

DRAWINGS

[FIG. 1]

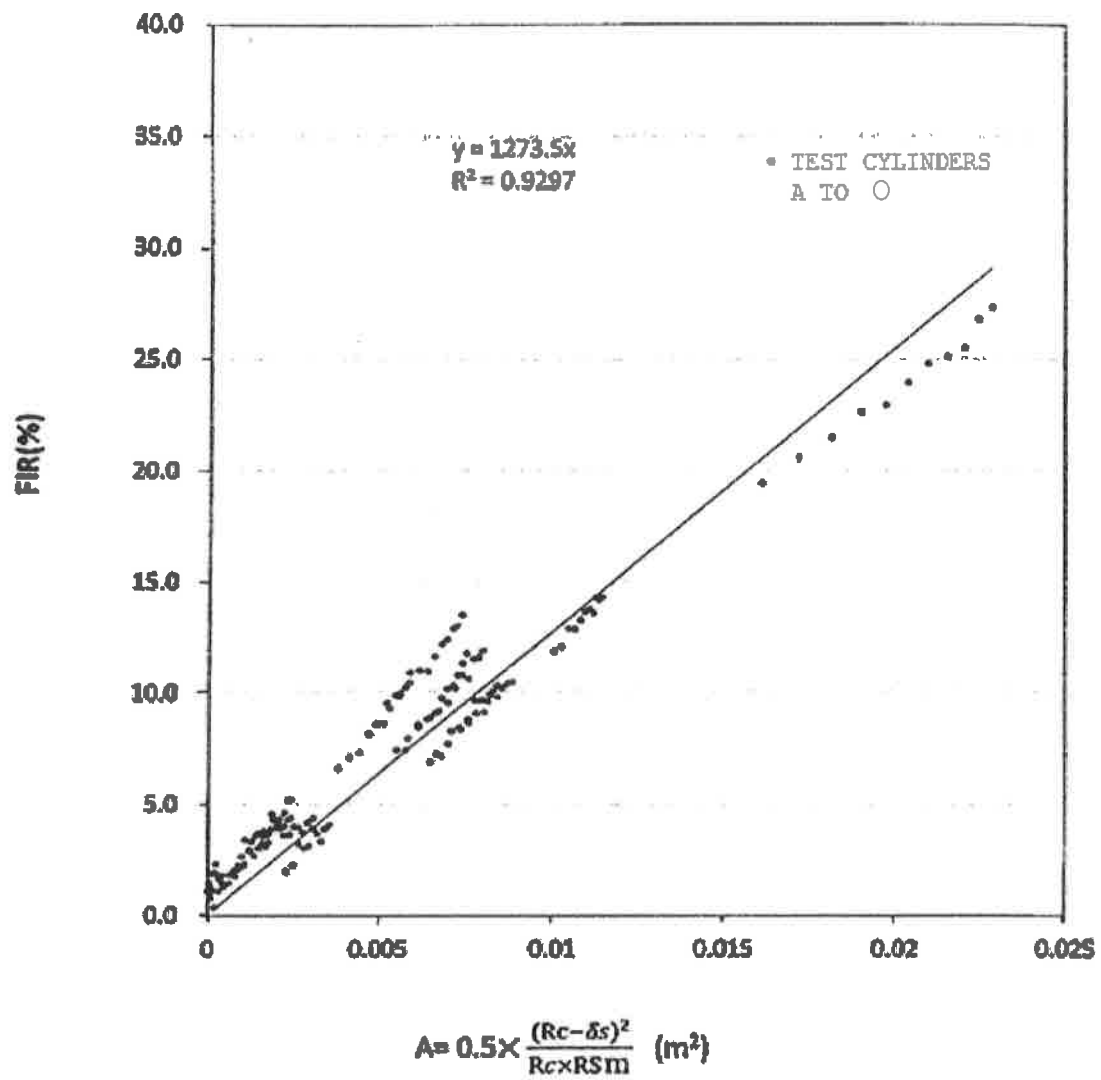


FIG. 1 RELATIONSHIP BETWEEN FRICTION INCREASE RATIO FIR (%) AND
 PROMINENT PEAK PROJECTED AREA $A = 0.5 \times (R_c - \delta s)^2 / (R_c \times R_{Sm})$

