

# PRECAST CONCRETE ELEMENTS

**KRAFT ENERGY SYSTEMS INC.** New Enterprise Stone & Lime Inc. Roaring Spring, Pennsylvania

## More capacity - more productivity: after-treatment using

"Think Big!" This motto of the American industrial pioneer imposes itself spontaneously on car drivers when they are met by a convoy of two or three massive low-loaders carrying 135 ft long pre-cast concrete bridge components as high as a man on the Interstate 70 Highway which connects Pittsburgh with the large cities in the

east of the USA. The home of these giants of the road is the small town of Roaring Spring in the romantic region of Alleghenies, about 60 miles east of Pittsburgh. Their destination? Construction sites in the area of New York or much further in Virginia.

"Until the fifties, there was only a quarry here," explains Frank Kliewer, Manager of the New Enterprise Stone & Lime Inc. concrete works at Roaring Spring, Pennsylvania. "With the development of modern concrete and pre-cast component technology, the limestone which was already here began to be used for the production of concrete elements." Success was not long in coming. The construction industry was booming as was the demand for ever larger and higher quality pre-cast concrete components.

Today, the company is one of the most modern and efficient concrete and pre-cast component manufacturers in the USA serving customers within a radius of more than 500 miles. "Under the brand name 'Newcrete', we are developing, producing and supplying everything that the architect and planner desires," emphasises Frank Kliewer. "From up to 151 ft long I-Beam bridge girders through H-beam elements for multi-storey car parks to complete multi-step seating rows for sports stadia, for example."

The original business of producing and supplying blocks, crushed stone and readymix concrete has almost become a sideline. "With around 400 m<sup>3</sup> quality concrete every day, we have become almost the main customer of our readymix concrete plant," says Kliewer, "even though we continue to supply other customers as before."



**Think Big! As high as a man and about 135 ft long and called an I beam because of its shape, this pre-stressed concrete element is destined for bridge construction.**

For Frank Kliewer, the brand name 'Newcrete' also represents the obligation to maintain the quality of the pre-stressed concrete elements produced. "Our latest investment is a vapour after-treatment plant from Kraft Energy Systems." Correct after-treatment has a huge effect on the quality of the concrete components and on the economy of production," underlines the Works Manager. "Earlier, we were working with simple steam, but that was very expensive. The temperature had to be controlled and regulated constantly in

order to avoid tension cracks on the solid components."

The Works Manager does not have these worries any more. The amazingly small units (in comparison to the dimensions of the works) electronically control and regulate the steam vapour requirements for the after-treatment of the whole of production fully automatically. Sensors immediately signal any fluctuation and correct for them practically within seconds.



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These H elements are a very popular Newcrete product and are mainly used in multi-storey car-park construction.



The company's own design office in Roaring Spring develops and carries out the calculations needed for the design parameters of Newcrete concrete components.



Small but wow! This small but almost inconspicuous unit supplies the whole Roaring Spring concrete works with energy for the after-treatment.

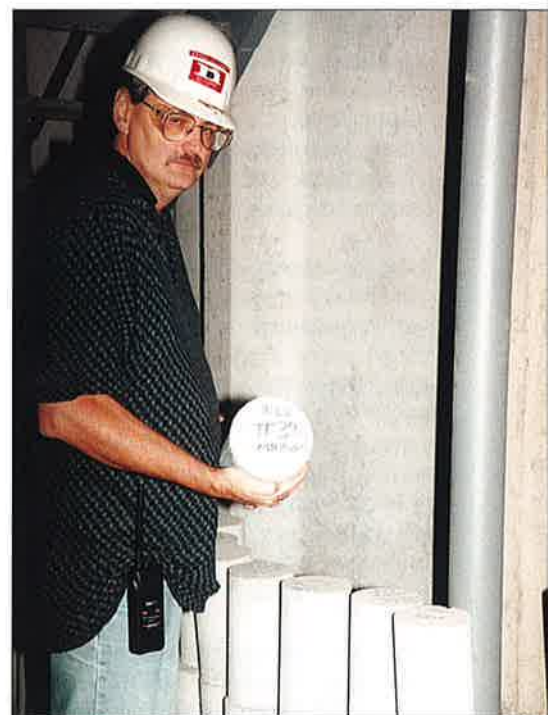
"For us, this investment has been worth it in every case," sums up Frank Kliever. "Since the plant has been in operation here, we have been able to increase our capacity by around 20% and production by about 25%."

## FURTHER INFORMATION:

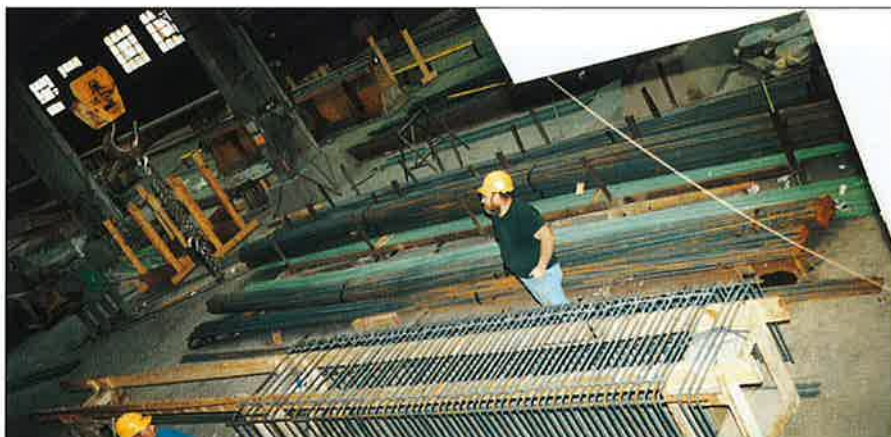
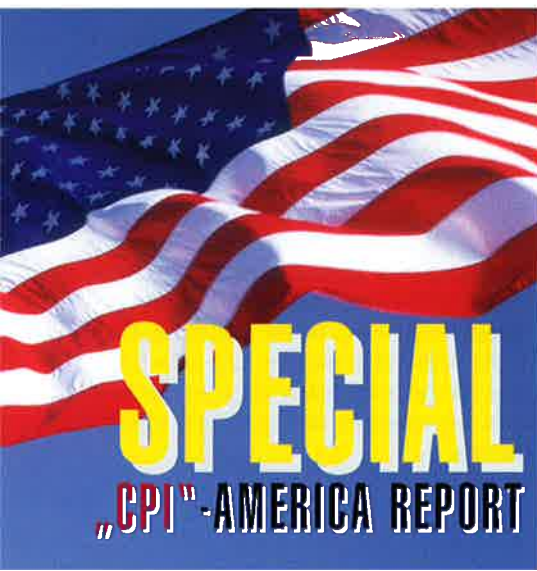
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Works Manager Frank Kliever with a core extracted for monitoring purposes. "Using our new Kraft Energy unit, we are able to increase our capacity and productivity by 20-25%."



The steel reinforcement needed for the gigantic Newcrete pre-cast concrete components is up to 40 millimetres thick.