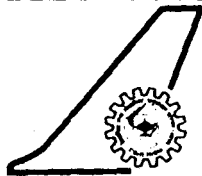


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Title Estimation of Drag Polars from Flight Test Data of TD1(SG), TD2(SG) and PV1(SG) Aircraft

Author/s Basappa and Jatinder Singh

Division FMCD

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Approval Head, FMCD: *Jatinder Singh* Group Head: *Jatinder Singh*

Remarks

Keywords Flight Data, Stability and Control Derivatives, Estimation, SOEM
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Abstract

The performance maneuver data generated from LCA TD1(SG), TD2(SG) and PV1(SG) test flights are analyzed and results presented. Comparative plots of the drag polars show the LCA versions to be aerodynamically similar. Compared to the estimated drag for zero slat configuration, the drag for auto or full slat configurations is observed to be less. Results show that drag increases with increase in Mach number, but with change in altitude, there is no significant change in the estimated drag. Furthermore, compared to the wind tunnel predicted value of zero-lift drag, the estimated zero-lift drag is observed to be lower for flights with $M < 1$ and higher for flights with $M > 1$.