NACA 0012
U_mag =   135 m/s

tgt: find Alpha such that -Cl/Cd is maximize
                  differntly from the previus testcase, the quantity minimize here are
                  derived from the corrected quantity, the case aim to test the robustness
                  of the correction
description: pressure distribution is used to correct the course model
                  from the pressure distribution is possible to compute the
                  max suction of the airfoil and the aero coefficient,the optimization aim to find the
                  condition in which the fitness function is minize
                  without exceeding the Valarezo condition
                - the course solver uses Hess-Smith to compute the pressure distribution P_HS
                - the fine solver uses Xfoil in viscous configuration to compute P_XF
                - the course method is corrected through a linear operator such that:
                  P_HS_corr(x) = P_XF(x_c) + Skf*(P_HS(x) - P_HS(x_c));

Optimization Cycle   X = alpha

                                                                              * in the first iteration
Set the Cycle   P_XF(x_c) e P_HS(x_c) set to be zero*   P_HS is not corrected
                Skf set to be eye

WHILE iter < iter_max & err > toll

        Course Optimization
                > fmincon   (star from 3 different point)
                > c(x) = – Cl(P_HS_CORR(x)). /Cp(P_HS_CORR(x))   /
                > all coefficient are computed from the pressure distribution   \
                > nonliner constrain is set to prevent c(x) > 14
                > MaxFunctionEvaluations = 50
                > OptimalityTolerance = 0.005
                > FunctionTolerance = 0.005
                > StepTolerance = 0.01

                -> x_c = risultato opt

        Fine computation at x = x_c
          > viscous; Re = 9M

        Error Assessment
          > Err = abs(P_XF(x_c) – P_HS_corr(x_c))

                Computation of the correction operator