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(54) Title: ITERATIVE CYCLE PROCESS FOR CARBON SUPERSATURATION OF MOLTEN METAL AND SOLID METALS OBTAINED THEREBY

(57) Abstract: The present invention relates to new compositions of metals and alloys, with variable de gree of carbon (super-)saturation, and methods of making such compositions. The new compositions of matter exhibit long-range ordering and unique electronic character, as revealed by XRF and magnetic measurements. A metal melt is processed by an iterative cycle process of carbon dissolution with continued argon addition to raise the carbon level to a desired degree of equilibrium saturation and supersaturation, e.g. ending at +18 % above carbon equilibrium saturation.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C22B9/00 C22B9/05 C22C1/02 C22C1/10 C22C9/00
C22C19/00 C22C33/04 C21C7/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C22B C22C C21C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
WPI Data, EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 168 967 A (SRIDHAR RAMAMRITHAM ET AL) 25 September 1979 (1979-09-25) abstract; table II	2,3,8,9, 40,41
A	US 3 695 865 A (WOLKER KARL) 3 October 1972 (1972-10-03) claims 2,4,8	5,8,9, 14,43
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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Bombeke, M

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