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SANDBERG, Odd [SE/SE]; Strandvägen 28, S-683 40 Uddeholm (SE).

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(74) Agents: **HYNELL, Magnus** et al.; Hynell Patenttjänst AB, Patron Carls väg 2, S-683 40 Hagfors/Uddeholm (SE).

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(71) Applicants (*for all designated States except US*): **ERASTEEL KLOSTER AKTIEBOLAG** [SE/SE]; Box 100, S-815 82 Söderfors (SE). **UDDEHOLM TOOLING AKTIEBOLAG** [SE/SE]; S-683 85 Hagfors (SE).

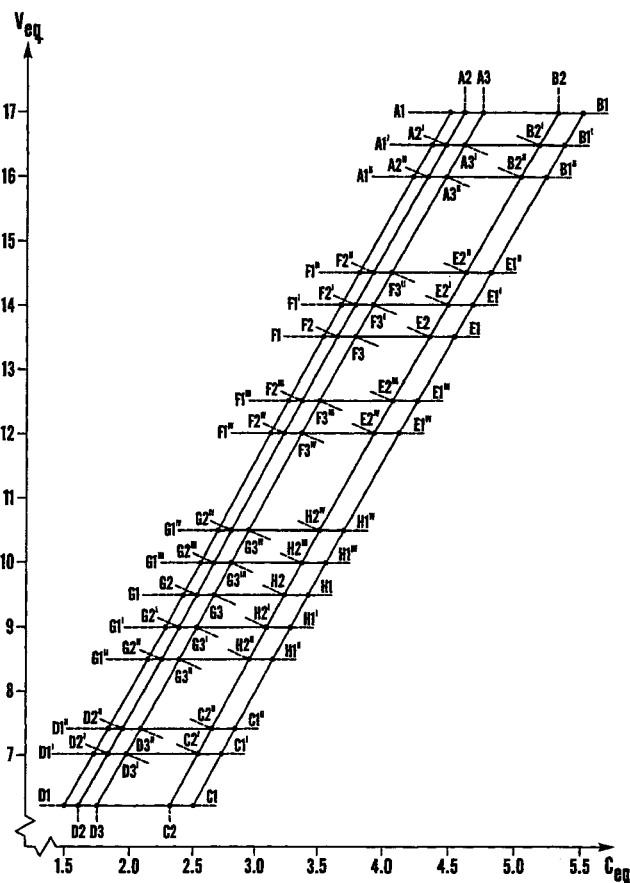
(72) Inventors; and

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(75) Inventors/Applicants (*for US only*): **WESTIN, Leif** [SE/SE]; Bergslagsvägen 2, S-815 75 Söderfors (SE).

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(54) Title: **POWDER METALLURGY MANUFACTURED HIGH SPEED STEEL**



(57) Abstract: A powder metallurgy manufactured high speed steel with a high content of nitrogen in the form of a body formed through consolidation of alloyed metal power has the chemical composition in weight-%: 1-2.5 C, 1-3.5 N, 0.05-1.7 Mn, 0.05-1.2 Si, 3-6 Cr, 2-5 Mo, 0.05-5W, 6.2-1.7 (V + 2 Nb), balance iron and unavoidable impurities in normal amounts, wherein the amount of, on one hand, the carbon equivalent, Ceq, expressed as formula (I), and, on the other hand, the vanadium equivalent, Veq, expressed as $V_{eq} = V + 2 Nb$, are balanced relative to each other such that the amounts of said elements, expressed in terms of said equivalent, will lie within the area A1-B1-C1-D1-A1 in the system of co-ordinates in the figure, in which the Ceq/Veq-co-ordinates of the points A1-D1 are: A1: 4.5/17; B1: 5.5/17; C1: 2.5/6.2; D1: 1.5/6.2. The structure of the steel in the hardened and tempered condition, contains 12-40 vol-% of hard matter consisting of particles of MX-type, which are evenly distributed in the matrix of the steel, where M in said hard matter of MX-type essentially consists of vanadium and/or niobium, and X consists of 30-50 weight-% carbon and 50-70 weight-% nitrogen.

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