



Chernobyl 1986

Where high performance is needed, Putzmeister is there.

100,000 cubic yards of concrete pumped through the first 52 metre boom – in three months – trouble free!

This is the report from "Minenergo" – the Soviet Ministry for Power Plant Construction. In total, approx. 400,000 cubic yards were pumped to protect the damaged reactor block 4.

Now, along with its records for longest distance and highest elevation, Putzmeister may have established another record for volume pumping.

More than 10 pumps of four different manufacturers were used to encapsulate the damaged reactor at Chernobyl as fast as possible. The longest booms and fastest pumps were Putzmeisters. They were also chosen because Putzmeister reacted faster with special equipment like lead shields, radio and video remote control, etc. All these were immediately available. The "Better Ideas" were at hand.

Putzmeister, therefore, received the lion's share of the order. Seven 52 Metre (175 ft.) boom pumps with 200 cubic yards per hour capacity and three heavy-duty trailer pumps with clean-out systems.

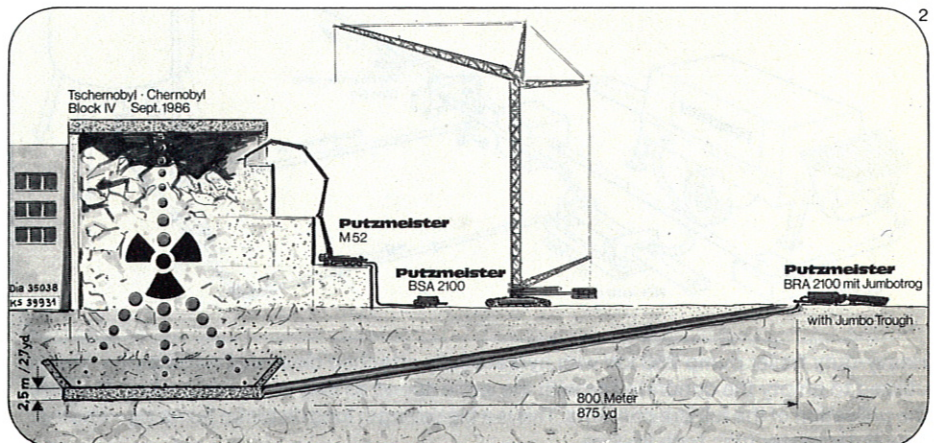
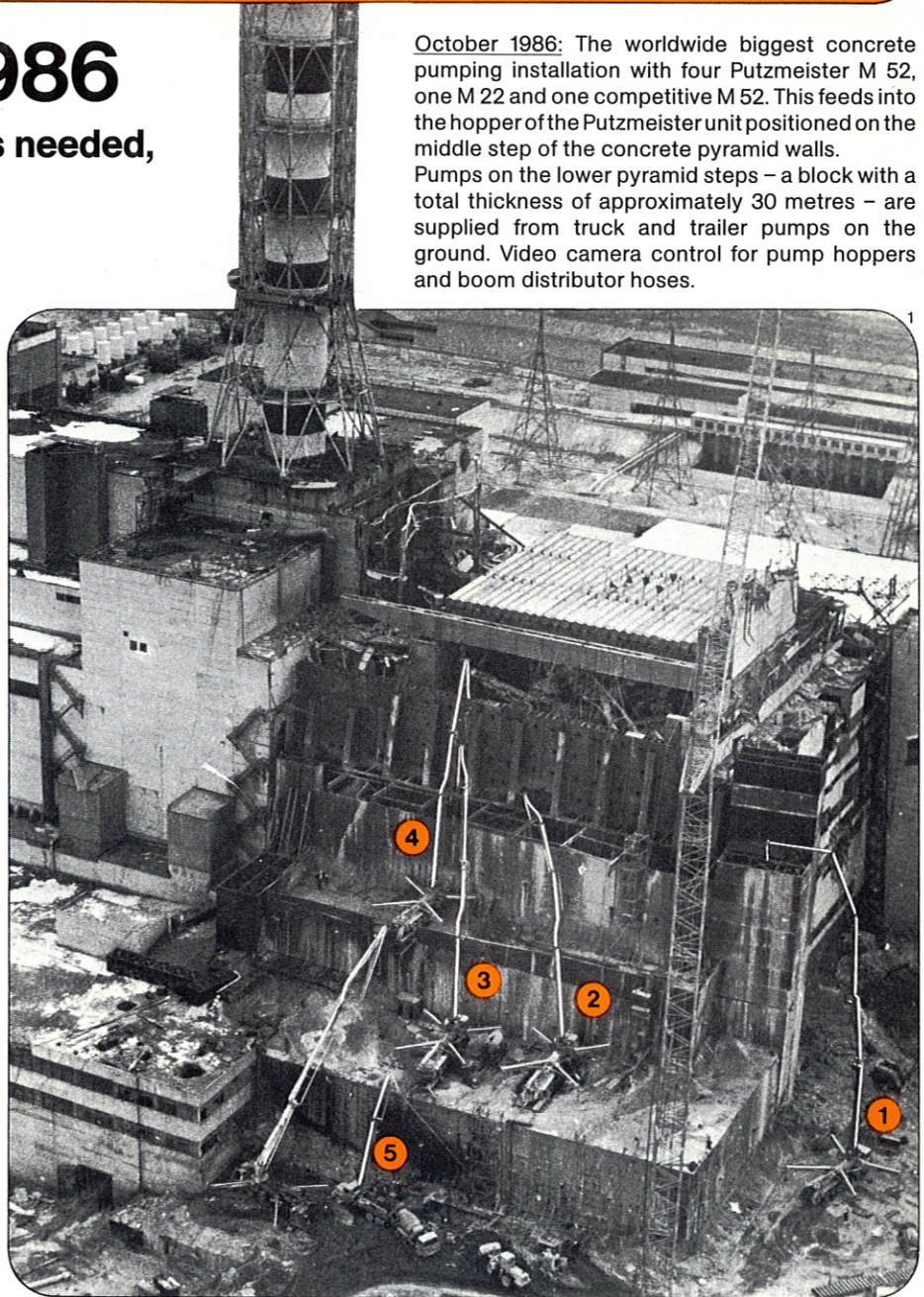
Working day and night, the giant Putzmeister pumps set records in speed and durability. These Putzmeister machines will now be used to upkeep other power plants in the Soviet Union.

