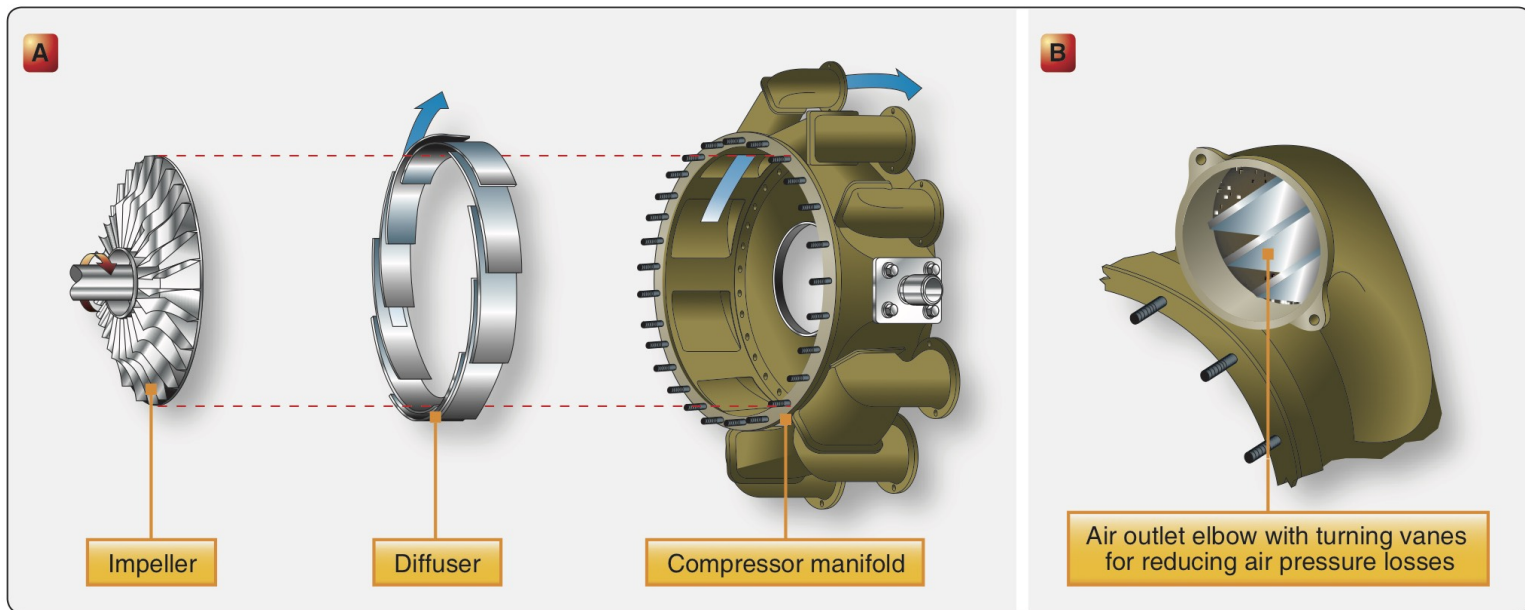
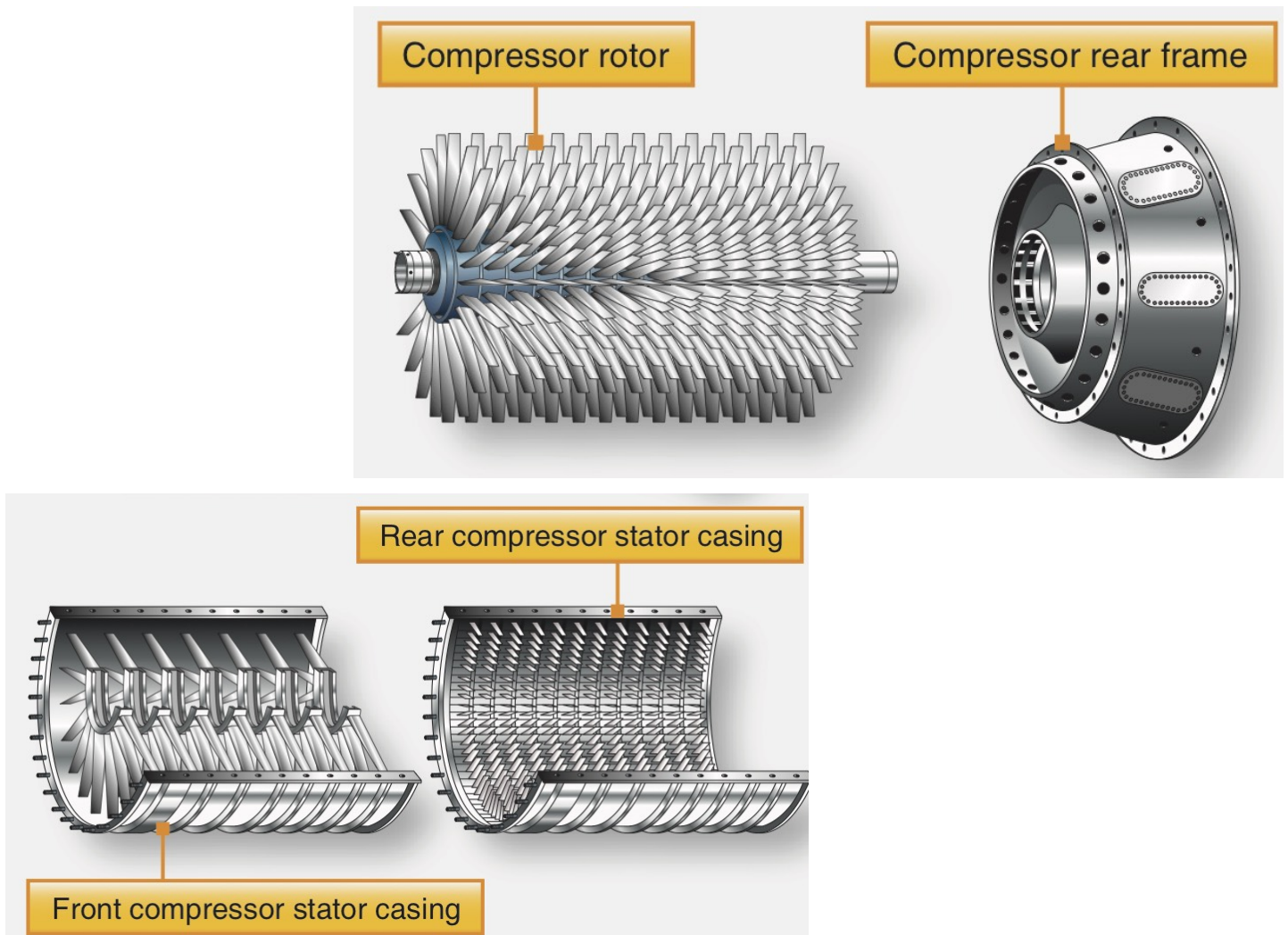