[FIG. 2]

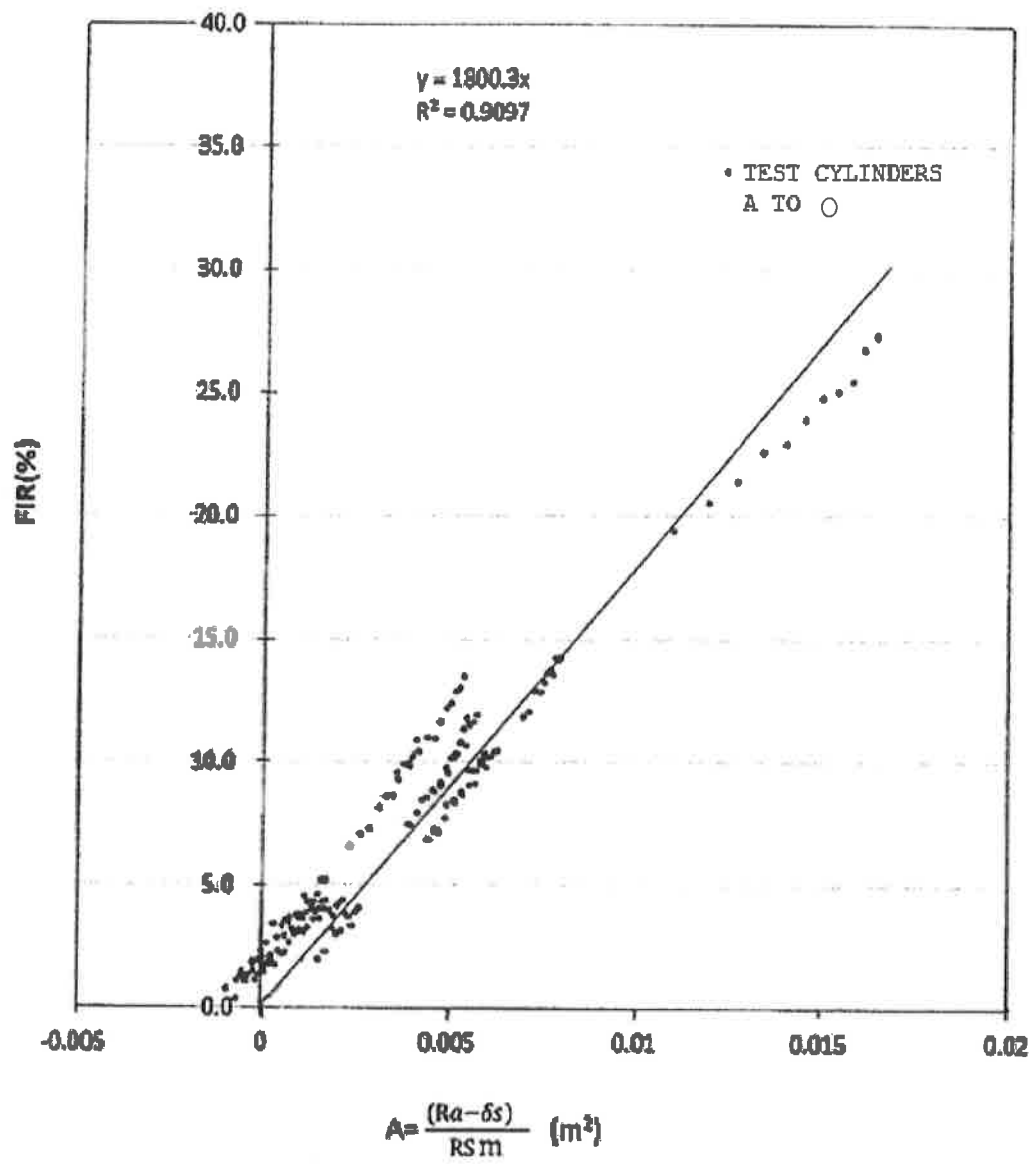


FIG. 2 RELATIONSHIP BETWEEN FRICTION INCREASE RATIO FIR (%) AND PROMINENT PEAK PROJECTED AREA $A = (Ra - \delta s) / RSm$

[FIG. 3]

