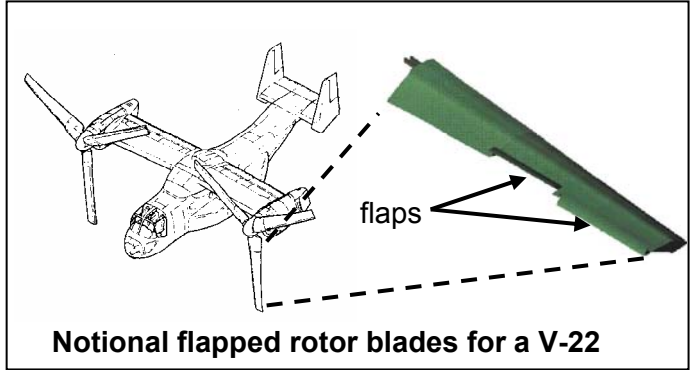




# Reconfigurable Tiltrotor Blades Via Smart Materials Technology

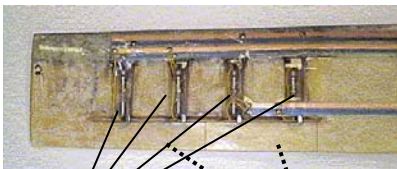
*Reconfigurable blades with on-board flaps operated by Shape Memory Alloy (SMA) actuators offer superior hover/cruise performance for tiltrotors such as V-22: 1500+ lb. net payload increase.*



Notional flapped rotor blades for a V-22



*Wind tunnel (left) and hover stand (right) testing have verified the performance of SMA actuators under aerodynamic load and up to 230G centrifugal fields.*



SMA actuators

flaps

1/5 scale blade with SMA flaps tested on CDI hover stand



*Model-scale flapped rotor demonstrated simultaneous flap deployment and validated predictions of flap effectiveness on a 1/5 scale V-22 blade system.*