Compressors

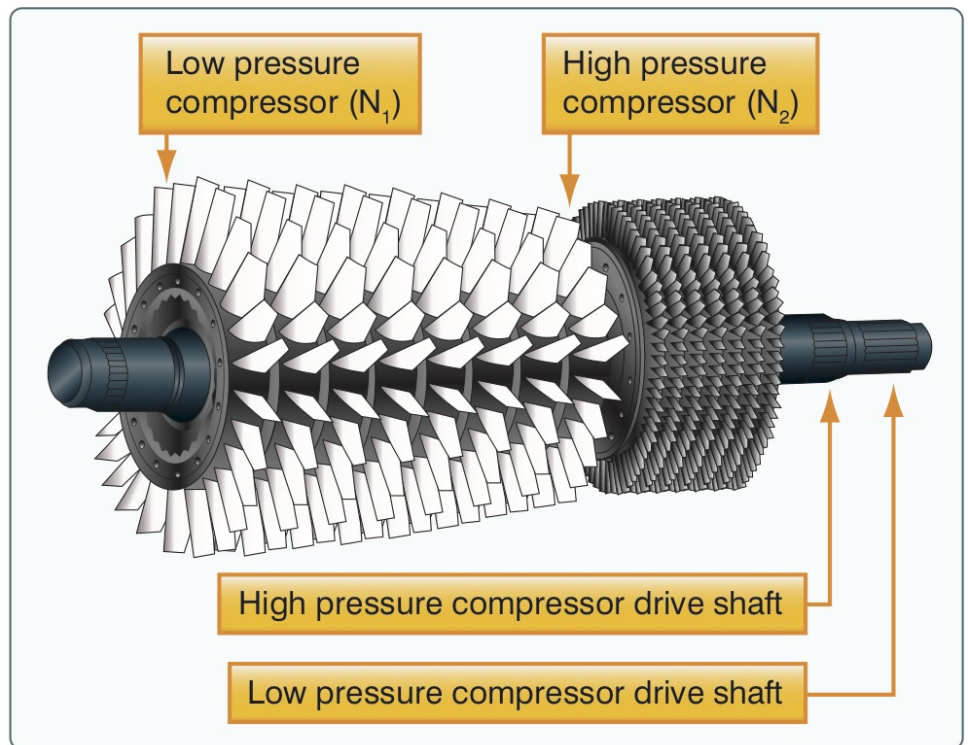
Centrifugal Compressor



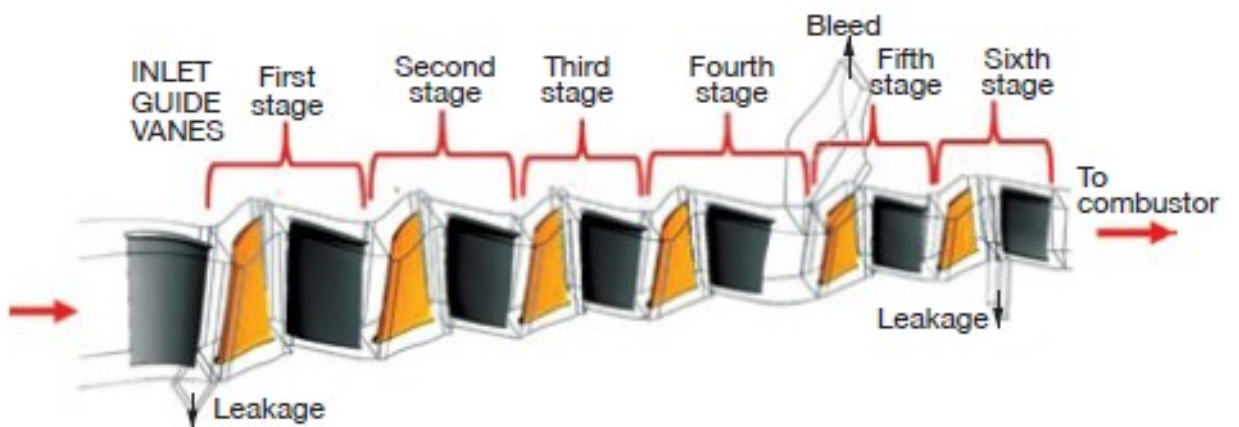
Axial Compressor



