Sizing of high lift devices using Parapy: output file

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Planform file name: test_planform1
The HLDs were sized using the CL_max computed by external analysis using xfoil and AVL
External analysis was carried out

Input parameters:

wing_span	= 15.0 m
root_chord	= 6.0 m
taper_inner	= 0.7
taper_outer	= 0.3
kink_position	= 4.0 m
flap_gap	= 0.3 m
sweep_deg	= 25.0 deg
dihedral_deg	= 5.0 deg
front_spar	= 0.2 x/c
rear_spar	= 0.6 x/c
outer_flap_lim	= 0.6 y/b
fuselage_radius	= 1.5 m
clmax	= 2.0
twist	= 0.0 deg
speed	= 100.0 m/s
airfoil_name	= ex1
flap_type	= Slotted

Output parameters:

Cl_max clan	= 1.2505
Delta Cl_max	= 0.7495
Flap hinge location	= 0.86 x/c
Flap deflection	= 45 deg
Stall AoA	= 10.5 deg
Flaps per wing	= 2
Flapped wing area	= 7.9289 m^2

Other parameters

Mach number	= 0.2915
Kink chord	= 4.2 m
Tip chord	= 1.26 m

Cross section of airfoil with the flap system: