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## Hejian Deris petroleum Drilling Equipment Co. Ltd.



### **HJT bit metal seal with journal bearing**

HJT series bit adopts metal seal with journal bearing which can drill stably with higher rotary speed.

#### **Main structure features**

- 1.** Metal face seal journal bearing. New processes of head bearing hardfacing and cone bearing silver plating are used to improve the load capacity, anti-galling ability and stability of the bearing.
- 2.** Various shapes of inserts can be equipped on this series of bits, including scoop inserts, wedge inserts, conical-spherical inserts and double spherical inserts, etc. Drilling process & formation and bit are efficient integrated by scientific insert shape selection to realize safety and high efficient drilling.
- 3.** A row of inserts is added between gauge row and heel row of HJ bit to trim borehole wall and protect cone shell, and as a result, HJT series bit is formed.



## **HAT bit rubber seal with journal bearing**

HAT series bit adopts rubber seal with journal bearing, which can sustain higher WOB under normal rotary speed and is suitable for drilling in formations from very soft to middle hard by properly selecting different cutting structure.

### **Main structure features**

- 1.**Journal bearing. Hardfaced head bearing surface. Inner hole of cone is silver-plated. The load capacity and seizure resistance of the bearing is greatly improved. O ring seal is made of the more wear resistance high saturated buna-N with the increased seal section and precisely designed sealing flange in the cone desling area increased the reliability of the seal.
- 2.**All rubber compensator is used which can limit pressure differential and prevent drilling fluid from entering the lubrication system and this provides the bearing system with good assurance of lubrication.
- 3.**High wear resistance and excellent cutting ability of the insert bit are given full play by using carbide compacts of high strength and high toughness in combination with optimized compact numbers and rows, the exposure height and special shaped compacts. For steel tooth bit the tooth surface is hardface with new type of wear resistant material and thus extended working life of the cutting structure while still maintaining high ROP.
- 4.**A row of inserts is added between gauge row and heel row of HA bit to trim borehole wall and protect cone shell and consequently, the special HAT series bit is formed.