

improving the crack resistance of concrete and like materials and for inhibiting the initiation of cracking comprising the steps of adding to a preselected amount of concrete a mixture of fibers having a plurality of deniers, cross-sections and aspect ratios defining a plurality of different types; and mixing the components sufficiently to distribute the fibers thoroughly throughout the concrete.

5458470

PUMPING APPARATUS

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A pumping apparatus of the type comprising twin cylindrical pumping chambers which alternately take in and deliver material to be pumped, the taking in being via ports in a common feeding chamber and the delivery being via a delivery conduit which moves to the port of the chamber which is to deliver. The pumping is carried out by hydraulically-actuated pumping pistons in the chambers, the hydraulic circuitry being adapted to ensure that the pumping piston in that chamber taking in material arrives at the fully charged position before the delivering chamber attains the fully discharged position. In another embodiment, the pumping apparatus comprises a push-over facility, wherein the speed of the pumping is automatically increased to compensate for the drop in flow rate caused by the time taken by the delivery conduit to move from one port to the other. The apparatus gives an exceptionally pulsation-free flow and is especially useful in concrete spraying apparatus.

5460033

CORROSION CONDITION EVALUATION AND CORROSION PROTECTION OF UNBONDED POST-TENSION CABLES IN CONCRETE STRUCTURES

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There is disclosed a method and apparatus for the corrosion condition evaluation of unbonded prestressing elements in post-tension concrete structures. The method involves locating a prestressing element in the structure and providing at least two openings in the structure at positions along the length of the element. One of the openings is an inlet port and the other is an outlet port, each of the ports permitting communication with the gaseous environment within a conduit surrounding the prestressing element. The gaseous environment is accessed through the outlet port by extracting a sample of gas therethrough. The sample is then measured to determine its humidity and thereby evaluate the corrosion condition of the prestressing element between the inlet port and the outlet port. A method and apparatus is also provided for the on-site corrosion protection of unbonded prestressing elements whereby the gaseous environments within the conduits are cyclically pressurized with a dry gas. The protection method may also include programmable control of the dry gas pressurization and feedback of the humidity levels in the conduits for adjusting the parameters of cyclical pressurization so as to maintain a predetermined maximum humidity value in the gaseous environments associated with the prestressing elements of the structure.

5460301

CONCRETE PUMP VEHICLE

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PCT No. PCT/EP92/02881 Sec. 371 Date Sep. 19, 1994 Sec. 102(e) Date Sep. 19, 1994 PCT Filed Dec. 12, 1992 PCT Pub. No. WO93/18991 PCT Pub. Date Sep. 30, 1993. A concrete pump vehicle has a foldable concrete distributing boom arranged on a chassis, a material container arranged next to the rear end of the chassis and a concrete pump connected at its suction side to the material container and at its delivery side to a delivery line that extends over the distributing boom. The material container is provided

with an anti-splashing device that projects over the edge of the opening and ensures that no concrete splashes reach the machine area during operation of the pump. In order to achieve an optimal splash-protection in both the traveling and working states, the anti-splash device has a wall structure that projects over the edge of the opening and a foldable wall hingedly linked to the area of the upper edge of the wall structure. The foldable wall has a swivelling area that overlaps the folded distributing boom and can swivel in a limited range between a traveling position in which it covers the filling opening and a working position, i.e. lifted with respect to the traveling position by 90 degrees C, only when the distributing boom is lifted off its support. The foldable wall can be locked in both positions.

5460649**FIBER-REINFORCED RUBBER ASPHALT
COMPOSITION**

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The invention provides a fiber-reinforced rubber asphalt concrete composition suitable for paving applications and a method of making the composition. Also provided is a method for converting a conventional asphalt plant to one capable of producing the fiber-reinforced rubber asphalt concrete composition of the invention and an apparatus suitable for doing same.