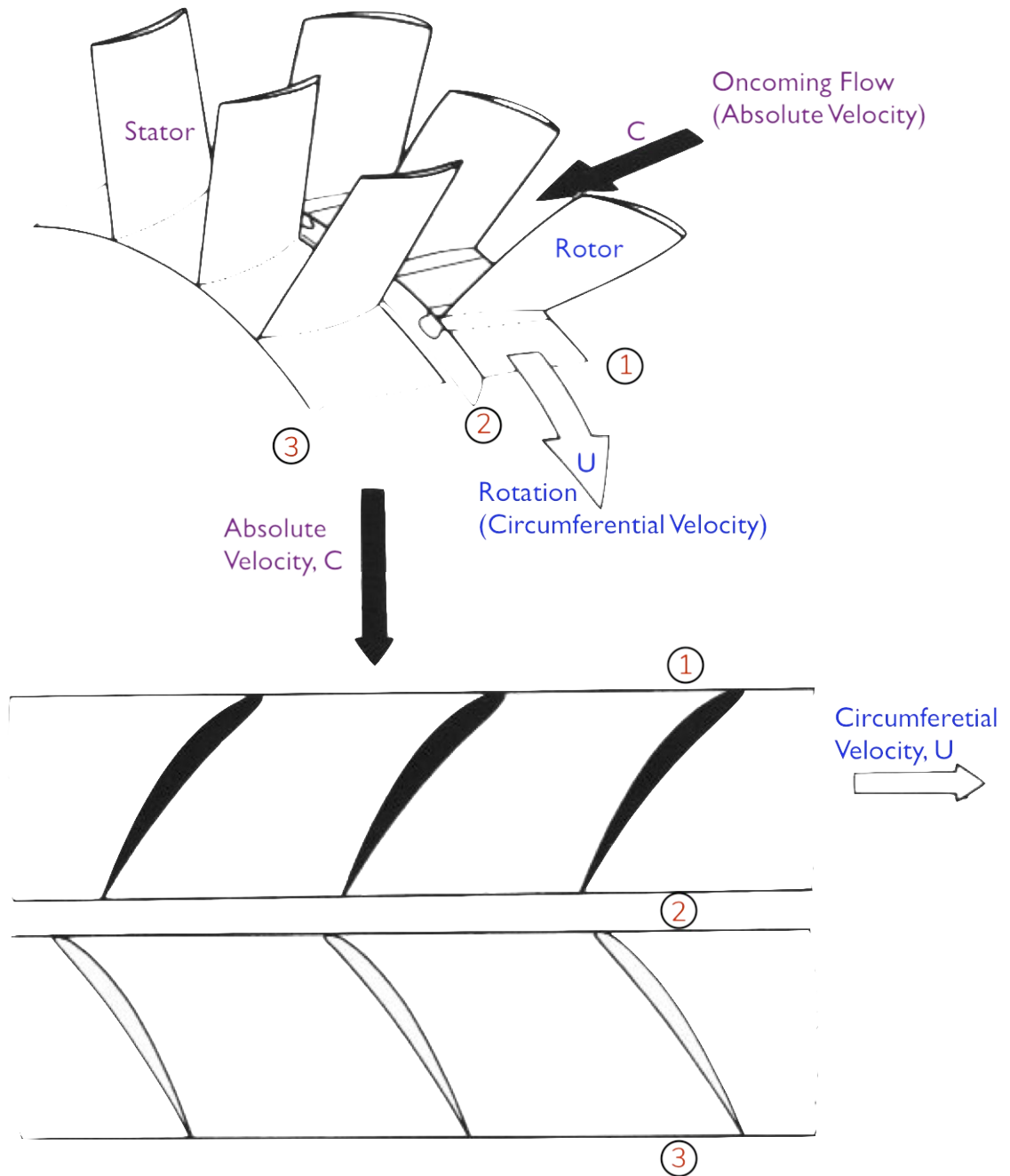
Dual-spool Axial Compressor

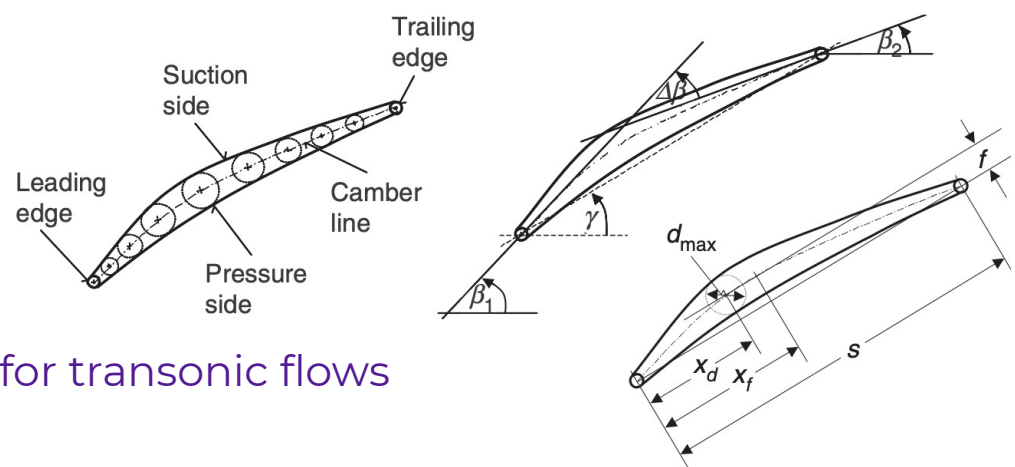
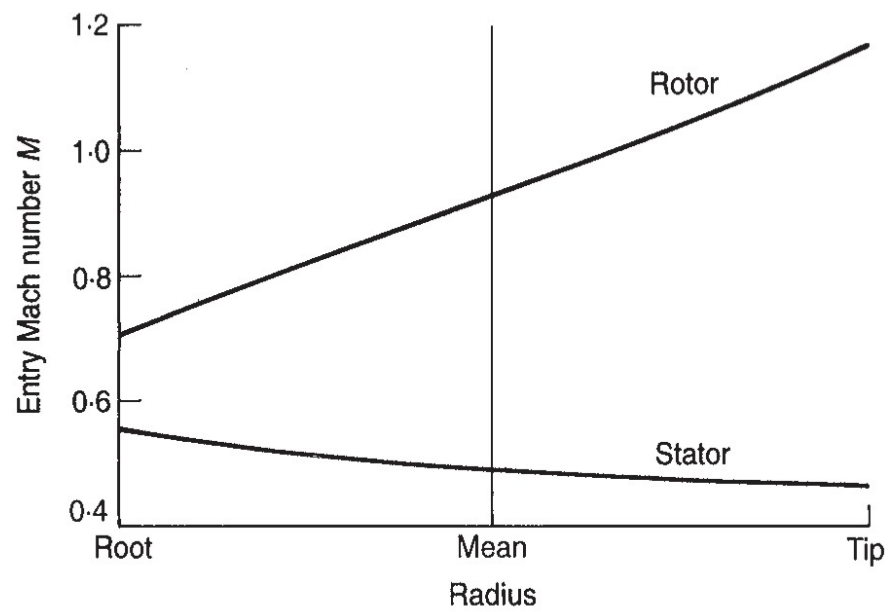


