



Key-Lock® mechanical Joint



Re-installable pipeline using Bondstrand® GRE pipe for Kolubara Coal Mine

The river Kolubara basin is an area covering three municipalities in Sumadija and Tamnava, with a coal reserve close to 4 billion tons. JP RB Kolubara is the largest coal manufacturer in the state and the most powerful business partner within the Serbian Energetic System (EBS).

By the end of the 20th century, in 1896, immediately after the invention of public powerlines in Belgrade, coal excavation started in the Kolubara basin, spread across 600 km². The town of Lazarevac is administrative center of the region and its development in the past few decades was closely dependant of coal exploitation.

The basic activities of JPRB Kolubara are production, transport and trade of coal and thermal energy. The company is qualified and equipped for engineering, maintenance, assembly and production of various mining constructions and equipment.

Open pit mines Kolubara Pov. Kopovi and Tamnava West Field are the largest lignite manufacturer in the country. The coal used to produce more than half the entire energy production in the state with average annual scores of 25 million tons of coal. Prior to coal, three times more overburden must be excavated, requiring dozens of bucket wheel excavators, draglines, stackers and spreaders, conveyors and other heavy mining machinery are running 24 hours a day, in three shifts.

Scope of Supply

Part of the existing steel pipeline was replaced with Bondstrand. In order to work the Kolubara Coal Mine Fields, the ground water needs to be lowered to allow appropriate working conditions for the digging machines. The water coming from the wells is transported to the nearby Kolubara River through a pipeline.

Once the field segment is completed, the pipeline is disassembled and moved to the new field segment where it is re-installed. The Key-Lock joints proved to be very easy to re-assemble without the need for heavy equipment and/or special tooling and it only required two people to move the pipe to a new location. This would have been impossible with steel pipelines.

Early 2007, the first 500 meter of Bondstrand pipe were disassembled and re-installed. The entire dismantling and re-assembly only took two days.

Project

Kolubara Coal Mine – 70 km from Beograd, Serbia

Client

EPS (Electric Power Industry of Serbia) Beograd, Serbia

Pipe system

Application:	Transportation of ground water
Fluid:	Ground water
Diameter:	8 inch (200 mm) – 1000 meter
Diameter:	12 inch (300 mm) – 1040 meter
Total quantity:	2040 meter

Operating conditions

Operating pressure:	10 bar
Test pressure:	15 bar
Operating temperature:	Ambient
Design temperature:	93 °C

Installation date

Assembly:	October 2006
Disassembly and re-installation:	On-going from January 2007