

Abstract**Method for surface treatment of a steel mechanical part to improve its resistance to wear and corrosion under harsh stresses**

The invention relates to a method for surface treatment of a steel mechanical part in order to improve its wear and corrosion resistance, the method comprising at least one step of nitriding or nitrocarburizing the part, forming a nitrided surface layer, followed by a step of impregnating the nitrided surface layer with a solution comprising at least one hydrophobic wax, characterized in that said wax is a carbon-containing organic compound of which the molecular weight is less than 500, and preferably between 200 and 500.