

case study

IRON ORE PELLETISING PLANT IN SWEDEN

metals



Reliability in a harsh environment and ease of maintenance are the key to successful operation at the world's most advanced iron ore producing facilities.

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As one of the world's leading producers of upgraded iron ore products for the steel industry, and a growing supplier of industrial minerals products to other sectors, LKAB has made substantial investment in its facilities in recent years and the important role of driving the pellet lines have been entrusted to the new Benzlers gearboxes. The first units were installed on the new KK4 line in Kiruna and the success of this project subsequently led to the specification of the same units for the upgrade of the existing KK2 conveyors in 2008, as well as the pellet line at Svappavaara.

In addition to the Series F units, LKAB also has a large number of Benzlers Series J and Series K units in operation. All models feature the patented KIBO ® sleeves to allow trouble-free maintenance which is all important in dusty process industries.



International high-tech minerals group, LKAB (Luossavaara Kiirunavaara Aktiebolag) has installed over a hundred Benzlers Series F geared motors at its iron ore pelletising plants in Kiruna and Svappavaara in northern Sweden. Since the first installations were carried out in 2007 the units have performed well and proved highly reliable in the extremely harsh operating environment.

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Using only a small wrench the units can be removed from the shaft, serviced and quickly and easily refitted without resorting to other methods which can be expensive, time-consuming and potentially dangerous.

In LKAB's process the crude ore is upgraded to pellets by grinding it into a fine powder in several stages and removing undesirable components with magnetic separators. The concentrate is mixed with water to form a slurry and pumped to the pelletising plant where the slurry is then dewatered with large filters and mixed with binders and additives, depending on the type of pellet to be produced. Olivine, quartzite, limestone and dolomite typical additives.

Finally the mixture is fed into huge drums and rolled into small 'green balls' and these are then heated in a large rotary kiln at 1,250°C to become pellets, giving them the hard surface they need to withstand long transports by rail and ship. Most iron ore products are sold to European steel mills, but other important markets are North Africa, the Middle East and Southeast Asia.

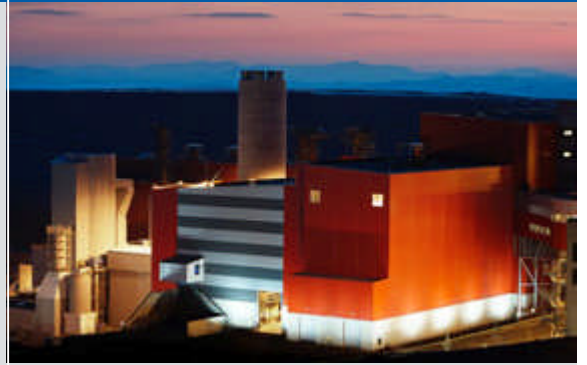
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