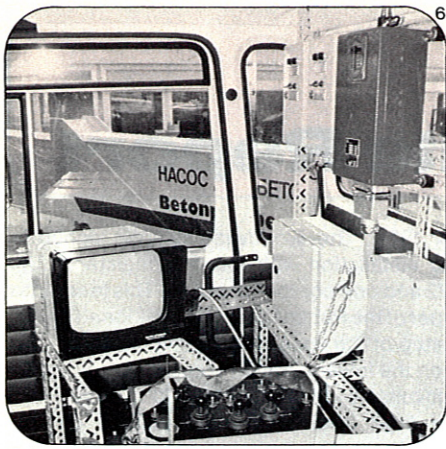
Some further Putzmeister pumps and approximately 20 operators were sent from a Leningrad Putzmeister pump customer. They trained another 80 operators in order to work in rotation on the job for a short time. Only two hours' exposure was allowed per man. Each man had a radiation counter in his pocket and could leave whenever he felt endangered. A rest-camp over 75 miles away was set up for the operators to ensure day and night operation.

Summer 1986: A Putzmeister Elephant trailer pump BRA 2100 Jumbo Trough – earlier used for the 1017 feet chimney at Kirishi – was installed to pump through a 2,000 ft. long tunnel. The purpose here was to fill an 8 ft. thick cavity that was mined out under the reactor building. This was done to seal off any possible ground contamination. Jumbo Trough with high-pressure pump allows remixing and storing of concrete. This increases the vehicle economy and pump performance.

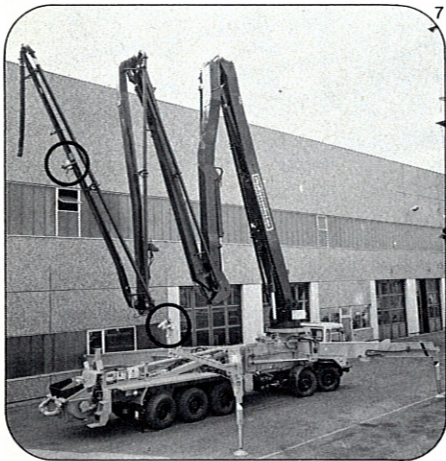
October 1986: The worldwide biggest concrete pumping installation with four Putzmeister M 52, one M 22 and one competitive M 52. This feeds into the hopper of the Putzmeister unit positioned on the middle step of the concrete pyramid walls.

Pumps on the lower pyramid steps – a block with a total thickness of approximately 30 metres – are supplied from truck and trailer pumps on the ground. Video camera control for pump hoppers and boom distributor hoses.

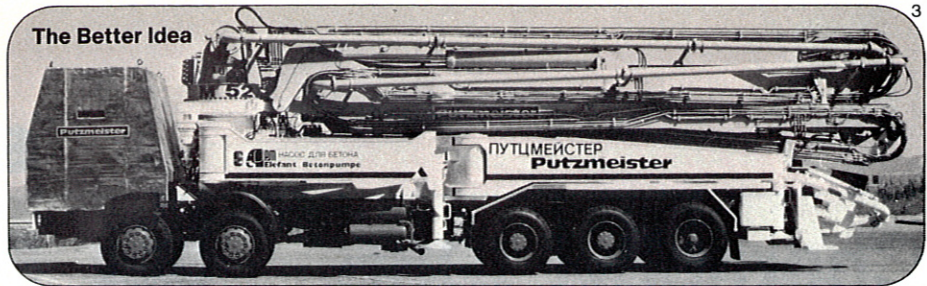




Video monitoring in the driver's cab, parallel to same installation positioned 2,000 ft. away in a protective control centre for all pumps.

