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(54) **Low carbon plus nitrogen, free-machining austenitic stainless steel.**

(57) A low carbon plus nitrogen, free-machining, austenitic stainless steel having improved machinability and excellent corrosion resistance. The steel composition in weight percent is essentially carbon plus nitrogen up to about 0.06, chromium 16 to 20, nickel 6 to 14, manganese up to 0.60, sulfur 0.15 to 0.50, silicon up to about 1, phosphorus up to about 0.20, molybdenum up to about 1 and balance iron.

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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.4)
A,D	US-A-3 902 898 (DENHARD, Jr. et al.) * Table I; claims 1-5 *	1	C 22 C 38/40
A	CH-A- 642 110 (NIPPON METAL INDUSTRY) * Page 2, right-hand column, lines 51-64 *	1	
A	US-A-3 192 040 (GODA et al.) * Table II *	1	
A	GB-A-2 114 155 (CARPENTER TECHNOLOGY)		
A	US-A-1 961 777 (PALMER)		
A	FR-A-2 143 256 (N.V. BEKAERT)		
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			C 22 C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18-11-1988	Examiner WITTBLAD U.A.
CATEGORY OF CITED DOCUMENTS 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 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			