

Specification for proposed Inlet Lock on Mill Creek, Luzerne Co.,

A pit for the Lock foundation, shall be excavated to the depth of two feet below Canal bottom, on the lower level, about 140 feet long, and 36 ft wide, with additions for recesses, puddle trenches, and side slopes, of such form, as the Engineer may direct, having in view the nature of the material to be excavated. — The pit being prepared, foundation timbers, one foot square, shall be laid crosswise on the bottom, eighteen inches apart, except under the Mitre sills, where five shall be laid, touching each other, these timbers to be hewed evenly, on the upper and lower sides, and to be laid to a horizontal plane. (See plan) — The sills being laid, a row of sheet piling shall be carefully placed in each puddle trench, prepared for the purpose. The sheeting at the head, and under the upper Mitre sill, to be formed of two courses of two inch plank, and that under the lower Mitre sill, and at the foot of the Lock, of a single course of plank, carefully jointed if required. — The top of all the sheeting, shall be made perfectly smooth and even, to as to form a water tight joint, with the first course of flooring plank. — The piling trenches, and spaces between the timbers, shall be carefully filled with gravel puddling, wet, mixed to such consistency, and pounded with a heavy maul, or puddled, as the Engineer may direct. — The timber foundation, sheet piling &c. being thus prepared, the walls are then to be started on the rock bottom, and carried up to the height of about six inches above the top of the timbers, when a flooring of truly jointed two inch pine plank, shall be laid, (covering the entire surface between the walls) and well secured, with white oak or Locust pins, one and a half inches diameter, and 10 inches long. The walls may then be carried up, they are to be perfectly plumb on the face, and on the back, between the offsets, which will reduce the thickness, (as represented on the plan) to three feet at top, where they shall be completed with a coping, three feet wide, and one foot thick, hammer dressed, and laid to make close joints. — The character of the masonry, is to be of the best quality, of uncoursed Rubble, laid dry, with vertical joints, and horizontal beds. In the construction of the walls, care must be taken, that large sized, and good shaped stone be procured, (which must be approved by the Engineer before used) and in laying, the whole shall be so bonded, that in each course, there shall occur, at least once in each six feet lineal of face, a header not less than three feet long, 20 inches wide, and 8 inches thick, crossed in the next course, by stretchers of equal size — Also from the rear of the wall, there shall be headers, between each of the face headers, and of similar dimensions, The whole shall be so arranged, as to make a perfect bond throughout the entire work. — In the walls at each 3 feet rise, and 3 feet lineal, must be inserted (as the work progresses) bars of Iron, 4 feet long, and 1/2 by 2 inches square, excepting at one end, 5 inches of which, must be made round, and provided with a screw & nut, to secure the uprights to the walls, 6 inches of the other end must be turned up, to form an anchor round a large stone to be laid for the purpose, these bars must be laid with care, so that the rounded ends shall be ranged perpendicularly over each other, and the face walls, (at their points of contact with all the upright posts, and timbers,) must be dressed smooth and even, so as to give them a firm bearing. — The Mitre sills will next be secured to their proper places, with 12 iron bolts, each 23 inches long, by one inch square, after which, the uprights 4 by 7 inches square, will be attached to the wall, by the iron bars above mentioned, as also, the Quoins, Recess and Breast posts, by 3 bolts