Flow path

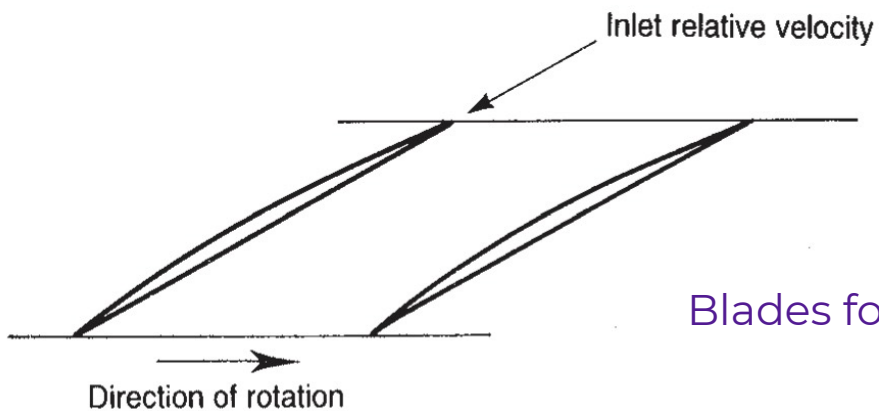


Flow path

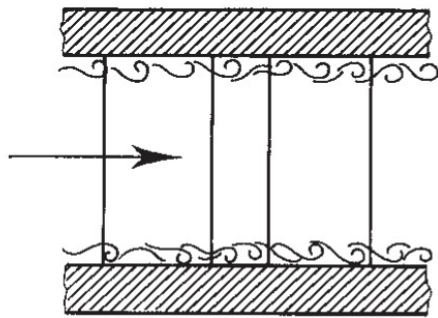




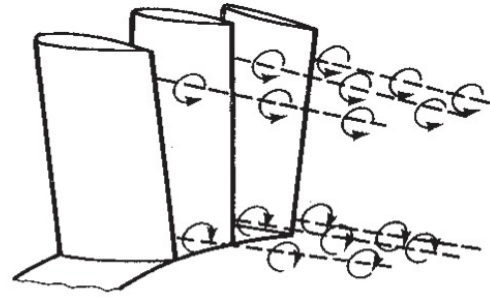
Blades for transonic flows



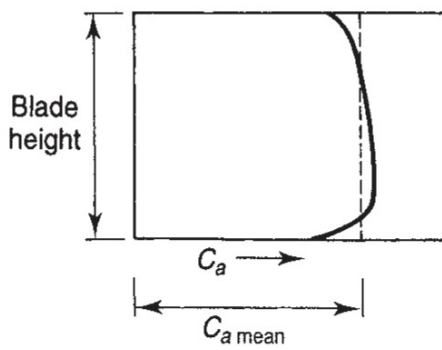
Blades for supersonic flows



