

## A NOT SO SLIPPERY SLOPE IN KASSEL

Over 26% reduction of heat loss with Flexalen



Flexalen PB Pipes



Certificates



### PROJECT INTRODUCTION

The chance to combine the vibrancy of city life with a high standard of living was just one of the many factors that attracted the Bergweg residential estate. The 15 buildings, each with 105 apartments, are located in Wolfsange, a quiet district on the edge of Kassel with a view of the River Fulda. This area is also just a stone's throw away from the city center. Despite the scenic awe of the location, there was one notable downside. The 1970s steel heating and drinking water pipe network was heavily deteriorated, resulting in continuously high heat losses and leakages. The water supply had become unreliable and energy increasingly costly. So Bergweg needed a new, reliable and sustainable distribution network for their domestic hot and potable water supply.

### GOALS

Firstly, the buildings were staggered up the hillside and had height differences of up to 25 meters. Additionally, the pipes had to be laid in cellar arches that were hard to access without disrupting the use of the existing networks. This demanded a high degree of flexibility. The brief from the consultant designers was clear: to build an energy-efficient, corrosion-free, and maintenance-free district-heating network capable of delivering 715 kW of heating power.

### PROJECT PROCESS

To minimize energy losses during heat transmission, and to ensure long-term reliability, the client and the designers opted for our tried-and-trusted district heating technology – the pre-insulated, flexible Flexalen pipe system. This proved an ideal solution for the unique challenges to be met. Thanks to the system's comprehensive range of dimensions, pre-insulated, molded parts, and sophisticated accessories, more than a kilometer of single and double Flexalen pipes were laid. The heating system in the first building and the 14 transmission stations were installed in no time.

### RESULTS

The Fuldablick Property Owners' Association in Kassel had taken on a formidable project. The underground steel pipe network on their 1970s-built residential estate with its 15 buildings and 105 apartments needed an overhaul due to the high heat losses. Replacing the district heating and drinking water network with a system of flexible PB pipes enabled them to reduce heat losses by more than 26%. Using our innovative Flexalen pipe system, we could support the Fuldablick Property Owners' Association in achieving energy savings of around 780,000 kWh per year – equivalent to the average annual power consumption of 80 houses!

### PROJECT INFORMATION

- 📍 Kassel, Germany
- Fuldablick Property Owners' Association
- ITEGA GmbH (consultant designers)

### APPLICATIONS

- Heating Networks

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