

KAWASAKI STEEL TECHNICAL REPORT
No.31 (November 1994)

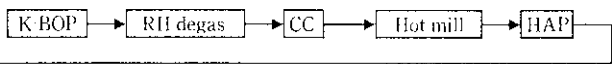
Stainless Steel Cold Rolling Plant at Chiba Works*



Synopsis:

Stainless Steel Cold Rolling Plant, which was newly built in Chiba Works, started operation. A cold rolling

Steelmaking and hot rolling
(Chiba Works)



Cold rolling-I (Chiba Works)



Cold rolling-II (Chiba Works)
— Newly built

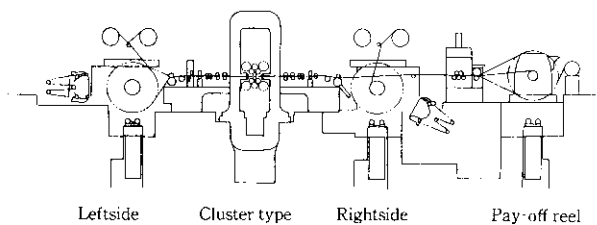


Fig. 3 Layout of stainless steel cold mill

shape meter.

The mill provides a maximum rolling force of 1 000 t for normal use, and the work roll diameter, which is an important factor for creating stainless steel brightness, has been designed within the range of 79 to 120 mm.

3.1.2 Features of the facilities

(1) Quality

The automatic gauge control (AGC) system combines the feed-forward, monitoring, BISRA, and massflow methods to ensure high accuracy. Low-viscosity mill oil is used with a Schneider filter in the filtering system. As a result, a stable level of brightness has been obtained, and the cleanliness of

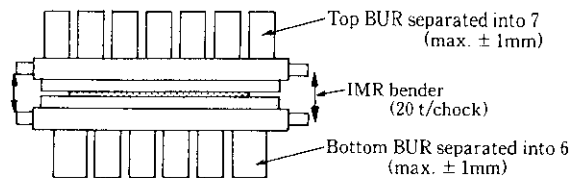
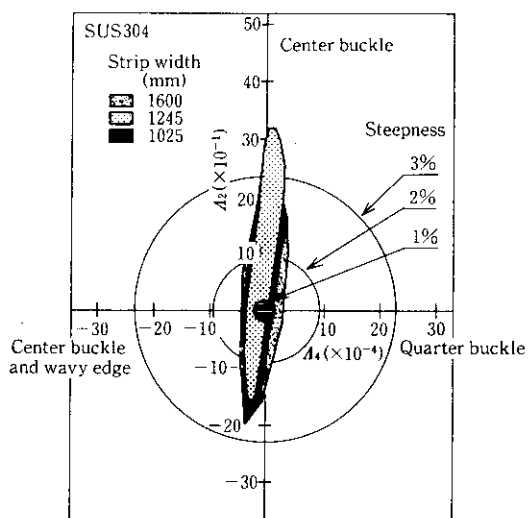


Fig. 4 Schematic drawing of shape control actuator



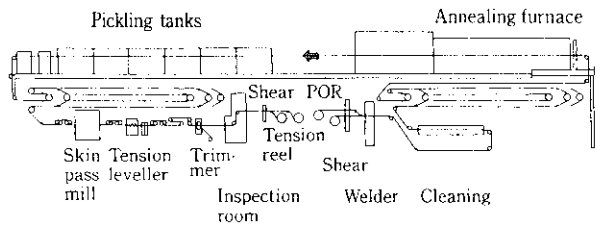
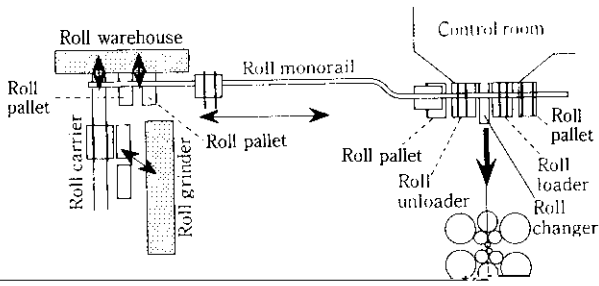


Fig. 8 Layout of the cold-rolled strip annealing and pickling line

← Work roll travel flow

Mill

tation

TABLE 3. Cold-rolled strip annealing and pickling line

slowing down to stop the mill. In particular, the

ing and pickling line

Material type	SUS300, 400 series
Thickness (mm)	0.5~5.5

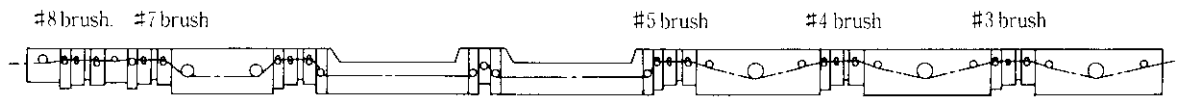


Fig. 10 Layout of the pickling line

The Ruthner method has been adopted for final pickl-

Table 4 Specifications of the recoiling line

Paper winder

Entry
shear

Belt bridle

Paper pay off

Pay off reel

Rough
leveller

No.1 looper

Slitter

No.2 looper

End shear

Tention reel



3.4 Automatic Coil Transportation System

racy, high speed and high reliability, and has sufficient flexibility to plan the optimum schedules.

Coils are automatically transported throughout the

The specifications and layout of the transportation

Table 8 Rules of expert system installed in P/C software

Components	Target of inductive reasoning	Rules	Mean CPU time(s)
Select O/C command	Select O/C command	10	0.2
Select machines	Select available machines under O/C command	10	0.2
Induce transport route	Route available stations for each command from start to terminal	25	0.3

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]