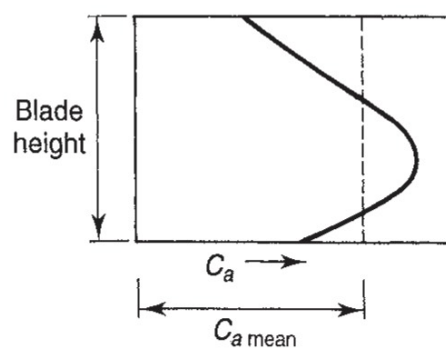
(a) Annulus drag



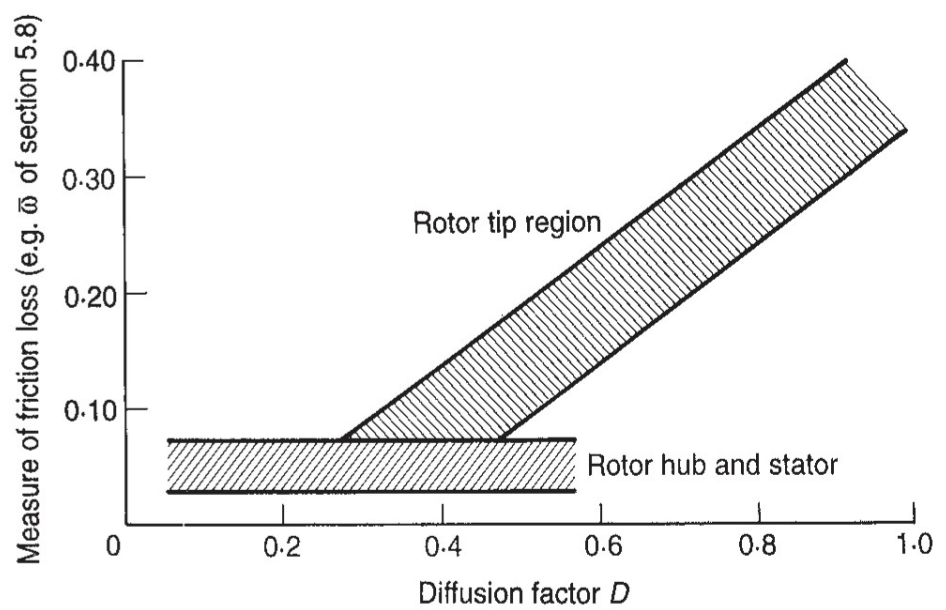
(b) Secondary losses

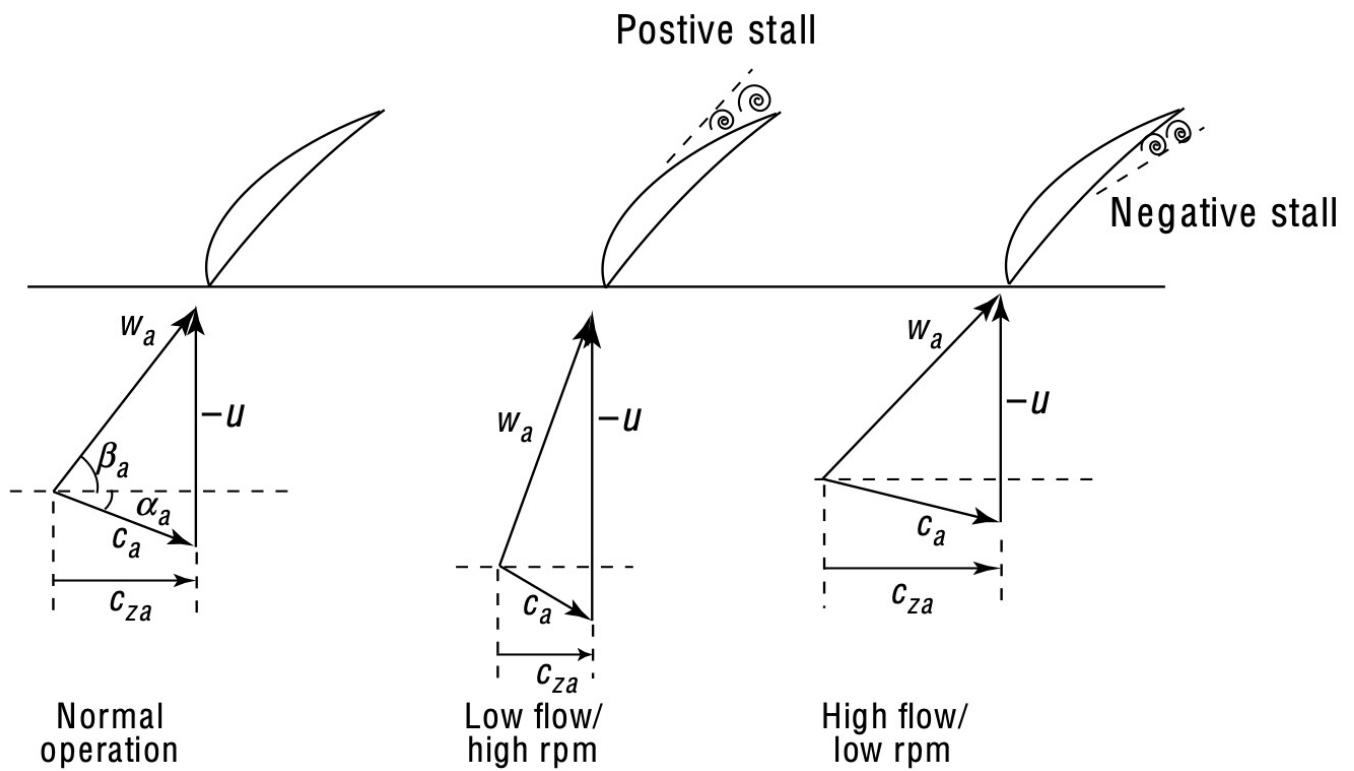
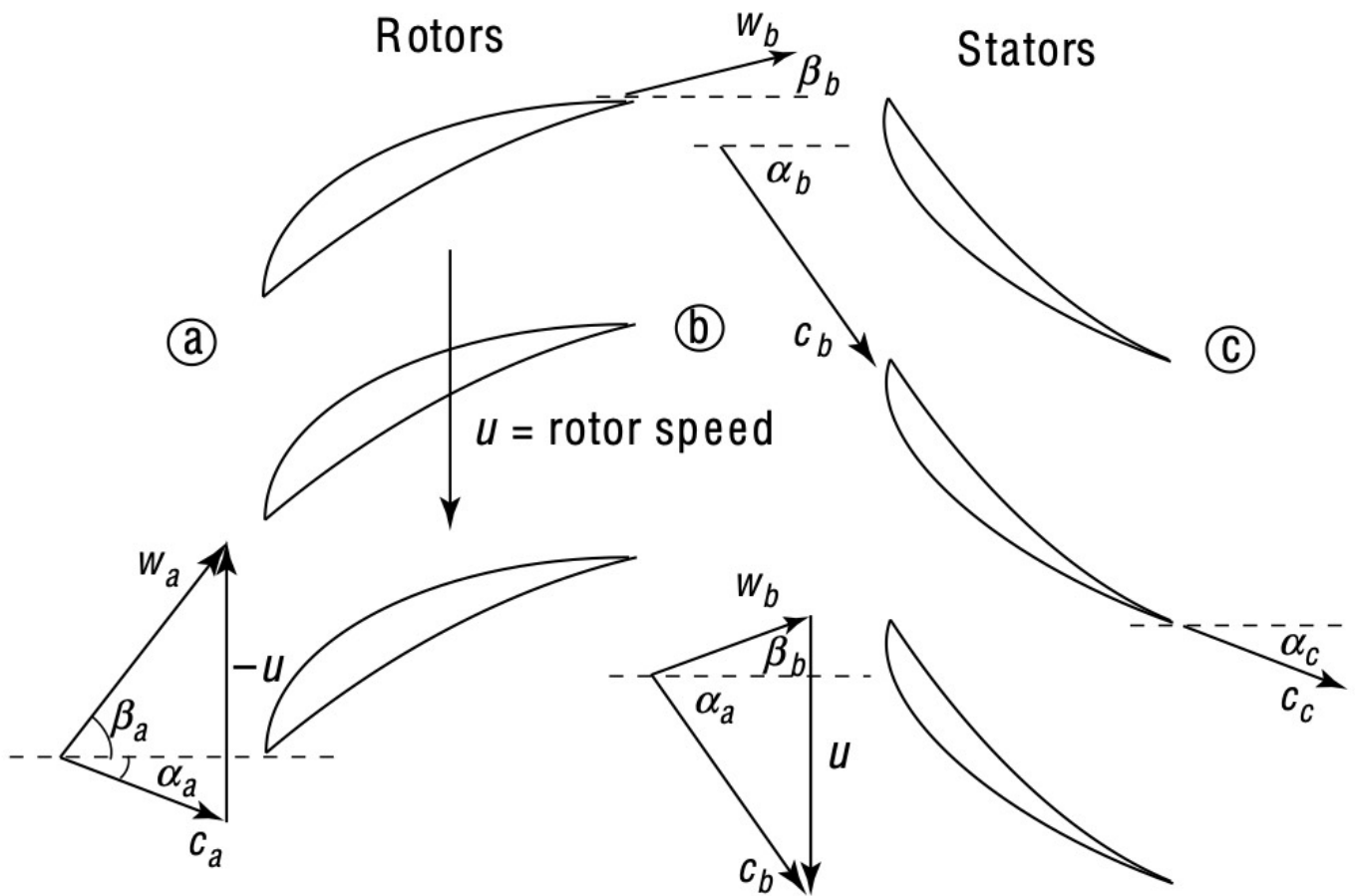


(a)

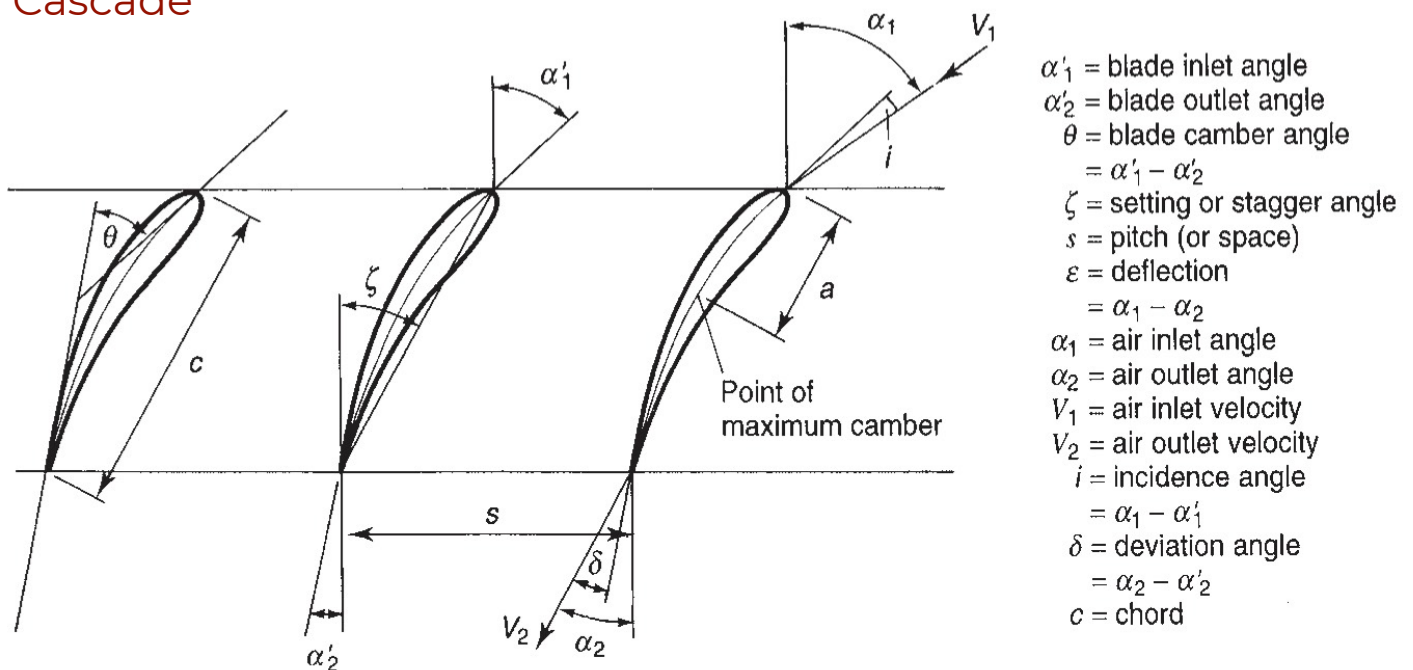


(b)

