

PROJECT REFERENCE

SAKHALIN II

Armaflex[®], Arma-Chek[®] R

- **Summary**

The Sakhalin island is located just off the east coast of Russia and north of Japan. In 1996, two large consortiums signed contracts to explore for oil and gas off the northeast coast of the island: Sakhalin I and Sakhalin II.

The oil and natural gas reserves contain an estimated 14 billion barrels (2.2 km³) of oil and 96 trillion cubic feet (2,700 km³) of gas. Armacell was the supplier of choice for Sakhalin II installation parts requiring thermal industrial insulation and non-metal covering.

- **Place**

Coast off Sakhalin Island, Russia

- **Market segment**

Oil & Gas offshore

- **EPC, Engineering**

Samsung Heavy Industries; Amec

- **Construction**

2004-2007

- **Owners / Operators**

Sakhalin Energy Investment Company Ltd

- **Contractor**

Cheondo Corporation



- **Application**

Thermal insulation and protection of process lines, pipes for ventilation and plumbing, vessels

- **Line temperatures**

up to 150 °C

- **Insulation systems used**

15,000 m² of HT/Armaflex (sheet layers),
75,000 m² of HT/Armaflex (tubes),
7,000 m² AF/Armaflex sheets & 2,500 lm tubes,
90,000 m² of Arma-Chek R covering



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Huge oil and natural gas reserves were discovered off the coast of the island of Sakhalin in the Russian Far East at the end of the Seventies. Since October 2005, the Sakhalin I project has been drilling for oil. Alongside this, members of the Sakhalin II project have been working relentlessly to develop further oil and natural gas fields.

The Sakhalin II consortium, which was led by Royal Dutch/ Shell at the time of construction, built two offshore platforms for the Lunskeye and Piltun Astokhskeye fields. The natural gas is liquefied in Russia's first LNG plant. The topside facilities of the LUN-A (Lunskeye) and PA-B (Piltun Astokhskeye) platforms were built at the Samsung Heavy Industry Shipyard in South Korea.

To reduce the risk of corrosion in the harsh climate, British project management group Amec looked for a system with a non-metallic covering for insulating the pipes and specified Arma-Chek R. Apart from resistance to weathering, the mechanical resistance of the material and fire behaviour tested according to the international IMO standard were crucial.

All process lines (some with trace heating), pipes of the ventilation and plumbing systems and vessels with a maximum medium temperature of 150 °C were insulated with HT/Armaflex or AF/Armaflex and then covered with the 1 mm-thick, elastomeric Arma-Chek R Grey cladding.

Armacell's support for the project included assistance in the tendering phase, developing special test methods (e.g. a thermoshock test), manufacturing special sizes and providing installation training on site.

The large quantities of insulation and covering material were delivered by the Cheondo Corporation (Geoje City, South Korea). Installation work went smoothly in this demanding project, not least due to the excellent cooperation with Cheondo.



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