

ROADS

Azerbaijan expands infrastructure using technologies 'made in Germany': biggest slipform paver project for Wirtgen

Azerbaijan is a country in the process of change: as a result of the oil boom and increasing revenues from the natural gas business, the southern Caucasian republic at the Caspian Sea counts among the fastest growing economies in the world. Commissioned by the country's national government, a private group of construction companies and major customer of Wirtgen International GmbH – Akkord – is currently building an almost 200km long motorway from the capital city of Baku with its major industrial port to the city of Quba in the North of the Asian republic. The project involves the use of Wirtgen slipform pavers.

The goal is to optimize the transport network between the country's economic regions, and to also strengthen the major transport routes for heavy goods traffic into the neighbouring states of Russia, Georgia, Iran and Armenia.

Other family members of the Wirtgen Group are playing a part in the extensive earthmoving operations as well: 40 single-drum compactors type 3516 from Hamm are involved in the required preliminary work in earth construction on the various construction sections, efficiently compacting the subsoil for the concrete pavement to be built.

Four complete paving trains in action

The dimensions of the construction site are truly enormous. This is confirmed by Werner Aeschlimann, Product Support Manager Slipform Paving at Wirtgen GmbH: "It's the biggest construction project in our product division to date. Four complete paving trains type SP 1500 L and SP 1600 are operated

simultaneously by one single customer, each comprising a bottom-layer paver, top-layer paver and TCM 1800 texture curing machine. The machines have been paving a new, dual-lane concrete motorway since the end of April 2008. Two additional SP 250 slipform pavers are in operation carrying out offset work, such as safety barriers, gutters and kerbs."

The motorway has been designed for high traffic loads and a long service life. The concrete pavement has a total thickness of 28 cm. 20 cm are paved for the bottom-layer concrete, 8 cm for the top-layer concrete. On the various construction sections, the largest machines in the Wirtgen slipform paver division are working at paving widths of 9 m and 12 m respectively. Paving crews of around 25 men are working on each construction lot, operating the machines – which are geared for high precision and automatic concrete paving – around the clock.

24-hour job for Wirtgen customer service

A customer service team from the Windhagen main plant provided extensive support to the customer and his brand new machines during the first project stage. Teams of two service technicians for each paving train supported the slipform pavers on the various construction lots for almost three months – a highly demanding job that gave impressive proof every day of the efficiency of the Wirtgen customer service. Their range of responsibilities was a challenge, indeed. Setting up the paving trains, familiarizing the operating crew with the new machines, and supporting the machines during the first phase of the large construction project were part of their comprehensive service package.



Dual-layer concrete paving for optimum quality and durability: The new traffic artery linking the capital city of Baku with the north of the country needs to withstand heavy goods traffic.

Conditions on the construction site were extremely tough even for the internationally experienced service technicians. During the peak period of the construction project in the hot summer months, the scorching heat of the steppe climate took its toll on everyone involved. Mario Weber describes the additional machine-related challenges that the customer service teams were facing on site: "In some construction sections, the machines needed to be repositioned several times within an extremely short period of time because the earthmoving operations were delayed. Yet concrete paving was to continue 24 hours a day and seven days a week, which meant that the Wirtgen customer service needed to be available 24 hours a day as well." As a result, the three construction sections on which work progressed simultaneously entailed great logistical efforts under tremendous pressure of time.

To be able to manage the large volumes and rapid speed, the construction lots were supported by four mixing plants which had been set up along the Baku to Quba stretch especially for this purpose. For each paving train, containers holding not only emergency kits but also spare parts and wearing parts for the first 1,500 operating hours were stored in the immediate vicinity to cater for any emergencies.



Heavy-duty finishing beams and super smoothers installed in the slipform paving trains are responsible for producing a surface of superior evenness.

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