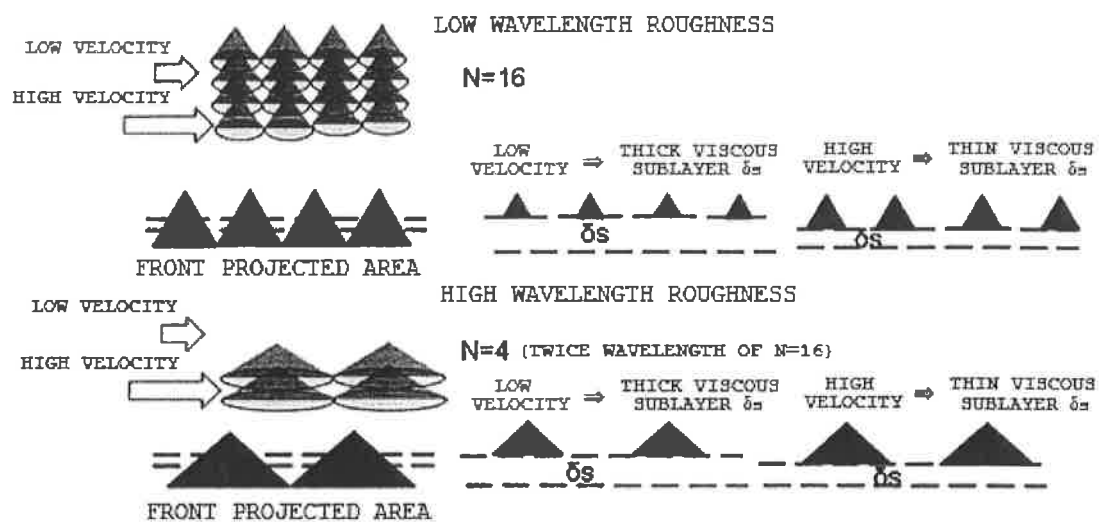


FIG. 3 A schematic view illustrates a change of δ_s and prominent peak projected by a change in flow velocity.

[FIG. 4]