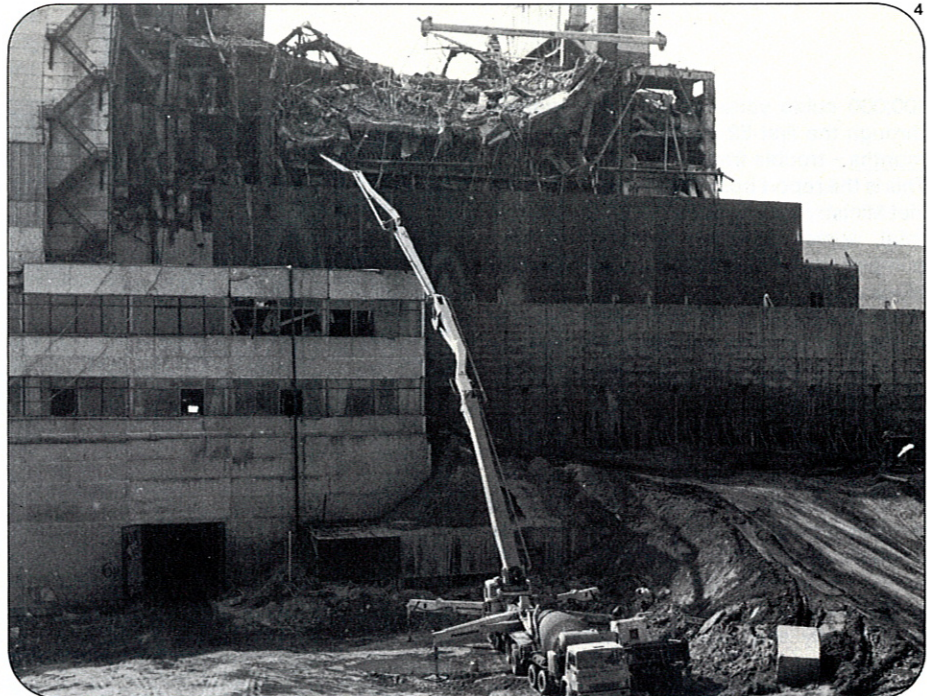


Camera at the fifth section surveys concrete distribution. Multi-Z for low unfolding height. End hose is immediately in service without long fold-out process. Second lead-lined video camera automatically extends when outriggers swing out to survey hopper functions.

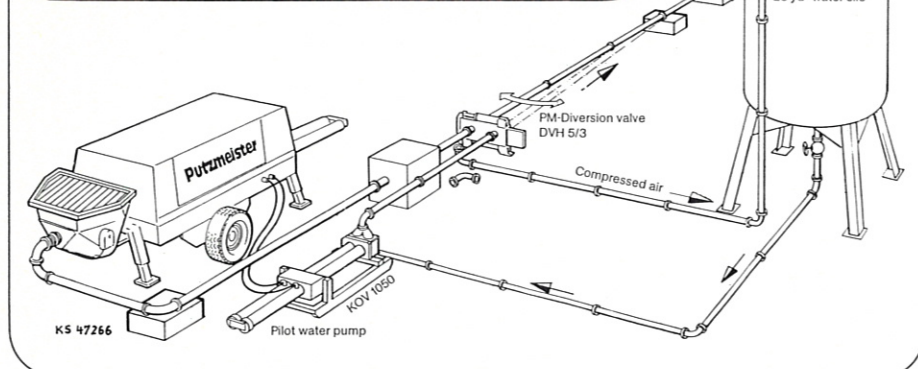


The Better Idea

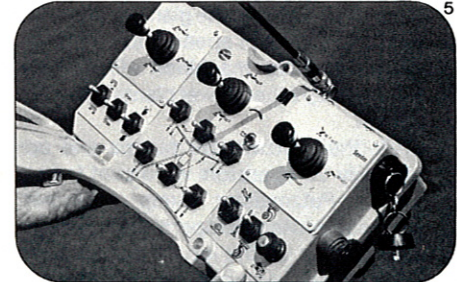
The Putzmeister M 52 with 200 cubic yards per hour capacity, 360 HP engine, on the road to Chernobyl with its lead lined cab. The compact five section Multi-Z-Boom was fully automatic, centrally lubricated, all radio and video controlled, including S-type harsh mix hopper to match most difficult concrete mixes.



The 52 metre five section Putzmeister filling the middle step – steel form – of the pyramid entombment. This unit performed the outstanding 100,000 cubic yards within three months – the lion's share of the whole pumping job.



Heavy-duty trailer pump 250 kW with hydraulically attached clean-out water pump. This is utilized to empty the concrete line with the same speed as that of the main pump. It allows the utilisation of the full line contents. This is a big saving in long distance pumping – another new Putzmeister high tech feature.



Radio remote control for all functions including outriggers In/Out, engine Start/Stop, all volume controls, etc. In addition to this, cable remote control was installed as an alternative to increase redundancy – also because nobody knew if the radio control would function under radioactive radiation.



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