

## **Liebherr LR 11350 crawler crane moves giant ring liner in India**

**May 2014 – A Liebherr crawler crane LR 11350 erected a complete pre-formed ring liner during the construction of reactor block 3 at the Kakrapar Nuclear Power Plant in Western India in the State Gujarat. A unit owned by Nuclear Power Corporation of India Ltd (NPCIL), the Government owned company for nuclear energy and nuclear power plants in India. With a diameter of around 50 m, a height of 5 m and a total weight of approx. 170 t including the weight of the ring, the spider type lifting tackle fitted with evener beam, the ring was probably the dimensionally largest single structure ever to have been hoisted by a crane in India. The Liebherr crane LR 11350 is owned by NPCIL.**

Initial plans called for the 16 ring segments to be hoisted individually on to the inner containment structure at a height of 50 m where they would be assembled and welded. This procedure is complicated and becomes even more difficult as the height increases. Since a Liebherr LR 11350 was already in use on the site, NPCIL decided to change its plans. As a result of the LR 11350's enormous load capacity and extremely sensitive control, the erection plans changed, the ring was assembled on the ground and then simply lifted into position with a single hoist. This procedure meant that the quality of welding was improved which in turn enhanced the safety of the power plant and also saved a good deal of material and time.

The Liebherr crawler crane has a maximum load capacity of 1,350 tonnes and was fitted with an S main boom, a luffing jib, derrick system and a ballast trailer. The heaviest load moved by the LR 11350 on the site was the generator which weighed in at 400 tonnes at a radius of 44 m. Lifting it through the openings whilst maintaining a safe distance from the surrounding walls was particularly challenging.

The Indian company NPCIL has three Liebherr LR 1650, two LR 11350, three LTM 1140 and one LTM 1250-6.1 and only uses its own cranes for major hoisting work.

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