

Power Curbers Inc., Volume 19, Issue 2

Recipient, E-Award for Excellence in Exports, US Department of Commerce



Our Commitment Shows

Creative Solution for Difficult Tunnel Job



5700-C-MAX working in a tunnel 45 meters (50 yards) under ground.

stanbul, Turkey is a beautiful city situated along the Bosphorus River, linking Europe and Asia. This city, rich with history, ranks among the world's largest with 13 million inhabitants. Like so many cities of its size, Istanbul's infrastructure has a hard time keeping up with the volume of motor traffic flooding its streets. The D-100 motorway running east-west across the city's Asian side can quickly turn into a parking lot during rush hour. To ease congestion the city has begun a 32km (20 mile) long tunnel 45 meters (50 yards) below ground, which will bring commuters into Istanbul via train. Avrasya Metro Grubu, a joint venture of the Astaldi, Makyol and Gulermak companies, selected a Power Curber 5700-C-MAX to slip-form U-shaped concrete platforms on the tunnel walls. These large structures will house electrical conduit and serve as maintenance walkways when the tunnel is in operation.



forming the wall was the only option Avraysa averaged 50-60 linear meters per day using more manpower than in their 200 meter slipform days. Concrete Superintendent Halil Ibrahim was thrilled with the production of the C-MAX stating "If we could get more concrete to the machine we could go even faster. Soon we will begin running two shifts to speed production." Ibrahim has also been pleased with the machine's dependability relaying "we haven't had any downtime due to the machine. It's been as good as they promised."

The job has been challenging in several ways. Aside from having to deliver concrete through chutes placed into the tunnel every few kilometers, affixing the concrete to tunnel walls that vary in diameter presented the real challenge. Due to widening the tunnel at train stops, the tunnel walls grow and contract throughout. Power Curbers engineering department designed a mold that varied in both height and width, all hydraulically controlled.

Avraysa will complete the tunnel in 2011 relieving the crowded highways above from some of their daily rush. And Power Curbers will have proven once again why it's the leader in slipform technology.

Shortly after the job began, Avrasya Project Managers Serkan Doguc and Oguz Efe recognized the amount of time and money that would go into hand forming the U-walls and sought out Power Curbers and Turkish dealer, Guran Makina, for a solution. Discussions centered around



Sketch of the tunnel project. The stringline is above the machine at the "10 o'clock" position.

concrete delivery to the machine, steel placement critical to a concrete structure being slipformed onto a sloped tunnel wall, and stringline placement in a confined workspace. After numerous conference calls and a jobsite visit from Power Curbers' engineering department, a Power Curber 5700-C-MAX and 4,545kg (10,000 lb) mold variable in height and width, was chosen to do the job.

Avraysa began pouring with the C-MAX in June and since that time has averaged around 200 linear meters per day, scabbing the U-ditch onto the tunnel walls. At press time, Avraysa had completed over 7,500 linear meters of the project. The machine has been a huge labor savings. In several sections where hand

The custom built mold has to adjust to the varying tunnel diameter and accommodate the steel reinforcement.

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PO Box 1639 Salisbury, NC USA 28145-1639 704-636-5871 Volume 19, Issue 2



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Construction Manager Warren Scattergood used the C-MAX's low speed torque hubs to steadily crawl the machine at 30cm (1') to 40cm (1'4") per minute, allowing for the necessary concrete compaction and vibration in the behemoth mold. The C-MAX was well-equipped to handle such a tall wall. "Even with the auger at full speed, a 3,500kg (7,700 lbs.) mold attached, and running all nine vibrators, I had plenty of horsepower" noted Scattergood. "I checked the engine stats while paving and was running at 70% of capacity."

Scattergood visited the Power Curber booth at World of Concrete in February and was blown away with new features and capabilities of the 5700-C-MAX. Nation Wide ordered a new C-MAX shortly after the show taking delivery in May, and kept it busy throughout the summer pouring barrier, v-ditch, and curb & gutter. Scattergood, who has owned Power Curber 5700 and 8700 series machines for years, is impressed with his new C-MAX. **"The machine has enough power to do most any job.** It holds a good line and height. My men have commented on how perfect our jobs are coming out – the best they've seen."



Due to the height of the wall, the finishing crew required scaffolding for their work.

"My men have commented on how perfect our jobs are coming out – the best they've seen."

POWER PAVERS SPOTLIGHT

Location :	Vnukovo Airport, Moscow
Contractor :	Engeokom
Project:	Expansion of parkin





7.5 meter (25') wide x 40 cm (16") thick

areas for cargo planes.

Paver: Power Paver SF-3000

Results:

Outstanding

Power Pavers SF-3000 paving 16" (40cm) thick slab at Moscow airport.

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Step, **Step** Dam Construction

xotic Concrete of Gauteng, South Africa is no stranger to tackling big projects with its Power Curber fleet. In 2009 using its 5700-C, Exotic slip-formed encasements for electrical conduit in a complex high-speed train project near Johannesburg.

This season Exotic took on the Bedford Dam near Ladysmith. The dam, which sits 1,700 meters (1.05 miles) above sea level, forms the upper reservoir for the Ingula Pumped Storage scheme. The dam comprises a 50 meter (165') high, 577 meter (1,100') long concrete facing supported by a rock filled embankment. The size of the dam is staggering, requiring 982,000 cubic meters (1.3 million cubic yards) of rock fill and another 27,000 cubic meters (35,000 cubic yards) of conventional concrete. Behind this wall, the reservoir will hold 22 million cubic meters (29 million cubic yards) of water.

