

A steel for rail comprising of the following elements, $0.25\% \leq C \leq 0.8\%$; $1.0\% \leq Mn \leq 2.0\%$; $1.40\% \leq Si \leq 2\%$; $0.01\% \leq Al \leq 1\%$; $0.8\% \leq Cr \leq 2\%$; $0 \leq P \leq 0.09\%$; $0 \leq S \leq 0.09\%$; $0\% \leq N \leq 0.09\%$; $0\% \leq Ni \leq 1\%$; $0\% \leq Mo \leq 0.5\%$; $0\% \leq V \leq 0.2\%$; $0\% \leq Nb \leq 0.1\%$; $0\% \leq Ti \leq 0.1\%$; $0\% \leq Cu \leq 0.5\%$; $0\% \leq B \leq 0.008\%$; $0\% \leq Sn \leq 0.1\%$; $0\% \leq Ce \leq 0.1\%$; $0\% \leq Mg \leq 0.10\%$; $0\% \leq Zr \leq 0.10\%$; the remainder composition being composed of iron and unavoidable impurities caused by processing, the microstructure of said steel comprising, by area percentage, 2 % to 10 % of Proeutectoid Ferrite, the balance being made of Pearlite wherein the pearlite having interlamellar spacing from 100nm to 250nm.