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(54) **NON-TEMPERED STEEL SOFT NITRIDED COMPONENT**

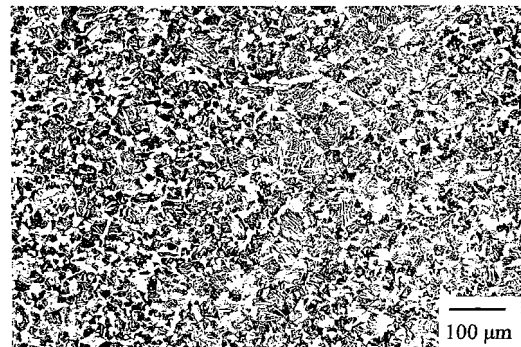
(57) Soft-nitrided parts wherein a ferrite grain in the diffusion layer does not have a γ' nitride of more than 20 μ m in the longitudinal axis, which is made of a non-heat treated steel that has a chemical composition of, by mass %, C:0.30 to 0.45%, Si:0.1 to 0.5%, Mn:0.6 to 1.0%, Ti:0.005 to 0.1%, N:0.010 to 0.030%, and the balance Fe and impurities, and that has a mixed microstructure of bainite and ferrite whose bainite fraction is 5 to 90% or a mixed microstructure of bainite, ferrite and pearlite whose bainite fraction is 5 to 90%.

further improved high fatigue strength and excellent bending straightening property after soft-nitrided even omitting thermal refining.

The non-heat treated steel may contain one or more elements of 0.001 to 0.1% of Nb, 0.01 to 1.0% of Mo;, 0.01 to 1.0% of Cu, 0.01 to 1.0% of Ni and 0.001 to 0.005% of B, 0.01 to 0.1% of S and 0.0001 to 0.005% of Ca.

This invention provides machinery parts, based on this non-heat treated steel for soft-nitriding, which has

Fig.1



EP 1 857 563 A8