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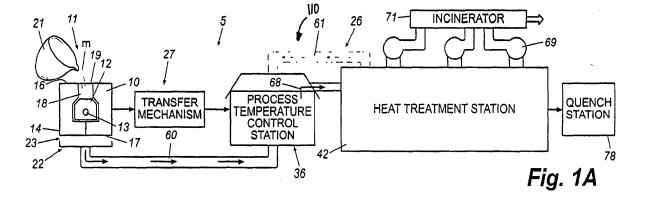
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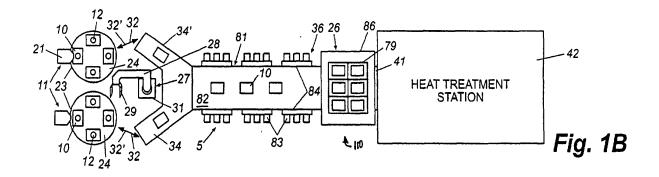
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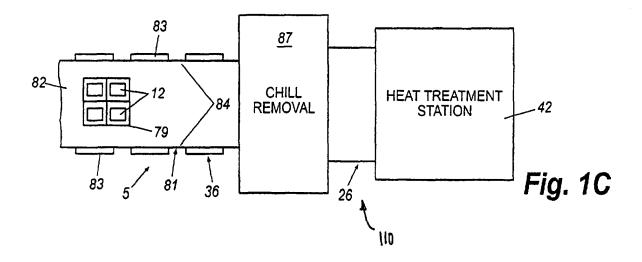
(54) Integrated metal processing facility

(57) A integrated facility for forming and heat treating a metal casting is provided, the facility comprising: a pouring station for pouring a molten metal into a mold to form a casting; a process temperature control station downstream from said pouring station, said process temperature control station comprising a temperature sensing

device in a heat treatment furnace; wherein said the temperature sensing device and said heat source are adapted to maintain the temperature of the casting at or above a process control temperature for the metal of the casting, and wherein upon receipt of a rejection signal from said temperature sensing device, said transfer mechanism removes the casting prior to entry into said furnace.









EUROPEAN SEARCH REPORT

Application Number EP 10 19 7136

Category	Citation of document with indica	tion, where appropriate,	Relevant	CLASSIFICATION OF THE
calegory	of relevant passages	, .	to claim	APPLICATION (IPC)
Х	WO 02/063051 A (CONSOI COMPANY, INC) 15 Augus * claims 1-31; figure	st 2002 (2002-08-15)	1-7,13	INV. C21D11/00 C21D9/00 B22D46/00
A	US 5 536 337 A (WEI E1 16 July 1996 (1996-07- * the whole document	-16)	1-15	F27B9/02 F27D21/00 F27B9/40 F27D19/00
A	LAMPMAN S.R. & ZORC T. HEAT TREATING, VOL.4", 1991, ASM INTERNATIONA * page 529 - page 541	, AL, USA, XP002357244,	1-15	F27019700
A	US 2004/035546 A1 (DIS 26 February 2004 (2004 * paragraph [0014]; fi	1-02-26)	1-15	
A	US 4 419 143 A (ITO ET 6 December 1983 (1983- * column 3, line 41 -	-12-06)	1-15	TECHNICAL FIFT DO
A	US 5 306 359 A (EPPELA 26 April 1994 (1994-04 * column 5, line 46 - * column 6, line 12 -	1-26) line 60 *	1-15	TECHNICAL FIELDS SEARCHED (IPC)
	The present search report has been	•		
	Place of search The Hague	Date of completion of the search 10 October 2011	Ris	Examiner Schard, Marc
X : parti Y : parti docu	ATEGORY OF CITED DOCUMENTS cularly relevant if taken alone cularly relevant if combined with another ment of the same category nological background	T : theory or principle E : earlier patent doo after the filing date D : document cited in L : document cited fo	underlying the i ument, but publi the application r other reasons	nvention
O: non	written disclosure mediate document	& : member of the sa document		

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 10 19 7136

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

10-10-2011

WO 02063051 A 15-08-2002 AU 2002239968 B2 13-03- CA 2436749 A1 15-08- CN 1526027 A 01-09- EP 1356128 A2 29-10- EP 2180069 A1 28-04- JP 2004523362 A 05-08- JP 2008296282 A 11-12- MX PA03006906 A 29-01- US 5536337 A 16-07-1996 NONE US 2004035546 A1 26-02-2004 NONE US 4419143 A 06-12-1983 NONE US 5306359 A 26-04-1994 CA 2081055 A1 06-05- DE 69224349 D1 12-03- DE 69224349 T2 28-05- EP 0541353 A1 12-05-
US 2004035546 A1 26-02-2004 NONE US 4419143 A 06-12-1983 NONE US 5306359 A 26-04-1994 CA 2081055 A1 06-05- DE 69224349 D1 12-03- DE 69224349 T2 28-05-
US 4419143 A 06-12-1983 NONE US 5306359 A 26-04-1994 CA 2081055 A1 06-05- DE 69224349 D1 12-03- DE 69224349 T2 28-05-
US 5306359 A 26-04-1994 CA 2081055 A1 06-05- DE 69224349 D1 12-03- DE 69224349 T2 28-05-
DE 69224349 D1 12-03- DE 69224349 T2 28-05-
ES 2111619 T3 16-03- JP 7011400 A 13-01- JP 8019510 B 28-02-

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82