

## SIKA TECHNOLOGIES FOR ULU JELAI HYDRO-POWER PLANT IN MALAYSIA

With its state-of-the-art technologies, Sika is making a significant contribution to challenging infrastructure projects. In large-scale projects top technologies are essential to ensure that concrete shows the required performance and can be properly processed. The Ulu Jelai hydroelectric power plant in Malaysia is a major project that has been realized with Sika products.



The 90-meter high dam at Ulu Jelai backs up water over a surface area of almost one square kilometer.

The Ulu Jelai hydropower facility is situated in the Malaysian state of Pahang, some 200 km north of the capital Kuala Lumpur. With an investment volume of more than half a billion Swiss francs, the plant is an impressive feat of engineering: The project involved the construction of a 90-meter

high dam, a tunnel system extending more than 25 kilometers, as well as various caverns, operating buildings and access roads. Thanks to the significant drop height of the water in the impoundment the plant boasts an impressive energy yield. The annual output of 326 GWh of electricity increases

Malaysia's share of renewable energies while at the same time reducing its annual emissions of CO<sub>2</sub> by 250,000 tonnes.

### **BROAD SPECTRUM OF SIKA PRODUCT SOLUTIONS**

The product technologies of Sika made their own contribution to the successful completion of the Ulu Jelai hydropower plant's impoundment facility. This involved the use of admixtures for the manufacture and application of different types of concrete to achieve the required product characteristics – roller-compacted concrete for the dam and shotcrete for tunnels and caverns; injection mortar for rock bolts and floor fittings; corrosion protection for steel structures, and finally system solutions for the waterproofing of the concrete structures.

### **CLOSE INVOLVEMENT OF SIKA SPECIALISTS**

Major projects like the construction of the Ulu Jelai hydropower impoundment facility are extremely challenging. Sika puts together Key Project Teams for any given major project: their members bring a comprehensive understanding of the structural challenges of the construction project and technical expertise for different areas.

In the Ulu Jelai project a five-person key project management team of Sika experts in close interaction with the global key account management was intensely involved throughout the four-year construction period, and regularly visited the construction site to give technical advice. Of utmost importance was for example, the adjustment of admixtures formulations for the manufacture and application of concrete according to the raw materials available and the available timeframe of their application to ensure the workability of the concrete.



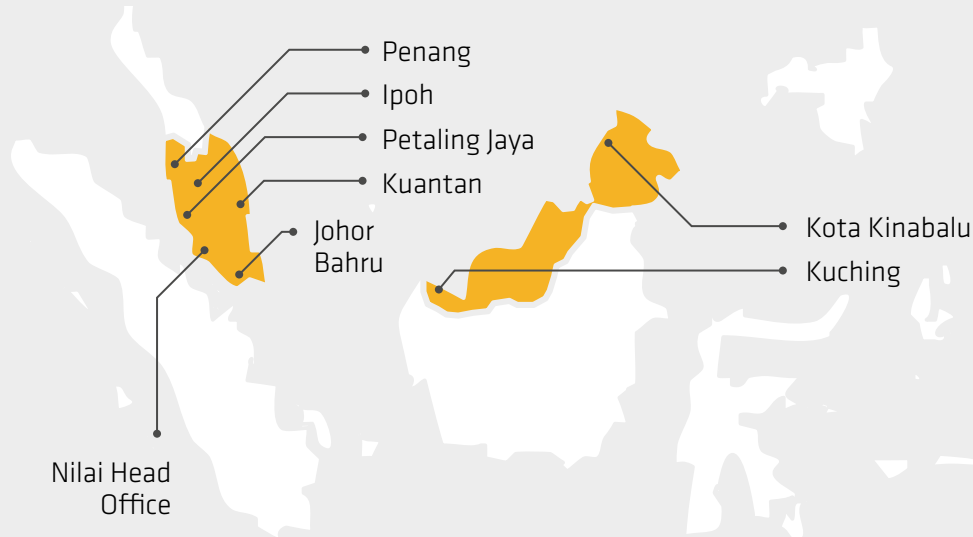
*"The Ulu Jelai project demonstrates the key role played by Sika in infrastructure projects – be it road, rail or air transportation, or indeed energy supply. Our high-performance product solutions, combined with the technical service we provide, enable our clients to build faster, better and more sustainable. Sika is well positioned to participate in Malaysia's infrastructure development over the coming years, and thereby generate further growth."*

Heinz Gisel, Regional Manager Asia/Pacific

### **MALAYSIA – AN ECONOMIC SUCCESS STORY**

Malaysia's economy has undergone a huge transformation over the last 40 years. Whereas in the 1970s economic activity was still dominated by the production of raw materials such as tin and rubber, today's economy is widely diversified. Malaysia is one of the leading exporters of electrical appliances, components and construction parts, as well as palm oil and natural gas. According to World Bank forecasts, economic growth will amount to 4.5% annually in both 2016 and 2017.

## SIKA'S PRESENCE IN MALAYSIA



### Sika in Malaysia

Sika has been present in Malaysia since 1989. Sika operates four manufacturing sites in the country. The head office is based some 30 kilometers south of the capital Kuala Lumpur. Sika supplies and advises its major clients throughout the country – concrete manufacturers, building contractors and building merchants – from a total of eight locations, including seven sales offices. Over the last five years, Sika has grown in Malaysia by an average of 20% annually.

### Focus on infrastructure development

The expansion of Malaysia's infrastructure is one of the national government's priorities as it seeks to develop the country further in line with the Vision 2020 project, which was launched in 1991. The 11th Malaysia Plan for the years 2016-20 will provide stimuli for infrastructure construction and thus for the construction industry as a whole. Major railway, road, bridge and energy projects will significantly contribute to growth.

## FURTHER INFORMATION

- [Concrete technology](#)
- [Waterproofing solutions](#)
- [Sika in Malaysia](#)

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