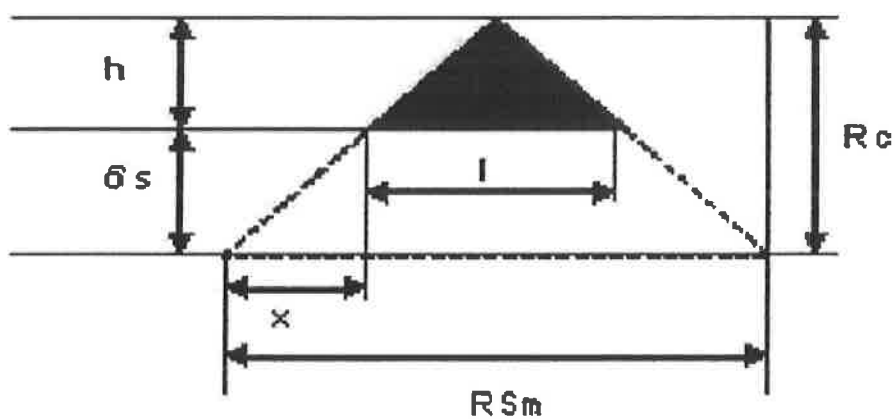
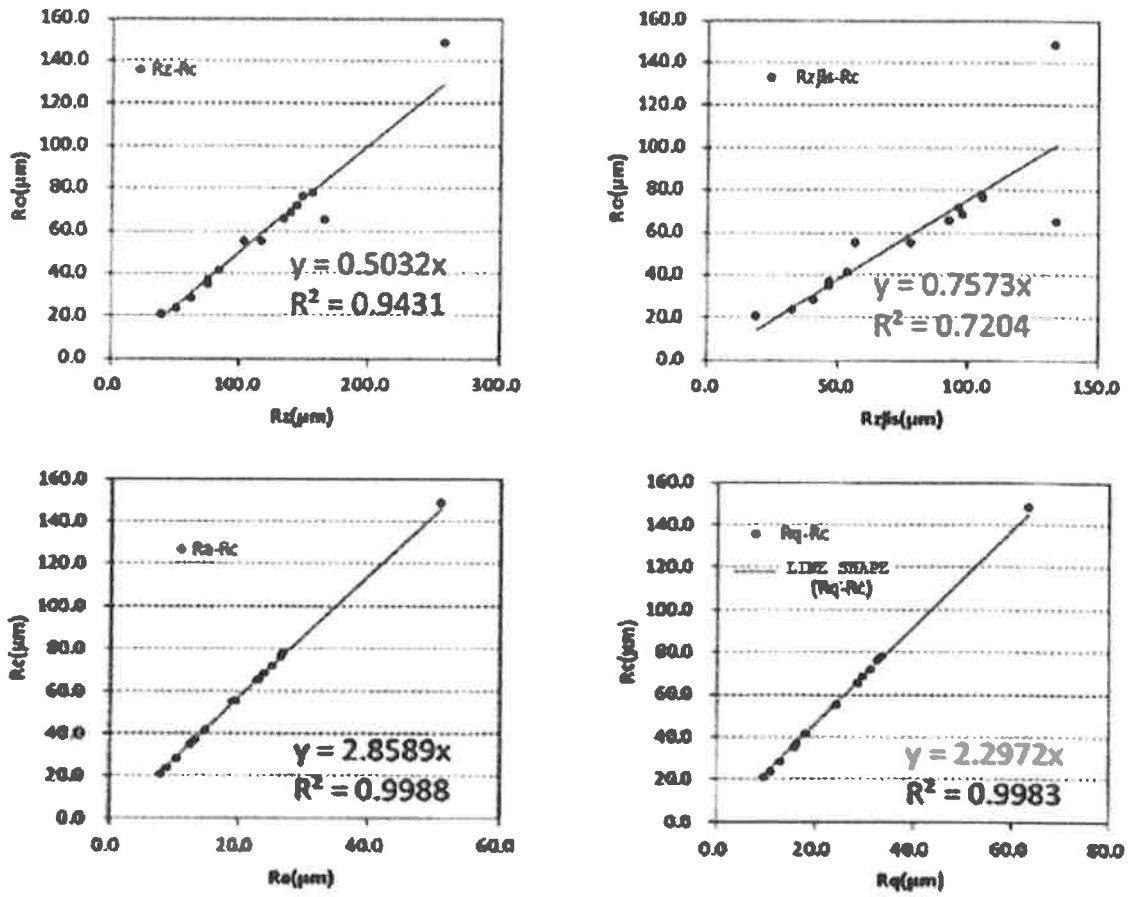
