mӱ + 2[ẏ + + 2f33 [1 – ] + 2f12 [ - ] + WA[+] = Fsy

equation no. 5.59

**value of following data** :

1. M= mass of the wheel axle set = 1500 kg
2. V= constant forward velocity = 100 to 110 km/h
3. ẏ = differential of lateral displacement of wheel axleset mass center .
4. rL&rR = rolling radii = 50cm
5. = roll displacement about x’’ axis = 5 degree
6. = yaw displacement about z’’’ axis = 1 degree
7. r0= nominal wheel axle set rolling radius = 10 cm
8. = left and right contact angle = 45 degree
9. WA = weight of the wheel axle set =1500kg
10. Fsy = suspension force
11. F11, f12, f22 , f33 = creep co-efficient = 1.1