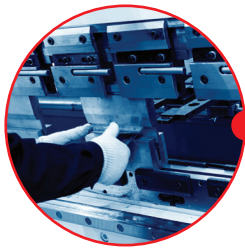


A component journey

Stress ball – Ball studs

Used in virtually every automobile made, ball studs are located within the ball joints in a vehicle's steering system, between the wheels and suspension, allowing rotating movement – similar to the way a human hip joint works. Because of their function and position within the vehicle, they must be extremely strong, corrosion resistant and able to cope with weight and stress. Their effective operation is critical to the safety of the vehicle and, therefore, the driver. Bodycote's proprietary Corr-I-Dur® process ensures the parts achieve the necessary material properties.



The ball studs are cold-forged from heat-treatable steel.



B The parts are quenched and tempered to obtain the necessary core material strength.



B The ball studs receive Bodycote's proprietary Corr-I-Dur® process to improve their corrosion resistance and hardness.



The part surface is machined and roller burnished.



B The parts are polished to achieve specified roughness values – essential for the function of the joint and the steering behaviour of the vehicle.



B The parts are inspected and tested for roughness, surface and core hardness, and corrosion resistance.



End application, **vehicle.**

B Denotes the parts of the component journey undertaken by Bodycote