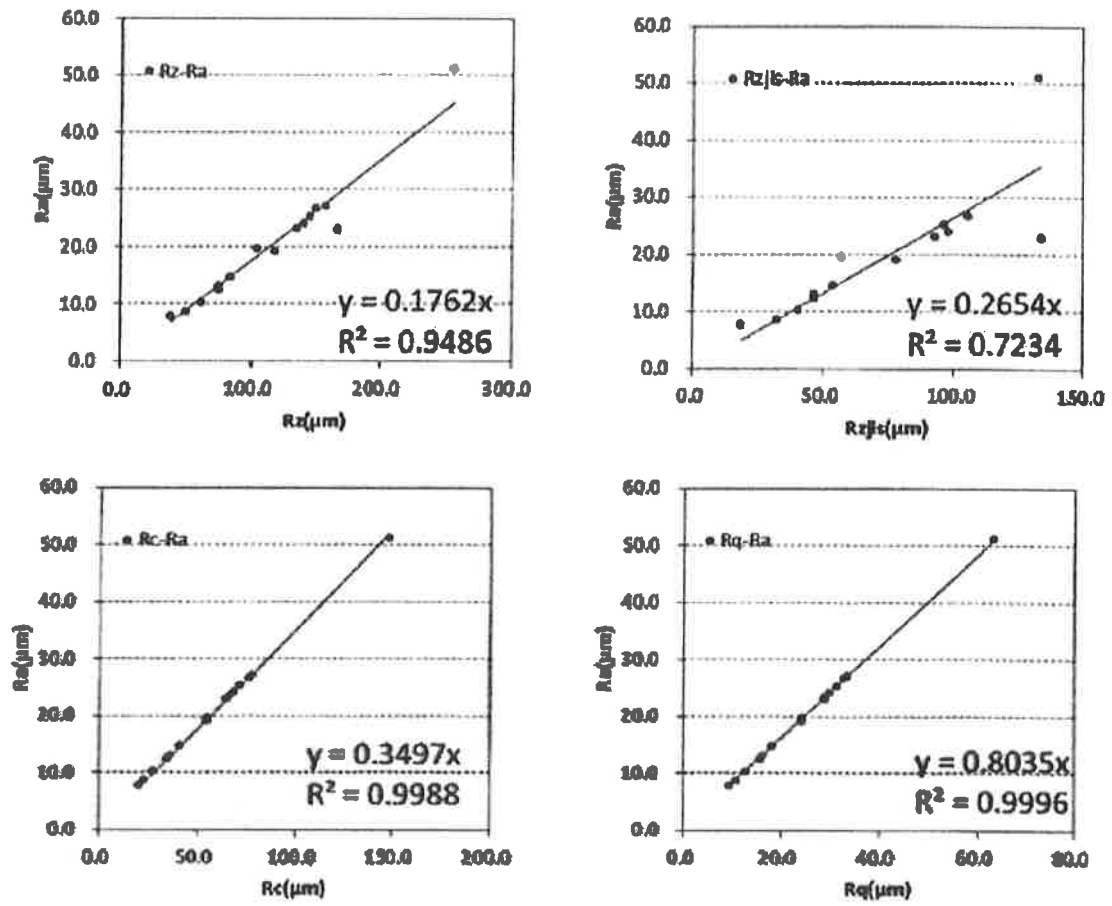


