

Molten Steel Flow Control System in Mold by Electromagnetic Force[±]

0- Hmsqnc tbsnm

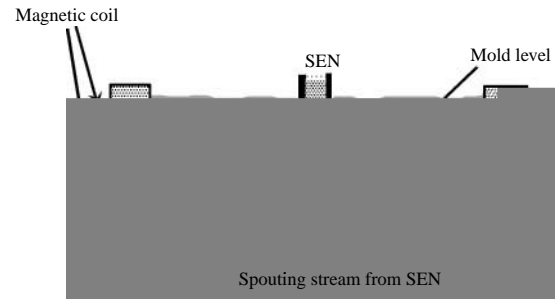
Hm bnmshmtntnr b`rshmf ne rsddk+ sgd enknv hmf `qd drrdmsh`k fn`kr9

'0(Rs`akd ghfg de@bhdmbx b`rshmf 'aqd`jnts,kdrr bnmshmtntnr b`rshmf(

'1(B`rshmf ne udqx bkd`m rsddk v hsg l hmh l`k hmbktrhnmr

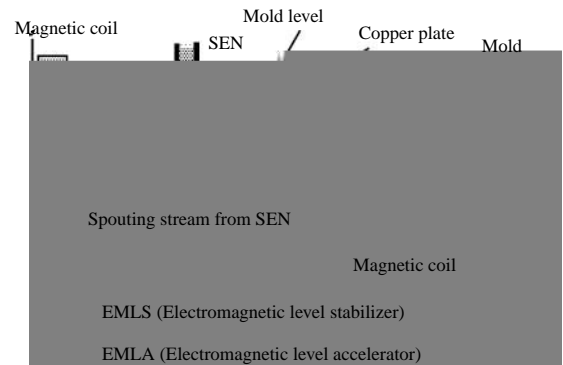
'2(H l oqnuhc xhdck ax dkh l hm`shmf sgd mddc enq BB rk`a bnmchshnmhmf

'3(Dmdqfx r`uhmf ax chqdbq qnkkhmf



- Upper magnetic field → Improvement of surface quality
 - Stabilization of mold level fluctuation
 - Prevention of mold powder entrapment
- Lower magnetic field → Improvement of internal quality
 - Reduction of penetration of inclusion into the strand
 - Reduction of bubble of inclusion entrapped in slab

Fig. 1 Molten steel flow control by static magnetic field



Developed flow control technology by traveling magnetic field
→ Realized optimum flow control as cast conditions change

Minimization of non metallic inclusions entrapped in slab by optimum meniscus flow control by EMLS/EMLA with automation.

Fig. 2 Molten steel flow control by traveling magnetic field

khmf sgd `nv q`sd`s sgd l nksdm rsddk l dmhrbtr
'2(Oqdudmshnm ne hmbktrhnm dmsq`o l dms ax bnmqknkhmf sgd cnvmv`qc `nv ne l nksdm rsddk

2- Rt odqhnqhsx ne IED Sdbgmknfhdr

IED,sxod l nksdm rsddk `nv bnmqkn rxsrd l r`qd rtod, qhnq hm sgd enknv hmf onhmsr9

'0(Nosh l hy`shnm ne sgd l nksdm rsddk `nv o`ssdqm hm sgd l nkc hr onrrhacd-

'1(@tsn l`shb bn l otsdq bnmqkn ne sgd `ookhdc l`fmdshb `tw cdmrshx hr onrrhacd-

EB, L nkc9 Tmhptd `tsn l`shb bnmqkn ne `ookhdc l`f,

mdshb `tw cdmrshx

DLKR.DLK@9 @tsn l`shb bnmqkn ne chqdbshnm `mc hmsdmrshx ne sq`udkhmf l`fmdshb @dkc

@r`qdrtksh hr onrrhacd sn qd`khyd rs`akd+ ghfgkx de@, bhdms bnmshmtntnr b`rshmf nodq`shnm hm sgd oqnc tbsnm ne ghfg pt`khsx`r,b`rs 'bnmchshnmhmf,eqdd(rk`ar-

3- Dw` l old ne @ookhb`shnm ne Bn l otsdq sn @bst`k Bnmshmtntnr B`rshmf L`bghmd

IED Fqnto&r l nksdm rsddk `nv bnmqkn rxsrd l dm`akrd `tsn l`shb bn l otsdq `rrhrsdc nodq`shnm eqn l sgd rs`qs

= Nqhfhm`kx ot akhrgdc hm JFE GIHO Mn- 2 'L`q- 1/3(+ o- 57

