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71 Applicant: **DAIDO TOKUSHUKO KABUSHIKI KAISHA**
11-18, Nishiki 1-chome
Naka-ku Nagoya-shi Aichi-ken(JP)

72 Inventor: **Morii, Kiyoshi**
124 Ohkuwa, Yamajiricho
Kohnan-shi, Aichi-ken(JP)
Inventor: **Kumura, Shuzo**
77 Okuda, Minamigawa, Mihamacho
Chita-gun, Aichi-ken(JP)
Inventor: **Hayakawa, Shygunori**
14-2 Higashikaito, Nawamachi
Tokai-shi, Aichi-ken(JP)
Inventor: **Inagaki, Yoshio**
12-2 Aza-Tosendai, Ohaza-Ogawa
Higashiuracho, Chita-gun, Aichi-ken(JP)

74 Representative: **Kraus, Walter, Dr. et al**
Patentanwälte Kraus, Weisert & Partner
Thomas-Wimmer-Ring 15
W-8000 München 22(DE)

54 **Vertical continuous casting method and casting apparatus.**

57 Disclosed are a method and an apparatus for vertical continuous casting. In the vertical continuous casting wherein a strand formed in a water-cooled mold is drawn down vertically therefrom without being incurvated light reduction means is positioned just prior to the solidification completing point of the strand and light reduction strong enough to compensate contraction caused by solidification is applied to the strand, then, formation of central cavities is prevented and central segregation is lessened. The light reduction pinch rolls are provided variably in position up and down along the strand.

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	WO-A-8 700 099 (CLECIM) * abstract * ---	1,2	B 22 D 11/128 B 22 D 11/14
A	AU-B- 419 372 (GOSUDARSTVENNY SOJUZNY INSTITUT PO PROEKTIROVANIJU METALLURGICHESKIKH ZAVODOV) * figure * ---	1	
A	FR-A-1 451 901 (GOSUDARSTVENY SOJUZNY INSTITUT PROJEKTIROVANYA METALLOURGITCHESKIKH ZAVODOV et al.) * figure * ---	1	
A	CH-A- 440 569 (AG DER VON MOOS'SCHEN EISENWERKE, LUZERN, UND CONCAST AG, ZÜRICH) * claim 4 * -----	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B 22 D 11/00
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 28-02-1992	Examiner GOLDSCHMIDT G
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			