



? Mn?0.90?1.20

? S ??0.035

? P ??0.035

? Cr??0.25

? Ni??0.30

? Cu??0.25

65mn????

?????b (MPa)?825~925

??? ?10 (%)?14~22.5

????? ? (%)????10

?????,?302HB;??+???,?321HB

???

????????????

????????830 $\pm$ 20,??; ??540 $\pm$ 50(?????, $\pm$ 30)?

????????

????????Ac1=726??Ac3=765??Ar3=741??Ar1=689??Ms=270??

?????:??810 $\pm$ 10??????[1]

??

??????

????5.5?16mm

????160?450mm

65Mn??

65Mn??

?=7.85?/????????????????????????????????

?65Mn????????????????????????65Mn????????????8?15mm????????????????????????????????

760?x30min????20?/h????700?x6h????????????????????????

65mn?????

1????????????

2????????

3????????????????????????