

4070549921 : Major METALLURGICAL ENGINEERING

KEY WORDS : DYNAMIC STATE, MOTOR LOOPER.

TEERAPONG HARNWIROJKUN : A MOTOR LOOPER MODEL FOR TENSION

CONTROL IN THE CONTINUOUS HOT ROLLING MILL THESIS ADVISOR :

ASSIST.PROF.PRASONK SRICHAROENCHAI (D.ENG) 79 p.p. ISBN 974-346-616-9

Dynamic simulation of 7 stands continuous hot rolling with interstand tension control by motor looper and no interstand tension control were investigated. This simulation have been analyzed from continuous rolling theory. Dynamic characteristics of hot rolling was considered for rolling process improvement. Main of this improvement is reducing of final thickness variation.

For dynamic simulation, result from analysis showed that interstand tension control by motor looper could reduce final thickness variation when inlet thickness variation occurred. Because of roll speed variation, changing of thickness would be occurred. Consequently, for interstand tension control, roll speed of final stand should be constant to reduce final thickness variation. In case of 32-39 mm inlet thickness, actual data and analysis result showed that difference of inlet thickness that not over 2 mm made rolling force of 1st-4th stand change reduce respectively but did not change that of 5th-7th stand when roll gap and interstand tension were constant.

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