



**National
Aeronautical
Laboratory**

Documentation Sheet

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RESTRICTED

Title : FLOW VISUALISATION STUDIES ON
WALL MOUNTED PITOT TYPE INTAKE
WITH SPLITTER PLATE

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Abstract : Flow visualisation studies employing schlieren/shadowgraph technique and simple oil flow technique were carried out on a simple pitot type of intake with splitter plate mounted on base plate in the NAL 0.3m Tunnel. Between the splitter plate and the base plate, a heat exchanger duct with wedge diverters was also simulated. From these studies, the effect of closure of the intake duct and the heat exchanger duct on the flow behaviour was qualitatively determined. It was found that flow constraint in the heat exchanger duct and diverter passages had considerable effect on the flow through the intake.