Beginning at the dam's base, Exotic poured a 40cm (16") by 76cm (30") trapezoidal curb the length of the dam. Behind the curb, rock backfill was placed and compacted. Following the backfill completion, the 5700-*Super*-B, running on the first pass, poured a second curb which partially overlapped the first. After



The Power Curber poured 103 passes across the face of the 165 ft. (50m) tall dam.

"We regularly emptied 6 cubic meter (7.8 cubic yard) trucks in 6-7 minutes."



For each layer, the trapezoidal curb is poured first. Then, rock backfill is placed and compacted behind the curb.

each section of wall was slipformed, the rock fill was trucked in and compacted prior to the next rise being placed. Pass after pass, working up the dam, the Power Curber 5700-*Super*-B poured 42,000 linear meters (26 miles) of concrete facing. The concrete and rock portion of the dam was completed in seven months.

Exotic ran into several jobsite circumstances which made an already large undertaking a real challenge. The machine's production was quite good, slowed down only by the wait for the rock fill to be completed. "On average, we slip-formed 300 linear meters per day and would have done much more if not delayed by the rock fill" reported Quentin Leppan, Director of Exotic Concrete. "We regularly emptied 6 cubic meter (7.8 cubic yard) trucks in 6-7 minutes." Mother Nature also added to the complexity of the job. Temperature shifts in excess of 30 degrees Celsius (54 degrees Fahrenheit) during the workday and wind speeds up to 110km/hour (68mph) aren't uncommon in the Drakensburg Mountains. "The Power Curber performed extraordinarily well under very harsh weather conditions. The 5700-*Super*-B performed with zero standing time. This was important due to the fact that we had a heavy standing rate penalty clause in the contract" explained Leppan. "We definitely recommend the Power Curber for its ease of operation and maintenance."

Exotic Concrete is proof that the versatility of the 5700 series makes it the most productive slip form machine in the world. From curb, to rail projects, to dams, Exotic Concrete is ready for the next challenge and its 5700's are ready right alongside. $\boxed{\mathfrak{n}}$

Sometimes You Just Have To Take a Break

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it takes to help our customers.

Covered in concrete and worn out from another day in the tunnel, Harun Guran, Director of Guran Makina, the Power Curber dealer in Turkey, calls it quits after a successful day's pour. Guran Makina. led by Harun and his father Necati, has been the Power Curber dealer in Turkey since 1975. Concrete splatter on his boots and hard hat and vest in place, Harun "Showed

His Commitment" assisting the Avrasya crew with their 5700-C-MAX. (See related story on fold-out cover.)

Plan for Show Season



March 22 – 26 in Las Vegas, USA South Hall - Booth #9333 www.conexpoconagg.com



January 18 – 21 in Las Vegas, USA Central Hall - Booth #5622 www.worldofconcrete.com



Jimmy Gilker, Extruded Curb Company, Atlanta



immy Gilker – Extruded Curb Company

f Power Curber owner Jimmy Gilker, of Alpharetta, Georgia, we were ower Curber writers hardly know where to start with this one. When this 1977 picspeechless. That's Jimmy second from the right. Who knew Jimmy was ever a

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curb & gutter and sidewalks, and successfully poured risers for numerous stadiums includ-5700-Super-B, and now 5700-C. Extruded Curb focuses on pouring ing the Equestrian Center for the 1996 Olympic Games. Daughter Megan recently joined insuring many more years of pictures, and hopefully better hairstyles Jimmy and wife Kathy have operated Extruded Curb Company since 1979. During that time, Jimmy's owned nearly every slipform model we've ever built including the 3500, 5700, 5700-B. the family business than in the past!



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Knowing the havoc runaway trucks can cause, the Road & Traffic anchored to a 1 meter (39") by 1 meter (39") concrete footer resttrucks losing control at the bottom of the winding road, local he drive down Bulli Pass into Bulli, near Sydney, Australia can be a treacherous one. Concerned with the potential for Authority designed a massive wall, two meters (6'7") tall and ing on 8 meter (26'7") deep piles spaced on two meter (6'7")authorities decided to build a barrier wall to contain traffic.

tance, prime contractor BMD Construction decided to turn the job over to Nation Wide Slipforming, Bradbury, NSW, due to its ability to move in with its Power Curber 5700-C-MAX, slip the job, centers. Fearing runaway trucks entering the jobsite, the R&TA place. Though the wall was designed to cover only a short disdecided to close the road to truck traffic while installation took and get out quickly, minimizing the road closure period. - continued on page 2

Before & Aft



Pouring extruded curb in 1977.

2011 Service Schools **Power Curbers**

and enhance your knowledge of your curb machine. Make plans to attend an upcoming Service School

5700-B Operator's School February 7 & 8

5700-Super-B Operator's School February 10 & 11

5700-C Operator's School February 17 & 18

February 22 – 24 5700-B Mechanic's School

5700-Super-B Mechanic's School March 1-3

5700-C Mechanic's School March 8 – 10

Don't make your flight and hotel arrangements until Class sizes are limited to 20 for the operator's you receive your registration confirmation. schools and 12 for the mechanic's schools.

For more information, contact Technical Support techsupport@powercurbers.com. at 704-647-6141 or

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Company Profi

Return Service Requested