

(19) (KR)
(12) (A)

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(43)

10-2004-0039373
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(87)

2003 03 27

(30) 09/955,792 2001 09 19 (US)

(71) , 15650-0231, , . . . 231, 1600

(72) .
15683 247 . . . 1

(74)

:

(54)

(18) 가 (12) (10) (11) , (11) (2)
8a), (28b)
(34,36) (14) , (34,36) 1 (3)
0), 2 (32) 3 (38) 3 (38) 2 (32)
2 (32) 1 (30)

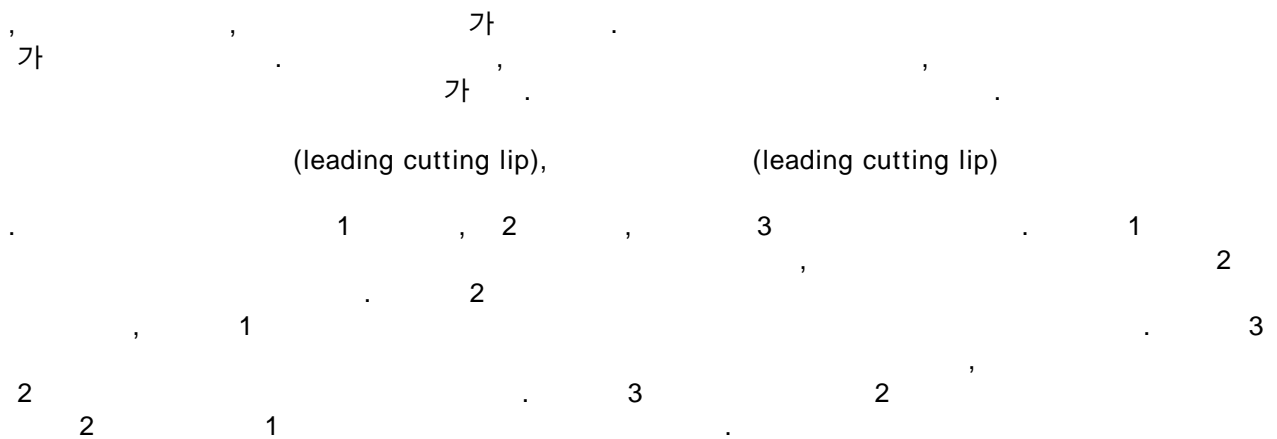
2

S

(thrust)

(twist drill) , (flute)
 (fluted land) (shank)
 (helical flute) (hand t
 ool) (chuck)
 (chisel edge) 가 (對向)
 (cutting edges) (leading faces) (end faces)
 (flanks) (periphery) (leadi
 ng edge) (land), (cylindrical land), (wear margin), (support ma
 rgin) 가 가

ance angle) (helical grinding) (clea
 (centered spot drilling)
 (high feed rate)가
 (cutting condition) (helically ground faces)
 R.Stock AG가 Stock - Taschenbuch [R.Stock AG
 (handbook)], , 1979 3 40 (side
 rake angle)



- 1 (端面圖)
 2 1
 3 2
 4 1
 5 1
 6 1

emented carbide) (10) (c
 tipped drill) (insert) (10) (11) (14) (12) (16) 30 (12) (helix angle) (12)
 가 (14) (12) 18 (12) (web,20) (22) (margin,24)
 (16) (rotational leading edge) (11) (single angle) (11) 140 1 가 (11)
 24) (20) (18) (26) (10) (cutting lips,28) (24) (16)
 (28) (negative radial rake) 가 (26) S (26) (11)
 가 (10) (18) 가 (leading cutting lip,28a) (34,36)
 (trailing cutting lip,28b) , 2 (a secondary relief surface,32),
 (34,36) 1 (a primary relief surface,30), 2 (30) (26)
 3 (a third relief surface.38) (28) 가 2 (32)

1 5 (26) (28a) , 1 (30) (24) (28a) . 1 (30) (30)
 , 2 (32) 1 (30)

2 (32) (26) , 1 (30)
 (14) . 2 (32) (26) , 2 (32)
 (32) (30) (18) (26) , 2 1
 (10) (C) (18) 20 60 . 2 1
 , 2 (32) 30 . 2 (32)

3 (38) (chip control) 가 3 (38) 2
 (32) (11) (14) S (26) . 3 (38) (38)
 S (26) (14) (14) (26) . 2 (32) (32)
 3 (38) 2 (32) , 2 (32)
 0 2 1 2 (30) . 3 (38) (38) 3 (C) (38)
 3 (38) , 3 (38) 3 (38)

(40) 1 3 6 (drill bit)
 () / (pressing)
 / S

4,826,368

1
 가 3 가 3

Markino A-55 (horizontal power drill) 4140 (steel)((200SFM(60.0MPM)@0.012I
 PR)(.304MMR)) 1018 ((290SFM(88.3MPM) @0.012IPR)(.304MMR))
 (holder) (toolholding device) Kennametal HSEM07
 09R1SSF075 HSK63ATG100 (collet chuck) KSEM1927MDM KSEM
 1927HMP Kennametal

1 2

< 1>

1018/290 SFM @0.012 IPR	
	10
KSEM1927MDM	1037.51lbs
KSEM1927HPM	949.04lbs
KSEM1927MDM	815.46lbs(22%)

< 2>

4140/200 SFM @0.012 IPR	
	10
KSEM1927MDM	948.54lbs
KSEM1927HPM	1065.80lbs
KSEM1927MDM	833.38lbs(13%)

가

emented carbide) (10) (c
 tipped drill) (insert) (

(57)

1.

, ,
 가 , , , ,
 , 1 , 2 3 ;
 1 2 ;
 2 , 1 ;
 3 , ;
 3 2 ;
 3 2 2 1 .

2.

1 , 30 가 .

3.

1 , 가 .

4.

1 , 가 가 .

5.

4 , 가 140 가 .

6.

1 , 가 가 .

7.

1 , 가 S .

8.

1 , 1 .

9.

1 , 2 .

10.

1 , 2 20 60 .

11.

10 , 2 30 .

12.

1 , 3 .

13. 1 , 3 0 2 .

14. 1 , 3 .

15. 1 , 3 .

16. 1 , 3 .

17. 가 , , , , 1 , 2 3 ; , 1 , 1 2 ; , 2 3 ; , 1 3 2 ; 2 1 .

18. 17 , 30 가 .

19. 17 , 가 .

20. 17 , 가 가 .

21. 20 , 가 140 가 .

22. 17 , 가 가 .

23. 17 , 가 S .

24. 17 , 1 .

25. 17 , 2 .

17	26.	,	2		20	60
26	27.	,	2	30		
17	28.	,	3			
17	29.	,	3		0	2
17	30.	,	3			
17	31.	,	3			
17	32.	,	3			

