

**HANSEN TRANSMISSIONS SOUTH AFRICA COMPLETES MANUFACTURE & DELIVERY
OF
AIR COOLED CONDENSER FAN DRIVES**

Hansen Transmissions South Africa (Pty) Ltd (HTSA), local subsidiary of industrial gearbox designer, manufacturer and supplier, Hansen Industrial Transmissions nv in Belgium, secured a second order for the manufacture and supply of 384 M4 Air Cooled Condenser (ACC) industrial gearboxes to Kusile Power Station which followed hot on the heels of the first order of 384 M4ACCs for fan drives at Medupi Power Station.

Hansen Transmissions South Africa, Managing Director, Fritz Fourie, is of the considered opinion that the closing of the Kusile order is a direct result of Hansen's success at Medupi. "Medupi called for the delivery of the first fan drives in January 2009 and we have paid meticulous attention to service and delivery details to remain strictly on schedule", says Fourie.

The Kusile order, received in August 2009, specified delivery of the 384 M4ACC drives in batches of 16 over a period of three years, commencing February 2010. "Delivery of the final batch was completed in October 2012," confirms Fourie.

"Our highly skilled local HTSA engineering team developed the fan drives in close co-operation with major original equipment manufacturers of air-cooled condenser equipment to meet exacting operating conditions for air-cooled steam condensation plants commonly used in dry environments", explains Fourie.

Mining and industry across the board face the stark reality of escalating energy costs and are investigating every single factor that can contribute to reduced consumption and associated cost containment. Keeping these factors in mind, Fourie says that the special design criteria of the Hansen M4ACC units dramatically reduce end-user operating costs for low total cost of ownership. "The design of our M4ACC incorporates criteria highlighted by OEMs and end users and include optimised gear geometry, rigid monobloc housing design, 'oil tight for life', high thermal capacity, and reduced operating costs."

The Hansen Transmissions gear design features *optimised gear geometry* to reach the perfect balance between strength, torque capacity, surface durability and low noise performance. According to Fourie, Hansen industrial gearboxes offer the lowest noise levels in the industry as they are carburised and ground to an AGMA level 11 finish.

The M4ACC *monobloc* gearbox housing design ensures greater rigidity and stiffness of the housing and is engineered for high volume manufacturing, delivering substantial cost savings compared to the traditional split housing design.

The “*oil tight for life*” housing design is another major plus as oil leaks not only cause environmental pollution but also affect operational efficiency of condensers in air-cooled condenser applications; as the transformers are located below the cooling towers, the risk of electrical short circuits is increased. The housing is uniquely designed to contain all the required oil channels and piping needed for lubrication of gears and bearings and eliminate external piping. The vertical down low speed shaft runs in a drywell which, being an integrated part of the housing, completely eliminates the risk of oil leaks through the bottom low speed shaft seal. This design also ensures that the bottom low speed shaft bearing is grease lubricated. The gearbox oil level is below the housing assembly port cover and eliminates the risk of oil leaks from this area.

Keeping gearbox *operating temperatures* to acceptable levels is critical for extended oil life as well as for reduced gear and bearing wear. The Hansen M4ACC housing’s external surface is finned to increase the surface area to increase heat dissipation. This is combined with a fan mounted on the motor shaft and a lantern housing designed to direct airflow to the housing areas where the most heat is being dissipated. Thousands of Hansen M4ACC industrial gearboxes operate in diverse climatic conditions across the globe proving the product’s excellent thermal characteristics. End users can therefore safely rely on a gearbox that will operate at optimum temperatures, extending intervals between oil changes and industrial gearbox life.

Apart from electricity consumption, oil changes constitute the largest operating cost and because the Hansen M4ACC features a much *lower oil capacity*, end users have the option of extending oil change intervals from one to three years by using synthetic oils as a viable alternative. Oil capacity is more than 50% lower than those of comparable products and end suppliers who have replaced older generation gearboxes with the Hansen M4ACC, have recorded up to 75% reduction in oil usage.

Considerable savings in the cost of the air-cooled condenser fan support structure are possible because the Hansen M4ACC industrial gearbox is *approximately 50% lighter* than comparable gearboxes is another contributing factor to the Hansen M4ACCs low cost of ownership.

HTSA has been responsible for the local assembly and support of Hansen industrial gearboxes since 1969. “Our name has been synonymous with supreme quality and superior service for over 40 years and the Hansen Transmissions brand is entrenched as one of the most respected in Southern Africa. In fact, leading Southern African mines and industry list us as supplier of choice for large industrial gearboxes. We have fully equipped repair facilities, accomplished application engineers, and an experienced, dedicated field service team to support our range of well respected products”, concludes Fourie.

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About Hansen Industrial Transmissions:

Hansen Industrial Transmissions nv (HIT) is an established global industrial gearbox designer, manufacturer and supplier. The Company provides durable gear drives for a wide range of industrial applications throughout the world and has established a dedicated international service network.

In addition to its principal state-of-the-art manufacturing facility located in Flanders, Belgium, HIT has assembly, sales and service centres in the US, the UK, China, South Africa and Australia. Strong in-house R&D operations maintain HIT's technological leadership.

Since 1 April 2012 HIT is part of the Sumitomo PTC division and HIT employs over 600 people worldwide.

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