

ABSTRACT

The research of physical and mechanism characteristic of material is very necessary especially to know the quality of material if we want to use it. The research was made through the experiments by the material sample.

Physical material experimenting by Yamaha and Jialing motor cycle chain and sprocket was made through some experimenting methods that is hardness experimenting by Vickers method, experimenting by chain strength and micro construction experimenting. By the hardness experimenting of Yamaha chain with its score : first link chain = 301 Hv, second link chain = 387 Hv, first big roll = 336 Hv, second big roll = 462 Hv, first small roll = 456 Hv, second small roll = 493 Hv, pin = 743 Hv, locker = 500 Hv. Whereas the Jialing link chain ; first link chain = 445 Hv, second link chain = 449 Hv, first big roll = 558 Hv, second big roll = 573 Hv, first small roll = 818 Hv, second small roll = 578 Hv, pin = 882 Hv, locker = 475 Hv. Yamaha sprocket = 222 Hv, Jialing sprocket 332 Hv. By strength experiment of Yamaha small link chain = 908.63 N, the big one = 884.93 N, wholly gravity of each : 1990 kg, 2020 kg, 1980 kg and 2030 kg. The Jialing small link chain = 913.11 N, the big one = 852.62 N, wholly gravity : 1880 kg, 1920 kg, 1950 kg, and 1890 kg.

By the micro construction experimenting, there be composition of forming compound of both of motor cycle link chain and sprocket namely common carbon steel which having been undergone the quenching and tempering process.