of the present invention, a wristwatch 100 with a wind indicator device includes a barrel gear 120d, a ratchet wheel 130, a first sun wheel 150, a first planetary wheel 152, a second planetary wheel 154, a second sun wheel 156, a first wind indicator intermediate wheel 180, a first segment gear 184c, a second segment gear 184g, and a wind indicator display wheel 190. An exemplary configuration of these components can be made with the following conditions.

Number of teeth of barrel gear 120d 84

Number of teeth of ratchet wheel 130 62

Number of teeth of first sun wheel 150 20

Number of teeth of first planetary wheel 152 24

Number of teeth of gear of second planetary wheel 154 20

Number of teeth of pinion of second planetary wheel 154 12

Number of teeth of gear of first wind indicator intermediate wheel 180 48

Number of teeth of pinion of first wind indicator intermediate wheel 180

8

Number of teeth of second sun wheel 156 24

Number of teeth of first segment gear 184c (calculated value assuming teeth over entire perimeter) 200

Number of teeth of second segment gear 184g (calculated value assuming teeth over entire perimeter) 104

Number of teeth of wind indicator display wheel 190 13

With this configuration, the reduction ratio from barrel gear 120d to wind indicator display wheel 190 is 1/18. When the spring is wound six times, a hand 196 attached to the wind indicator display wheel 190 moves 120 degrees, and when wound seven times, 140 degrees.

[3]

1. A TIG welding apparatus comprising:

a welding-current supply unit for supplying an electric current for carrying out welding;

a shield-gas supply unit for supplying two kinds of gasses;

a tungsten electrode connected to the welding-current supply unit;

a welding torch disposed coaxially around the tungsten electrode and connected to the shield-gas supply unit so as to form inner and outer double gas shields provided with gas jetting nozzles through which the gasses are jetted;

a wire feeding unit for continuously feeding a plurality of wires as filler to a portion at which a welding arc is generated;

a heating unit connected to the plurality of wires, except at least one wire, for heating the wires; and

a gas-supply-rate control unit connected to the shield-gas supply unit and configured to control a gas supply rate thereof.

2. The TIG welding apparatus according to claim 1, wherein the plurality of wires except at least one wire are solid wires formed as hot wires to be heated by the heating unit, and the at least one wire is a twisted filament wire formed as a cold wire.

3. The TIG welding apparatus according to claim 1, further comprising a wire-feeding-rate control unit connected to the wire feeding unit and configured to control a wire feeding rate thereof.