

中文原文:

4. 转向性能计算:

4.1 转向阻力矩计算

1. 计算条件

- (1) 作用在每块履带板上土壤的横向和纵向摩擦反力与挤压反力都简化为横向反力。
- (2) 假设履带支承区段的负荷均布, 履带支承长度为 L , 每侧履带荷重为 $G/2$, 履带支承端上单位长度的负荷 $q=G/2L$, 并作用在履带纵向对称平面的长度 L 线段上。
- (3) 设履带 L 线回转时, 其上各点所受土壤的横向反力 F 与该点负荷 q 成正比, $F=u_Bq \cdot u_B$ 为转向时履带与土壤作用的阻力系数, 称转向阻力系数。根据以上假设条件, 各点 u_B 值相同。

英文译文:

4. Calculation of steering performance:

4.1 Calculation of steering resistance torque

1. Calculation condition

- (1) Both the horizontal and longitudinal frictional reaction and pressing reaction on the soil of each caterpillar's plate are simplified into the horizontal reaction.
- (2) Assume that the load in caterpillar's supporting section is evenly distributed, caterpillar's supporting length is L , the load on each side of the caterpillar is $G/2$, and the load per unit length of the caterpillar's supporting end is $q=G/2L$, which is applied on the line with a length of L in the longitudinal symmetrical plane of the caterpillar.
- (3) Assuming that when the caterpillar's L line revolves, and the horizontal reaction F from the soil on each point of it is proportional to q , the load of this point, we have $F=u_Bq \cdot u_B$, which is the resistance coefficient of the interaction between the caterpillar and the soil during steering, known as Steering Resistance Coefficient. Based on the assumptions above, the value of u_B on each point is the same.