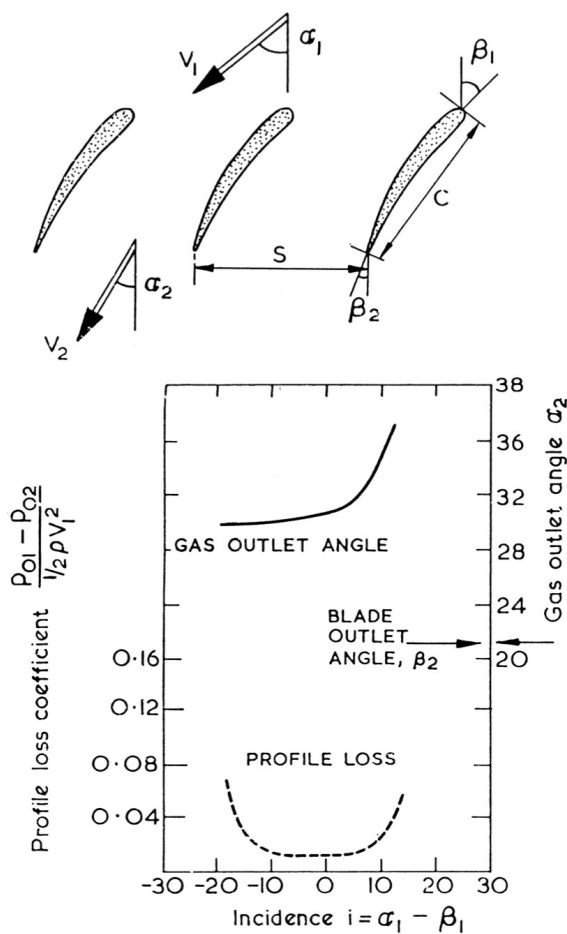




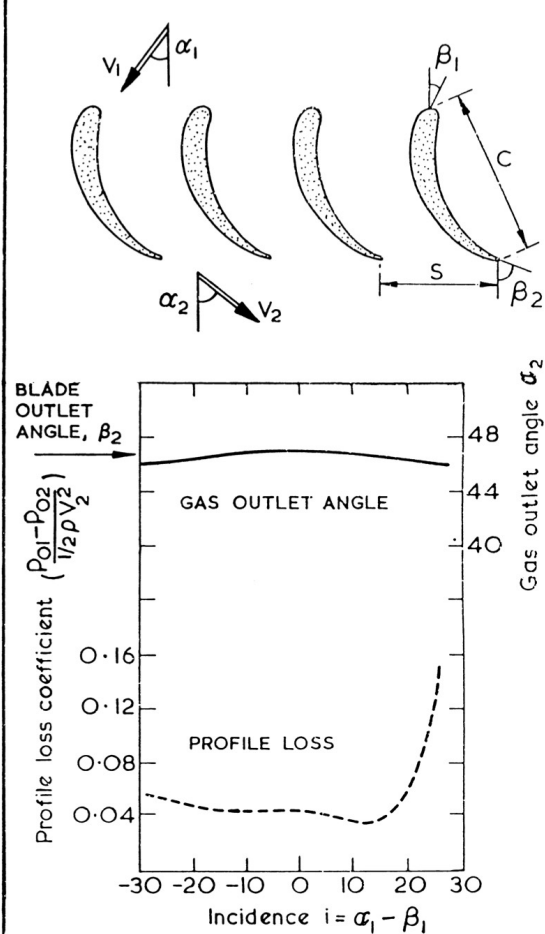
Cascade



COMPRESSOR



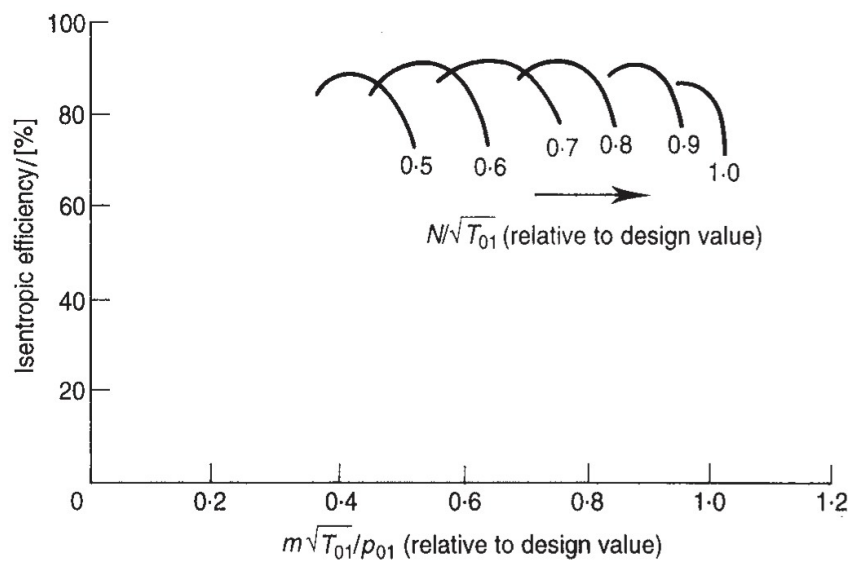
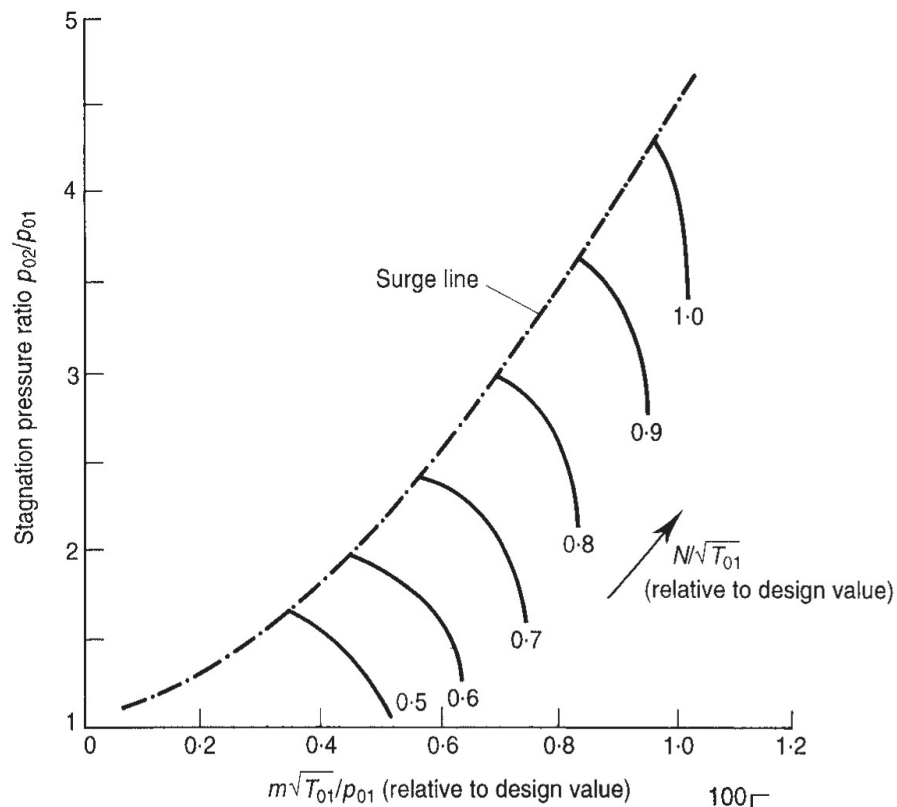
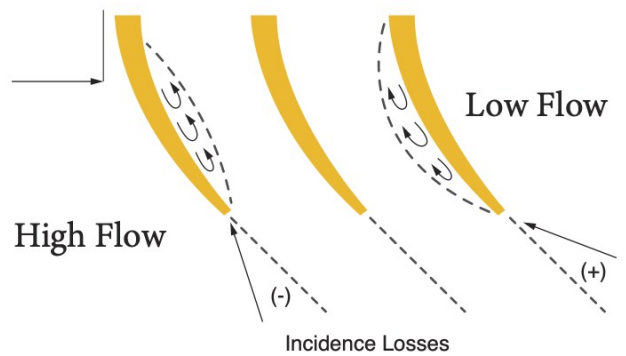
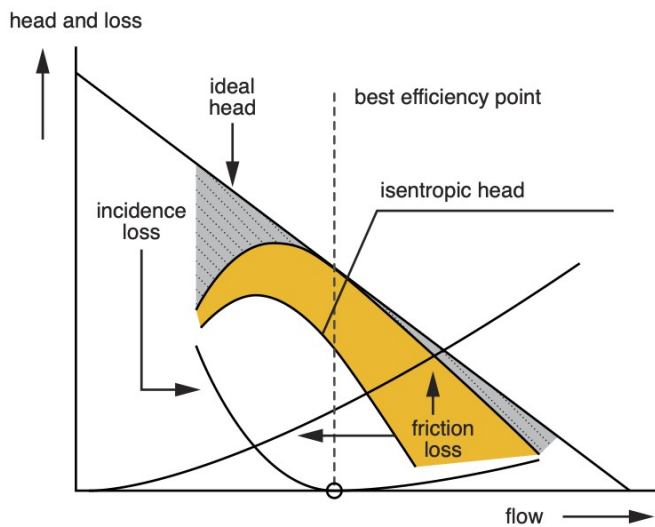
TURBINE