FIG. 4 CALCULATION OF PROMINENT PEAK PROJECTED AREA A FROM VISCIOUS SUBLAYER δ_s USING R_c

[FIG. 5]

FIG. 5 CORRELATIONS OF R_c WITH PARAMETERS

[FIG. 6]

FIG. 6 CORRELATIONS OF R_a WITH PARAMETERS

[FIG. 7]

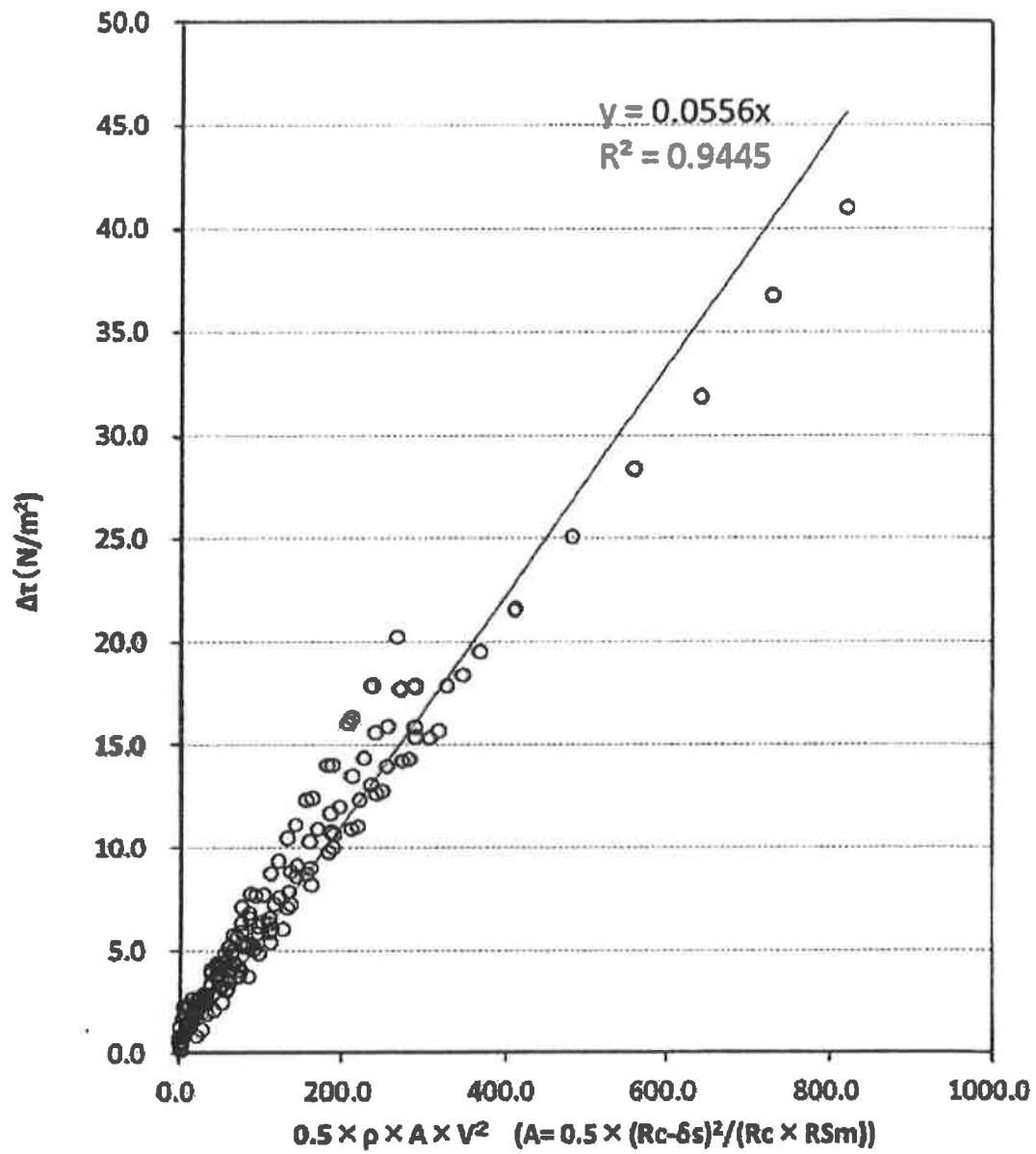


FIG. 7 RELATIONSHIP BETWEEN $\Delta\tau$ (N/m²) AND $0.5 \times \rho \times A \times V^2$
 $A = 0.5 \times (Rc - \delta s)^2 / (Rc \times RSm)$

[FIG. 8]

