

The critical value of ball bearings

The world's leading ball bearings manufacturer, SKF, has traded on a global scale ever since it was first established over a century ago. Indonesia is just one of the many countries where it has manufacturing and sales operations. The company sees a number of growth opportunities in Indonesia and other emerging markets, across several industry verticals, says Anders Fogelberg, who manages SKF's Indonesian industrial business. He highlights their recent contract win with PT. Kereta Api Indonesia (Indonesian Railways), Indonesia's state-owned railway operator, for the supply of tapered roller bearing units. The units will be produced in SKF's factory in Nankou, China, with deliveries expected to start during the third quarter of 2015.

SKF was founded in 1907 by Sven Wingqvist, who invented developed a novel, self-aligning radial ball bearing out of frustration with the poor performance of ball bearings in the textile industry. He constructed self-aligning ball bearings with the inner ring and ball assembly contained within an outer ring that has a spherical raceway. This construction allows the bearing to tolerate a small angular misalignment resulting from shaft or housing deflections or improper mounting, making it particularly suitable for bearing arrangements with very long shafts, such as transmission shafts in textile factories. Patenting his invention on a global scale, Wingqvist set out to sell his powerful invention worldwide. By 1910, the company had

325 employees and a subsidiary in the United Kingdom. Manufacturing operations were later established in multiple countries. By 1912, SKF was represented in 32 countries and by 1930, a staff of over 21,000 were employed in 12 manufacturing facilities worldwide.

SKF began operations in Indonesia in 1919, says Mr. Fogelberg, and has had a long history since. It currently has two Indonesian business units: the industrial market unit and the automotive unit. The latter has its own manufacturing plant in Indonesia and caters to the needs of the thriving South-East Asian two-wheeler and four-wheeler market with products such as ball bearings, hub bearing units, solid oil ball cages for steering columns,

ceramic and hybrid bearings. Mr. Fogelberg runs the industrial market unit in Indonesia, where he oversees operations at five offices. The Indonesian operation forms part of SKF's global Industrial Market, Strategic Industries division, which in turn consists of seven business units with full responsibility for sales to OEMs and end-users, as well as management of business development, manufacturing and engineering. These business units are Aerospace, Renewable Energy, Traditional Energy, Industrial Drives, Precision, Railway and Off-highway and Lubrication. The business units' focus is to meet customer needs in managing their assets' total life cycle – where SKF products, services and solutions help to improve productivity, reliability, energy efficiency and maintenance of assets. SKF Industrial Market, Strategic Industries' offer is based on the know-how and manufacturing of a wide range of bearings – such as spherical and cylindrical roller bearings, angular contact ball bearings, medium deep groove ball bearings and super-precision bearings – as well as lubrication systems, seals, linear motion products, magnetic bearings, by-wire systems and couplings. Net sales in 2014 of this SKF business amounted to SEK 21,140 million.

Mr. Fogelberg sells SKF bearings to industrial customers both directly and through distributors, backed by an extensive engineering and service organisation. "As SKF has been in Indonesia for a very long time, we know the industry very well. We are involved from the incept of raw material to the

SKF Indonesia and Kereta Api at the signing of the contract





final end product e.g. pulp production to finished paper and are known in the country for our ability to deliver industry-specific solutions. These solutions require engineering capabilities and expertise not only in the area of bearings and machinery in general, but also of issues that are specific to Indonesia. Some of our customers have food processing factories in far remote areas with varying climatic conditions e.g. humidity, rainfall, tropical heat, etc. placing unique demands on the performance of our bearings. Bear in mind that in the food processing industry in particular, the quality of ball bearings and the lubrication system needs to be exceptionally high, as you can't have lubricants spilling for obvious reasons." On that note, Mr. Fogelberg adds that while ball bearings may seem relatively straightforward products, their performance is critical to machine uptime in many industries. "Our engineers recently provided valuable engineering services to a cement company; without their help the company would've had to stop production, at potentially a huge cost." This also explains, in his view, why SKF maintains a leadership position as a high-end manufacturer. "Our bearings

certainly aren't the cheapest on the market. But their quality is indisputable. Combined with our engineering expertise, that's exactly what our customers look for."

The food processing industry is a growth driver for SKF in Indonesia, says Mr. Fogelberg. Indonesia's economy overall is largely driven by rising household consumption, and one industry that thrives on this like no other is that of food and beverages. Sales growth is fuelled by rising personal incomes and increased spending on food and drink, especially from the growing number of middle class consumers. Consequently, this is also an industry where local companies have been particularly ambitious – and several of them have evolved into successful global exporters. At the same time, the internationalisation of local cuisine represents a prime opportunity for foreign companies to sell their products to Indonesian consumers, who are more and more open to new foods and flavours. As a result of these developments, food and beverage processing is one of the most mature industries in Indonesia, with a large number of businesses competing for sales.

Another growth driver for Indonesia is the fact that the government has increased investment in infrastructure projects. Lack of adequate infrastructure still is a problem in the country and causes Indonesia's logistics costs to rise steeply, thus reducing the country's competitiveness and attractiveness of the investment climate. According to data published by the Indonesian Chamber of Commerce and Industry (Kadin Indonesia) around 17 percent of a company's total expenditure in Indonesia is absorbed by logistics costs. Another example of how poor infrastructure is an issue in the country





is the fact that Soekarno-Hatta Airport (SHIA), which operates at 260 per cent and which braces itself for passenger numbers to swell beyond 80 million by 2030, is located just 20 kilometres from Jakarta but the only connection between the airport and the city is a single highway built on a tidal plain that regularly floods. Addressing this issue, the Indonesian government has given the green light to the 33.8 kilometres-long Soekarno-Hatta International Airport Railway project. The railway will be partly constructed underground, and will serve five stations in Jakarta as well as terminals I and II at the Soekarno-

Hatta Airport. Total travelling time from Halim (starting point) to Soekarno-Hatta Airport is estimated to be approximately 30 minutes, a significant improvement from the current situation. The railway should be operational by 2019 or 2020.

In order to strive for excellence, PT. Kereta Api Indonesia (Indonesian Railways), Indonesia's state-owned railway operator, has given SKF a three-year contract for the supply of tapered roller bearing units. The units will be produced in SKF's factory in Nankou, China, with deliveries expected to start

during the third quarter of 2015. SKF will also supply Indonesian Railways with aftermarket sealing solutions and dismantling tools. "This is a prestigious and significant contract for us to secure in a country with major on-going investments in railway infrastructure. SKF's tapered roller bearing units and sealing solutions contribute to more reliable train operation, increased passenger comfort and, ultimately, reduced environmental impact, through reduced friction. Producing the units in China provides us with a competitive edge that meets the high standards and technical requirements of the railway industry," says Mr. Fogelberg.



SKF has a long history in Indonesia; this photo was made in 1930, picturing SKF celebrating its ten year anniversary in the country



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