



# Lovemore Bros.

MACHINE MOVING AND RIGGING CONTRACTORS

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<http://www.lovemore.co.za>

*Simply getting on with it.*

## TRANSPORTING, RIGGING AND INSTALLING A POWER GENERATION PLANT IN SWAZILAND IS ALL IN A DAY'S WORK

Lovemore Bros were recently awarded a contract from project management company SiVEST for the transportation and installation of a condenser, turbine and generator to provide the power requirements for the Royal Swaziland Sugar Corporation (RSSC) mill at Simunye, in the country's north-eastern lowveld.

RSSC is one of the largest companies in Swaziland employing more than 3 500 people and producing two-thirds of the country's sugar. The power generator provides power to the Estate by burning begasse, a sugar by-product.

Phase one of the project, involved loading the 43 ton condenser directly onto a Lovemore 60 ton lowbed from



**Phase 1 of the project was to rig the 43 ton condenser into position on plinths 3,5 metres above ground level using a 200 ton LPG powered mobile gantry. This was achieved using a cross travel purpose built system to traverse the condenser load**

the vessel at Durban harbour and transporting it along the 560 km route to the mill. There it was rigged into position onto plinths 3,5 meters above ground level, using a 200 ton LPG powered mobile gantry.

"This fairly complex task was achieved

by purpose-building a cross travel system which allowed us to traverse the condenser load with the gantry beams at 10 meters from the initial lift position off the lowbed to the final position.

"The control achieved by the gantry enabled the condenser to be positioned within a 5mm tolerance in all three axes," said Hugh de Borchgrave who heads the Mechanical and Projects Division at Lovemore Bros.

Phase two required loading the 65 ton generator onto Lovemore's 100 ton lowbed at Durban Harbour while the turbine and its baseplate weighing 49 tons, was offloaded onto a 60 ton lowbed and ferried to Simunye.

Working in conjunction with the civil engineers, the 3,5 meter suspended concrete slab on which the generator, turbine and gearbox was to be placed was also purpose-built.

**Phase 2 was to place the generator, turbine and gearbox onto a concrete slab 3,5 meters above ground level**



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Two open "runways" accommodated the same 200 ton gantry tracks at ground level allowing the gantry to suspend the generator and turbine, "travel" 24 meters and lowered onto its final resting position on the slab within a 10mm tolerance.

"We believe that the project was successful mainly due to the cooperation and contributions of all parties concerned and the 'homework' we all put in.

This included creating a three-dimensional computerised AutoCAD rigging study in advance, selecting the correct lowbeds for both transport and site access, and the use of sound rigging practises and equipment," added de Borchgrave.



**Suspended from the gantry, the generator is gently lowered onto the concrete slab**

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