

Poland rams steel pipe roof with TERRA-HAMMER TR 360

City:	Włocławek/ Poland
Contractor:	M/s Koimex/ Świebodzin
Authorities:	Authorities of Włocławek City
Project:	Construction of a street tunnel underneath the railway between Kutno Piła and Włocławek
Steel pipe ram:	TERRA-HAMMER TR 360
Steel pipe roof:	1.530 m steel pipes OD 508 mm and 610 mm 5'050 ft steel pipes OD 20" and 24"
Tunnel:	2 tunnels, each 21 m long (70 ft)
Underground:	Soft ground, sandy with ground water



The street tunnel is constructed underneath the railway from Kutno Piła to Włocławek. The TERRA-HAMMER TR 360 rams a bottom steel pipe (in the left corner).

Here a better view: TERRA-HAMMER TR 360



The requirements for this tunnel project had been extremely high. The vertical and horizontal steel pipes underneath the railway line are good to recognized. Both tunnels are parallel to each other.

Trenchless pipe laying by steel pipe ramming



The tunnel project began from the top. At first the vertical pipes had been rammed. HEB 450 beams were laid onto them. Then the horizontal steel pipes were rammed as a roof. After that, the tunnel walls were rammed from the top to the bottom.

The railway traffic could continuously flow during the tunnel work. The slope of the steel pipe roof was 1%. The steel pipes were connected by a special locking system which required more than 5'000 m (16'500 ft) of welding. The required compressor delivered 12 m³/ min (420 cfm) at 6 – 7 bar. (85 – 100 psi).



These pictures shows the impressive dimensions. The diameters of the steel pipes where 508 mm (20") and 610 mm (24"). In total 1'530 m (5'050 ft) steel pipes were rammed.

An optimum result for M/s Koimex. The TERRA-HAMMER TR 360 had been ideal fort his jobsite.