(11) Publication number:

0 128 734 A3

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 84303788.8

(51) Int. Cl.4: C 21 D 9/573

(22) Date of filing: 05.06.84

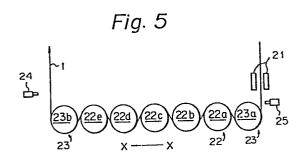
- (30) Priority: 11.06.83 JP 104617/83 08,12.83 JP 230602/83
- (43) Date of publication of application: 19.12.84 Bulletin 84/51
- (88) Date of deferred publication of search report: 14.08.85
- Designated Contracting States:
 BE DE FR GB IT LU NL
- 71) Applicant: Nippon Steel Corporation 6-3 Ohte-machi 2-chome Chiyoda-ku Tokyo 100(JP)
- (72) Inventor: Misawa, Yasuo c/o Kimitsu Works Nippon Steel Corporation 1, Kimitsu Kimitsu-shi Chiba-ken(JP)
- (72) Inventor: Dazai, Takeo c/o Kimitsu Works
 Nippon Steel Corporation 1, Kimitsu
 Kimitsu-shi Chiba-ken(JP)

- (72) Inventor: Haeno, Tsutomu c/o Kimitsu Works Nippon Steel Corporation 1, Kimitsu Kimitsu-shi Chiba-ken(JP)
- (72) Inventor: Saitoh, Yoshio c/o Kimitsu Works Nippon Steel Corporation 1, Kimitsu Kimitsu-shi Chiba-ken(JP)
- (72) Inventor: Shimada, Masanori c/o Kimitsu Works Nippon Steel Corporation 1, Kimitsu Kimitsu-shi Chiba-ken(JP)
- (72) Inventor: Ikegami, Hiroshi Yawata Works Nippon Steel Corp. 1-1-1, Edamitsu Yahata Higashi-ku Kitakyushu-shi Fukuoka-ken(JP)
- (72) Inventor: Yui, Katsuhiko Yawata Works Nippon Steel Corp. 1-1-1, Edamitsu Yahata Higashi-ku Kitakyushu-shi Fukuoka-ken(JP)
- (22) Inventor: Namba, Tadashige Tobata Plant & Machinery Works
 Nippon Steel Corporation 46-59, Oaza Nakabaru
 Tobata-ku Kitakyushu-shi Fukuoka-ken(JP)
- (74) Representative: Arthur, Bryan Edward et al, Withers & Rogers 4 Dyer's Buildings Holborn London EC1N 2JT(GB)

54) Method for cooling a steel strip in a continuous-annealing furnace.

The present invention relates to a method for cooling a steel strip (1) in a continuous-annealing furnace. Conventionally, the steel strip (1) is cooled by a water medium and, thus, oxidation is inevitable. Recently developed roll cooling methods can prevent oxidation but are disadvantageous in that the steel strip (1) is nonuniformly cooled as seen in its short width direction.

The present invention attains uniform cooling by means of feedback control and feedback-feedforward control, in which the blowing width of the gas-jet cooler (21) is controlled by detecting the sheet temperature distribution with a thermometer (24).



品

European Patent Office

EUROPEAN SEARCH REPORT

EP 84 30 3788

Cetagon: DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document with indication, where appropriate, Relevant				
Category	Citation of document w of rele	ith indication, where appropriate, vant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 3)
A	5, no. 98 (C-60 1981; & JP - A	TS OF JAPAN, vol. [770], 25th June 56 41321 [K.) 18-04-1981	1	C 21 D 9/57
А	Cn, vol. 81, no 1981, page 6, M	, GB; & JP - B -	1	
A	EP-A-0 058 607	 (STEIN HEURTEY)	1	
A	DE-C- 890 804	 (WESTFALENHÜTTE)	1	
A	FR-A-1 554 547	 (KLOCKNER-WERKE)	2	TECHNICAL FIELDS SEARCHED (Int. Ci. 3)
				C 21 D
				•
	The present search report has b	een drawn up for all claims		:
	Place of search THE HAGUE	Date of completion of the search 01-04-1985	MOLLE:	Examiner F G.H.J.
Y: par doo A: tecl O: non	CATEGORY OF CITED DOCU ticularly relevant if taken alone ticularly relevant if combined w sument of the same category nological background i-written disclosure trmediate document	E : earlier pate after the fill th another D : document o L : document o	nt document, b ng date cited in the appl cited for other r	ring the invention ut published on, or lication easons t family, corresponding