

**OPTIMIZATION OF VARIABLES AFFECTING CORROSION RESISTANCE
OF VACUUM SINTERED STAINLESS STEELS**

SCM METAL PRODUCTS, INC. *ERHARD KLAR, PRASAN SAMAL

MATERIAL AND PROCESS VARIABLES THAT STRONGLY AFFECT THE CORROSION RESISTANCE OF P/M STAINLESS STEELS, INCLUDE : ALLOY COMPOSITION, POWDER CLEANLINESS, NITROGEN, OXYGEN AND CARBON CONTENTS, CHROMIUM DEPLETION DUE TO SURFACE EVAPORATION AND SINTERED DENSITY.

THE OPTIMUM PROCESS PARAMETERS FOR DELUBRICATION AND SINTERING THAT RESULT IN LOWEST LEVELS OF NITROGEN, OXYGEN AND CARBON AND MINIMUM LEVELS OF CHROMIUM DEPLETION WILL BE PRESENTED, FOR A NUMBER OF AUSTENITIC AND FERRITIC STAINLESS STEELS. THE EFFECT OF SINTERED DENSITY ON THE CORROSION RESISTANCE OF BOTH AUSTENITIC AND FERRITIC GRADES OF STAINLESS STEEL WILL ALSO BE COVERED.

* Director of Particle Technology and Scientist, Respectively.