

SafeSet Application: Tunnel Drilling Machines



Application

Herrenknecht Traffic Tunnelling Technology (diameter > 4.20 m) is being used for traffic infrastructure tunnelling solutions around the world. Various geological and hydrological conditions for soft, mixed, hard, dry or water saturated soils put high demands on the equipment. With pinion-shaped cutter of diameters up to 14 meters, the torque peaks are hard to predict.

Customer benefit

- Protection for all driveline components in the event of a catastrophically high torque occurrence
- Minimal consequential damage in the event of a failure of a driveline transmission component
- Individual protection of each cutter head
- Increased availability of the machine

Customer

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Technical specification SafeSet ST-KB 100, 125, 140

Torque range	ST-KB 100: 2 to 4 kNm
	ST-KB 125: 4 to 9 kNm
	ST-KB 140: 7 to 14 kNm
Speed	2,500 rpm
Outer diameter	200 mm
Shaft diameter	Splines, 76 mm / 122 mm
Length	270 mm



Actual problem

If the large pinion-shaped cutter was blocked, there was no protection for the driveline components, thus potentially destroying vital parts of the transmission leading to the machine stoppage.

Solution

ST-KB 100, 125, 140 inserted on the back of the motors between hollow shaft and torque shaft with splines. Up to 14 SafeSets are implemented in the machine.

VOITH
Engineered reliability.



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