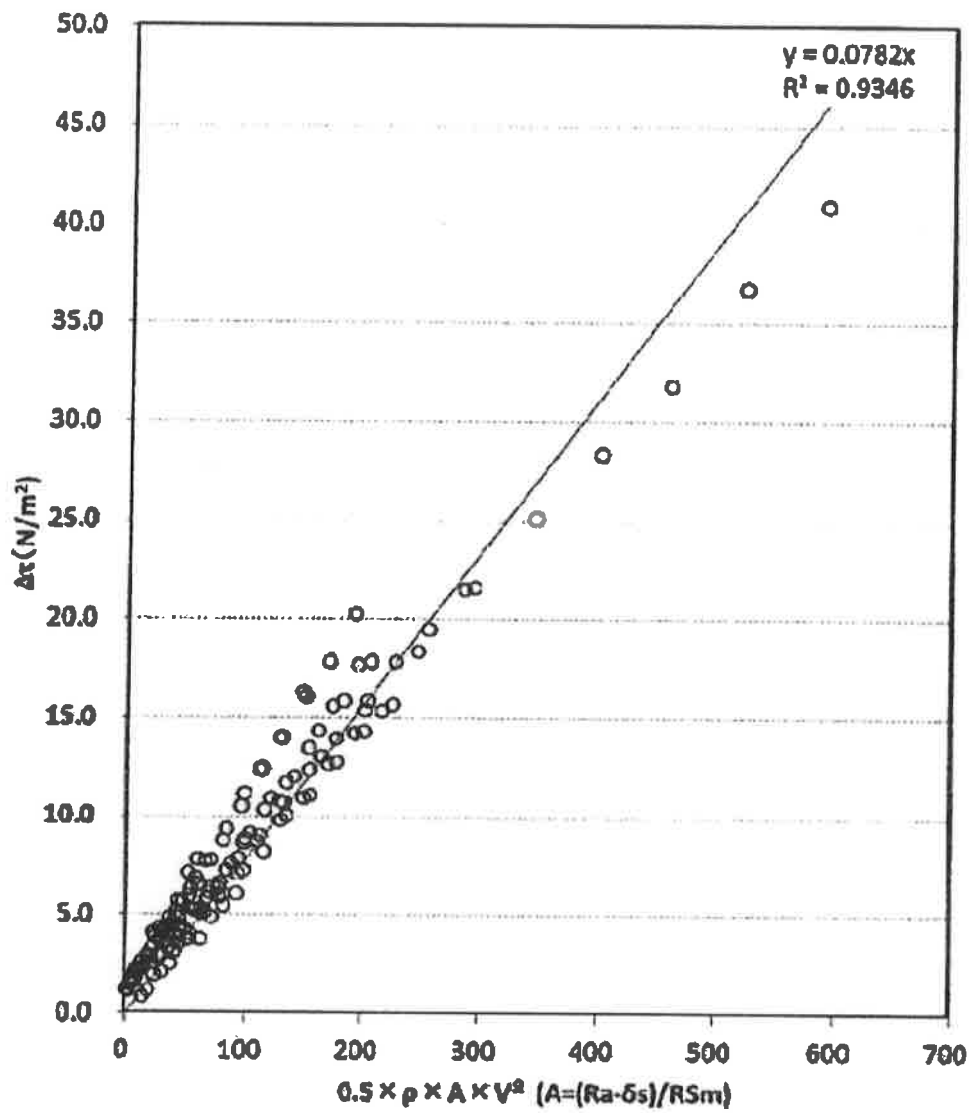


FIG. 8 RELATIONSHIP BETWEEN $\Delta\tau$ (N/m²) AND $0.5 \times \rho \times A \times V^2$
 $A = (Ra - \delta s)/RSm$

[FIG. 9]

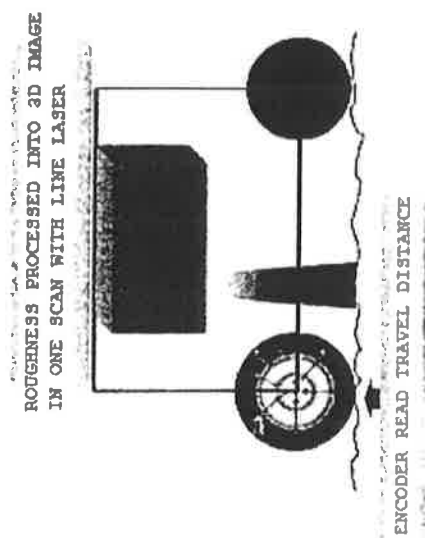
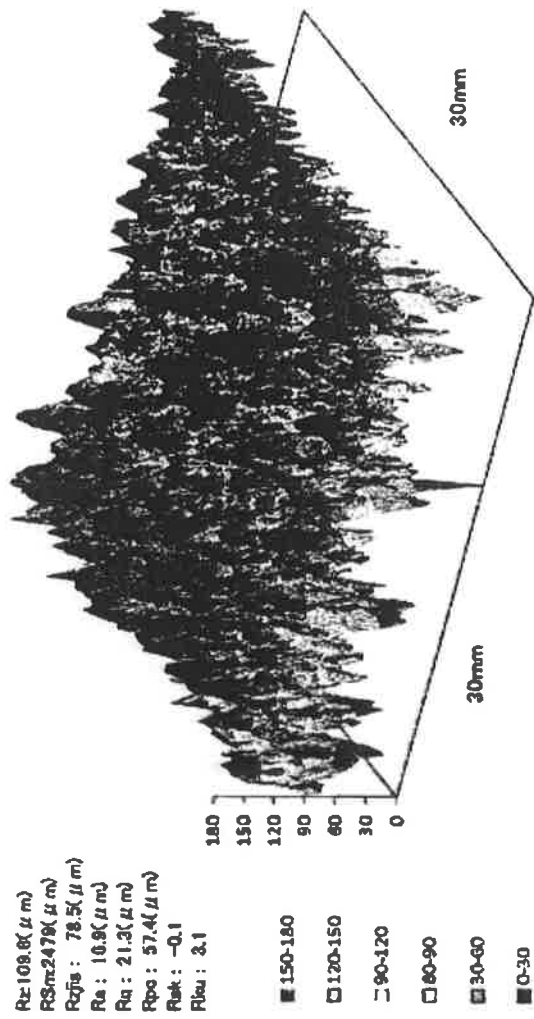


FIG. 9 SURFACE ROUGHNESS MEASUREMENT WITH 2D BEAM