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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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(54) Title: HIGH CARBON SURFACE DENSIFIED SINTERED STEEL PRODUCTS AND METHOD OF PRODUCTION THEREFOR

(57) Abstract: A powder mixture alloy is provided for manufacturing surface densified high carbon sintered steel articles containing iron or iron pre-alloyed powder, which has been preliminary mixed with at least 0.4 wt% graphite, lubricant and optionally at least one alloying element from the group of nickel, chromium, copper, manganese and molybdenum. Components are manufactured utilizing the alloy mixture comprising the steps of: a) compacting the metallic powder to obtain a compact; b) pre-sintering the compact at a low temperature to prevent graphite from diffusing into the iron; c) surface densifying of the pre-sintered compact to a predetermined densification depth; d) sintering under neutral gas or carburizing atmosphere; e) heat treating the sintered compact.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/06726

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: C22C 32/00(2006.01),33/02(2006.01)

USPC: 419/11
 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)
 U.S. : 419/11

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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6473964 (ANDERSON et al) 05 November 2002 (05.11.2002), Figure 3, col. 6 lines 54- col. 7 line 21, col. 7 lines 40-43, col. 8 lines 26-36, col. 11 lines 38-59, example 1, claim 10	1-3,6-8,10-11 ----- 4-5,9,12-24
A	US 6,338,747 B1 (Kosco) 15 January 2002 (15.06.2002), abstract, Brief Summary of the Invention section, col. 5 line 31-col. 6 line 36, col. 9 lines 17-38 and claims	1-24
A	US 5,881,354 (SHIVANATH et al) 09 March 1999 (09.03.1999), Figure 2, Description of the Invention section and claims.	1-24

Further documents are listed in the continuation of Box C.

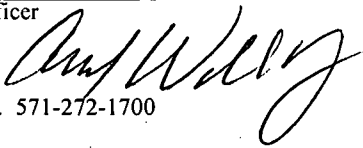
See patent family annex.

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"O"	document referring to an oral disclosure, use, exhibition or other means	
"P"	document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

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