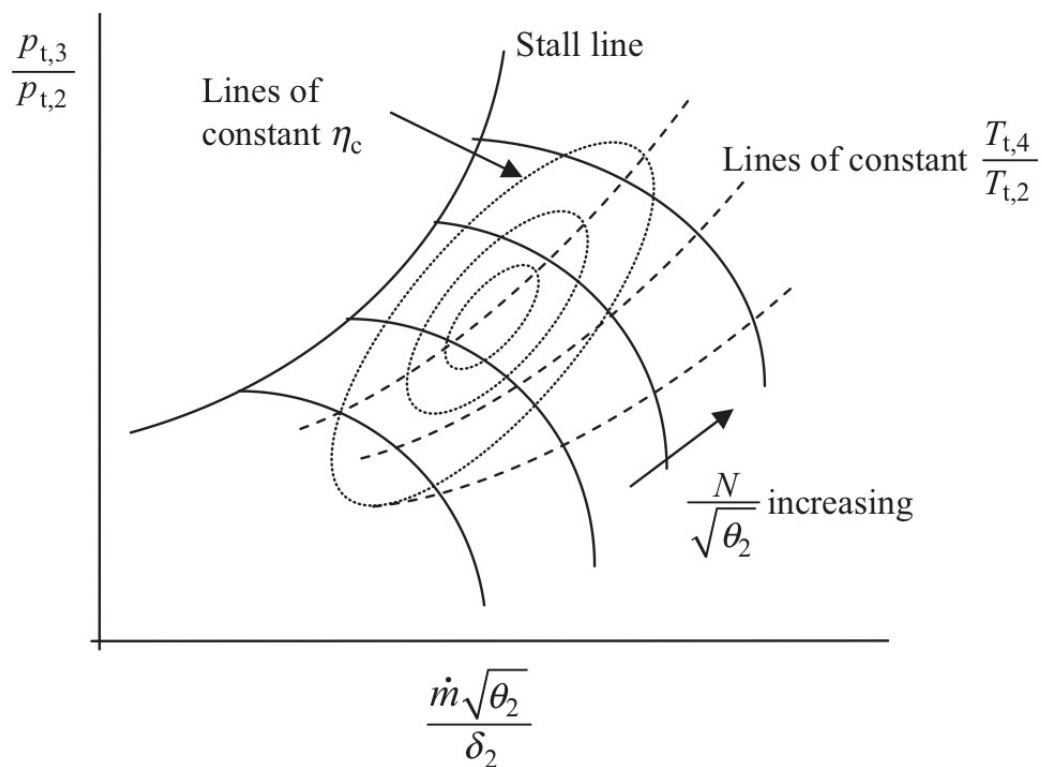


51.5°
21.5°
1.00

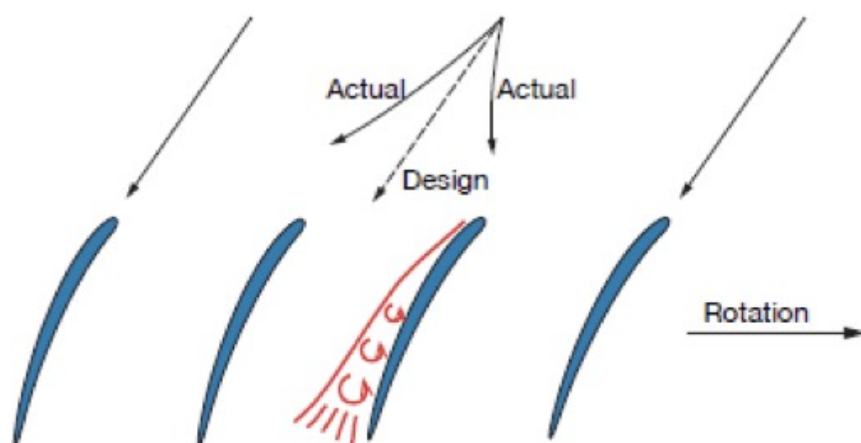
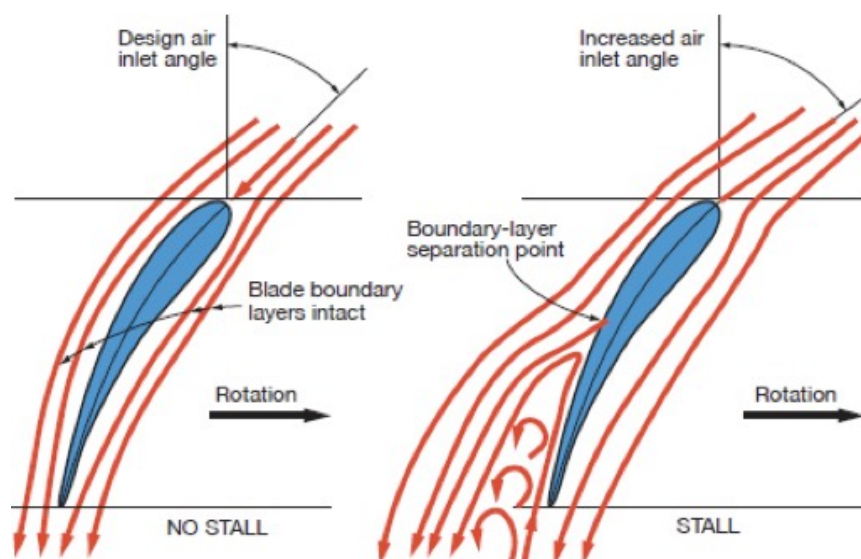
Blade inlet angle β_1
Blade outlet angle β_2
Pitch-chord ratio s/c

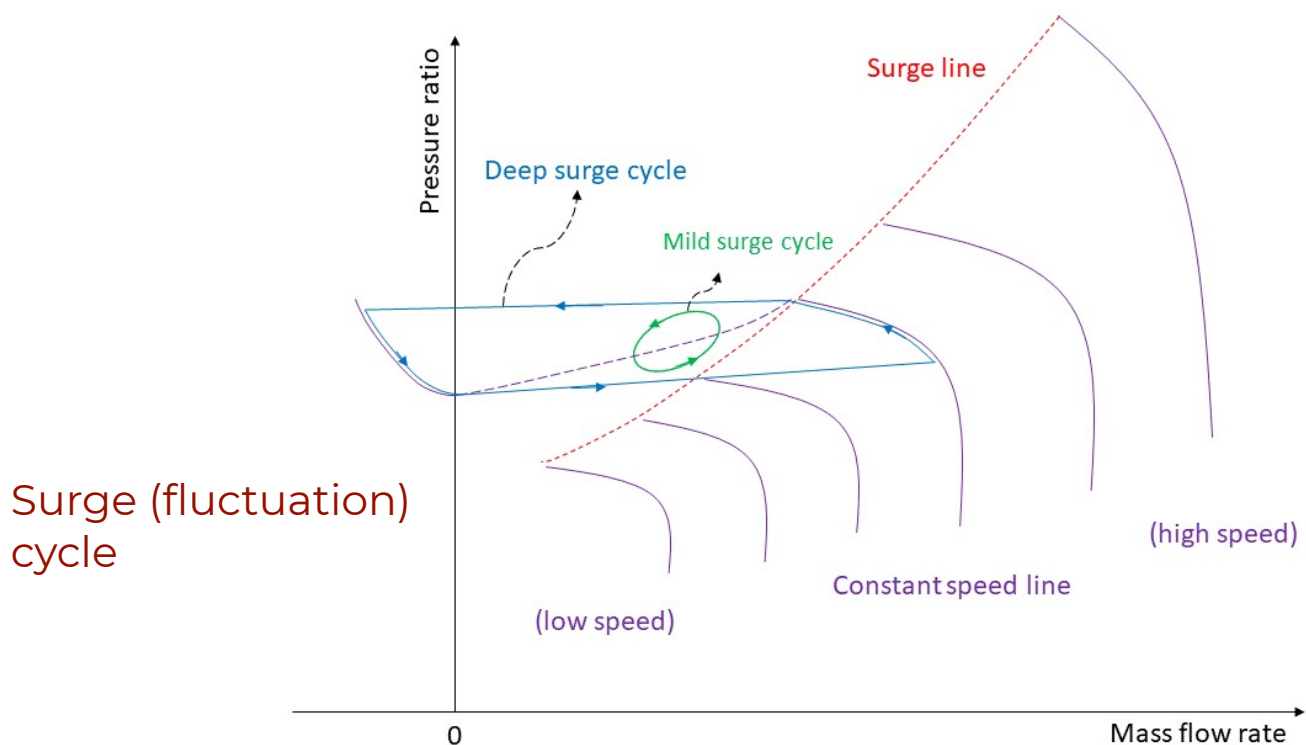
18.9°
