

Service Insights

Coupling Technologies | Mining | Replacement | APAC

Application	Crusher – Iron ore
Product	Voith torque limiting coupling, Type SR-P 160
Country	Australia
Operator	One of the world's three largest mining companies

No false trips again after replacing with Voith coupling

A crusher for iron ore built in 2013 in an open pit mine in the north-west of Australia is shut down several times unplanned in 2015 due to a malfunction of the ball detent clutch. The operator decides to look for another longer functioning and wear-free torque-limiting coupling. Voith supplies a ready-to-install SafeSet coupling, which has been in operation ever since.

Viewpoint of customer: In 2015, the operator of a Swedish produced crusher in an iron ore mine had a monthly unscheduled production outage because the Brunel ball detent clutch installed tripped incorrectly - presumably due to wear and tear. As the crusher has a 24/7 operating mode, this means considerable downtime costs. Voith has been known to the customer for many years through various projects and service support from the past, as it also uses other products such as hydrodynamic couplings in conveyor belts. At the beginning of October 2015, the customer directly contacts the Australian Voith representative for an inspection of the system. He is looking for a replacement solution with a defined permanent tripping torque.

Order: After several approaches and comparisons, the operator opts for Voith in April 2016. The many references for SafeSet couplings in different industries and applications, the absence of wear as well as the simple operation convinced him. Especially the ability of the local Voith team to design the drive train, as well as the willingness and flexibility to offer individual components separately so that they could be covered with the OPEX budget, were plus points in the decision in favor of Voith as manufacturer.

Inights: Voith assumed responsibility for the drive train between the motor shaft and the pinion shaft of the crusher. In addition to the pure equipment up to the screw and seal, this meant being responsible for the customer with regard to connections, tolerances and fits, as well as the installation procedure. In October 2016, Voith delivered a countershaft and two toothed couplings for the coupling itself.

Technical Details: In order to offer the customer a "plug & play" solution, the coupling flanges were adapted to the conditions of the couplings so that the

customer can order them from the original manufacturer at a reasonable price 'off the shelf' when a replacement is required, thus saving a lot of money over the service life of the crusher. The countershaft was also a special length for retrofitting.



Installation of Voith SafeSet coupling with tooth connection coupling

How we make the difference...

Since the SafeSet coupling was commissioned at the beginning of 2016, not a single unplanned coupling release has occurred in the crusher, so that crusher production is at a maximum level. This convinced the customer to come back to Voith for similar problems.

More about the Voith product at: www.voithturbo.com/safeset

More about Voith Service at: [www.voith.com/turbo-industry-service //](http://www.voith.com/turbo-industry-service//)

