



Conjet's diesel Robot performs surgery on bridges in New York state, USA

Case Stories



Specialist US hydrodemolition contractor IVS Hydro Inc has successfully used the first diesel powered Conjet Robot 432 D high-pressure waterjetting machine in the US to carry out vital concrete surgery during essential repairs to two sets of dual carriageway bridges on Route 15 near the town of Painted Post, New York State.

IVS Hydro, working as the specialist hydrodemolition sub-contractor for bridge renovation prime contractor L C Whitford, used its new diesel powered Conjet Robot 432 D hydrodemolition machine to selectively remove concrete, that did not meet the New York DOT standards, from the bridges' decks, prior to L C Whitford replacing with a new concrete overlay.

L C Whitford, based in Wellsville, New York is carrying out the approximate US 1.4 million dollars of improvements to the bridges for client and bridge owner New

York DOT. L C Whitford removed approximately 35 mm of concrete deck with a milling machine down to just above the steel reinforcing, prior to IVS Hydro following on behind to complete the removal.

"Just start it up, and you're ready to go"

IVS Hydro, based in Waverly, West Virginia, won the US\$83,000 specialist hydrodemolition work, which involved removing about 164 m³ of concrete from the bridge'



"Great manoevrability and it is just to start and go", says to of the operators at the Painted Post project.

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decks with its high-pressure water jetting Conjet Robot 432 D. IVS Hydro used its hydrodemolition Robot to remove the remaining average 2.5 inches (64 mm) of the damaged slab in a single pass and to a level of 25 mm below the bottom of the exposed reinforcing bars. The Robot, supported by a single pump delivering 52 US gal/min (196 lit/min) at a pressure of 20,000psi (1360 bar), selectively removed concrete at the average rate of 0.5 m³/high pressure hour. The 432 D can work with two 750 hp (550 kW) high-pressure pumps, rated up to 20300 psi (1400 bar) and 51 US gal/min (194 lit/min).

"I like the diesel powered 432 D, especially its mobility as you don't need a generator for it on the site, which would have been difficult at this particular site" says IVS Hydro Supervisor Lyle Moore. "You can just start it up, and you're ready to go. It's very easy to move around and did a good job on the bridges. The concrete was moderate to extremely hard, but the 432 D coped with it very well and cleaned away all the concrete to leave an inch clearance under the steel reinforcing."



IVS Hydro carried out the hydrodemolition repairs in two separate visits, which included concrete removal on the entire surface of one set of the dual carriageway bridge decks and patchwork removal on the other set. After hydrodemolition L C Whitford followed on placing a new 140 mm thick layer of concrete prior to a return to traffic.



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Equipment used

- 1 Conjet Robot 432 D
- 1 High pressure pump rated at 52 gpm at 20,000 psi (196 lit/min at 1,360 bar).