47.1°
0.58



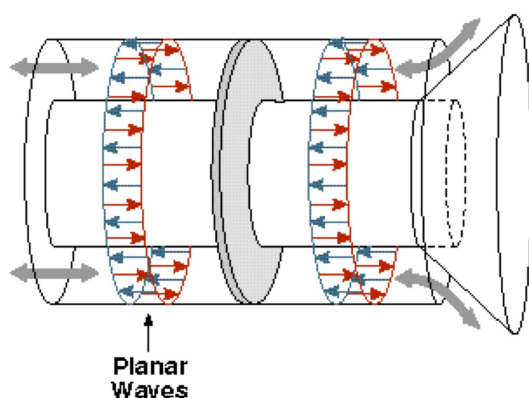


Rotating Stall



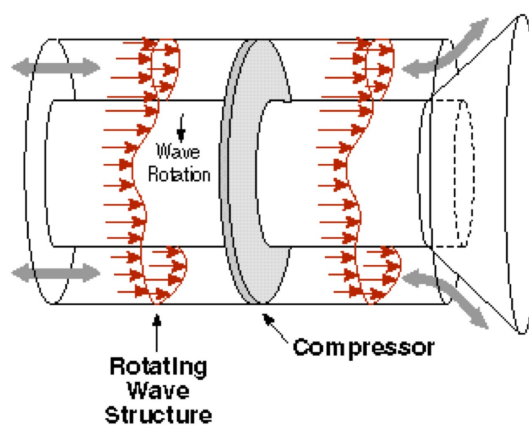


Global
(Lowest Order)



Surge

Local
(Higher Order)



Rotating Stall

Fluctuation
Models for
Surge and
Rotating Stall



Fan Operating Map

