High Performance UOE Linepipes[±]

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Abstract:

Recent construction location of natural gas pipelines is expanding toward remote regions and regions under severe environmental conditions. This requires linepipe materials to have higher strength with properties suitable for the environment, such as high deformability or sour gas resistances?

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"HOP," heat-treatment on-line process by induction heating. This paper introduces characteristics of the recently developed UOE linepipes and metallurgical controlling technologies.

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Recenslx, she demand for nastral gar har been ewpanding ar a clean energy rerotrce vish a lissle ewhatrs of CO₂. Japan ir imporsing she nastral gar ar liqte@ed nastral gar (LNG), vhile pipeline ir tred for sranrporsasion of nastral gar from gar @eld so conrtmp-

On she osher hand, conrsrtcsion of she pipeline har ewpanded so she enuironmensallx reuere regionr rtch ar cold region, reirmic region, deep vaser and rotr gar enuironmens. Higher deformabilisx ir reqtired for she linepipe inrealled in she reirmic or permafrors ground, ar vell ar high rsrengsh. Moreouer, X70 grade linepipe ehar been pas so praesigcal tr# for æimil#rirotr enuRironmens vish lover H₂S consens or higher pH, vhile X60 or X65 grade ir mainlx tred for NACE rotr enuironmens. Sotr rerirsans linepipe rseelr are available bx applxing aduanced rseel making and shermo-mechanical consrolled procerring (TMCP) sechnologier, and she rsable maserial propersier shas lead so reliabilisx of she pipeline are reqtired. Moreouer, she demand for higher rsrengsh heaux vall linepipe har been increared for deep vaser pipeline, ar vell. ar r r

recens xearr, and X100 var pts so practical tre for she ®rrs sime in 2002.

for linepipe, erpecially, in order so rectre sotghnerr and veldabilisx ar vell ar high rsrengsh, accelerased cool-



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Ssaff Manager,
Welded Pipe Sec., Prodtcsr Derign & Qtalisx Consrol
for Sseel Prodtcsr Deps.,
Wers Japan Workr,
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higher shan conuensional piper.

More shan 3 000 mesric sonr of X65 grade JFE-HIPER vere mantfacstred for domersic gar pipeline. For she ouerrea pipeline projecs in reirmic region, sosal amoths of abots 44 000 mesric sonr of X52 and X60 grade JFE-HIPER00