

Title (en)
Auger drill

Title (de)
Spiralbohrer

Title (fr)
Fleuret hélicoïdal

Publication
EP 1041240 A2 20001004 (EN)

Application
EP 00106647 A 20000328

Priority
JP 8895599 A 19990330

Abstract (en)
A method of constructing high-friction piles in the ground is provided, wherein the amount of excavated soil from prebored holes can be reduced, and the total number of piles which must be set for a pile foundation can be reduced. An auger is utilized which comprises an elongated shaft (1) and a helical blade (2, 3) extending around the shaft (1) and projecting radially from the periphery of the shaft (1). The shaft comprises a first helical blade (2) along the length of the main portion thereof with an inclination angle in the positive direction of rotation and at least one second helical blade (3) only along the top portion of the shaft (1) with an inclination angle in the opposite or reverse direction as that of the first helical blade (2). When drilling such an auger into the ground, the agitated soil is thrust sideways into the ground so that a plastic zone (A) is formed around the hole up to a prescribed range. Next, a hardening agent (4) is poured into the hole, and then a support or reinforcement material (5) is inserted into the hardening agent (4) before the hardening agent (4) hardens completely. The support material (5) and the plastic zone (A) surrounding the hole form together a monolithic pile. <IMAGE>

IPC 1-7
E21B 10/44; **E21B 17/22**

IPC 8 full level
E02D 3/12 (2006.01); **E02D 5/34** (2006.01); **E21B 7/00** (2006.01); **E21B 17/22** (2006.01)

CPC (source: EP)
E21B 17/22 (2013.01)

Cited by
JP2018135683A; CN105401893A; CN110206029A; CN102002942A; EP2133507A1; CN105735907A; CN110878553A; CN110552645A; US8322458B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 1041240 A2 20001004; **EP 1041240 A3 20020102**; **EP 1041240 B1 20031217**; AT E256816 T1 20040115; DE 60007211 D1 20040129; JP 2000282461 A 20001010; JP 3163420 B2 20010508

DOCDB simple family (application)
EP 00106647 A 20000328; AT 00106647 T 20000328; DE 60007211 T 20000328; JP 8895599 A 19990330