



Siemens-Schuckertwerke
Aktien-Gesellschaft

SIEMENS

Siemens-Bauunion GmbH.
Kommandit-Gesellschaft

PROGRESS ON THE SHANNON

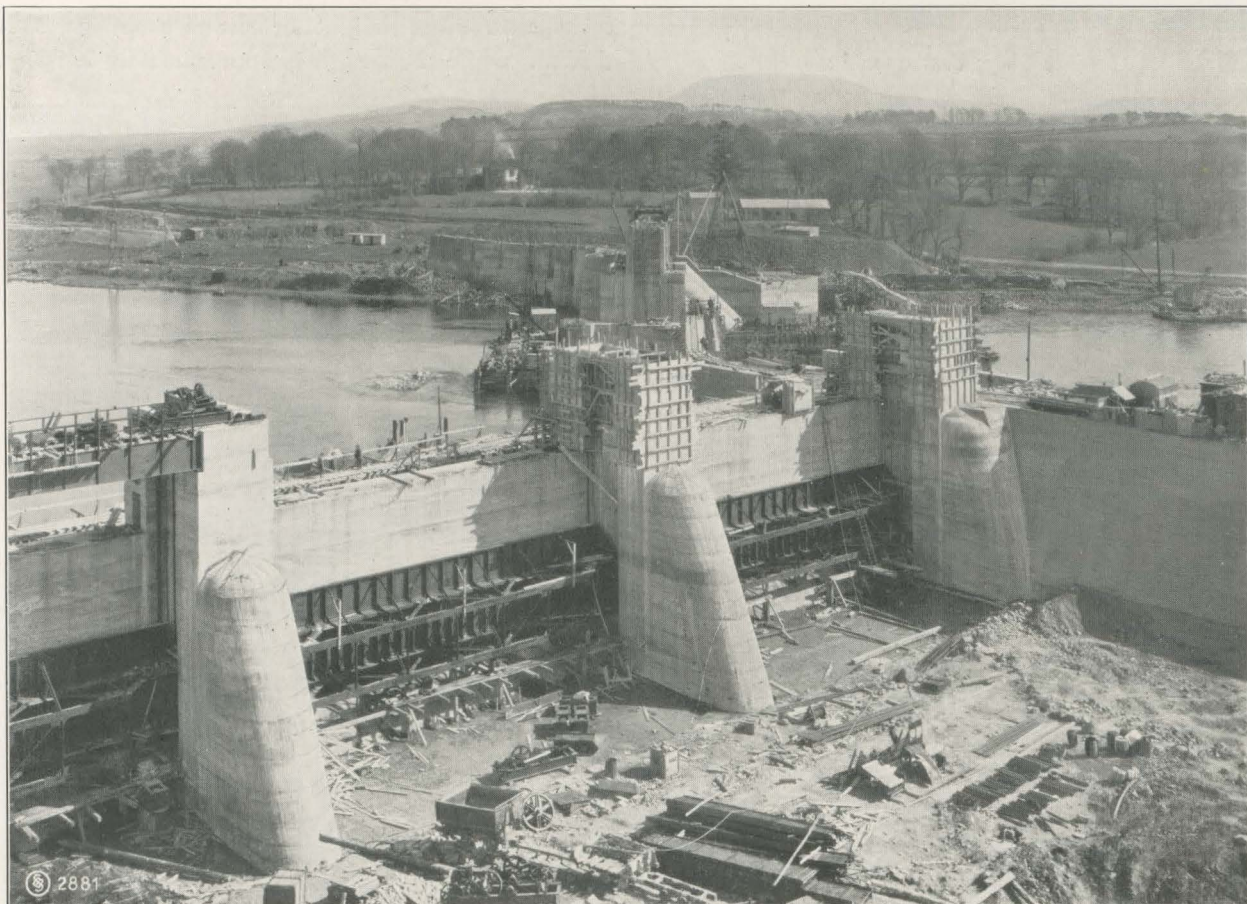
3rd YEAR

NOVEMBER 1929

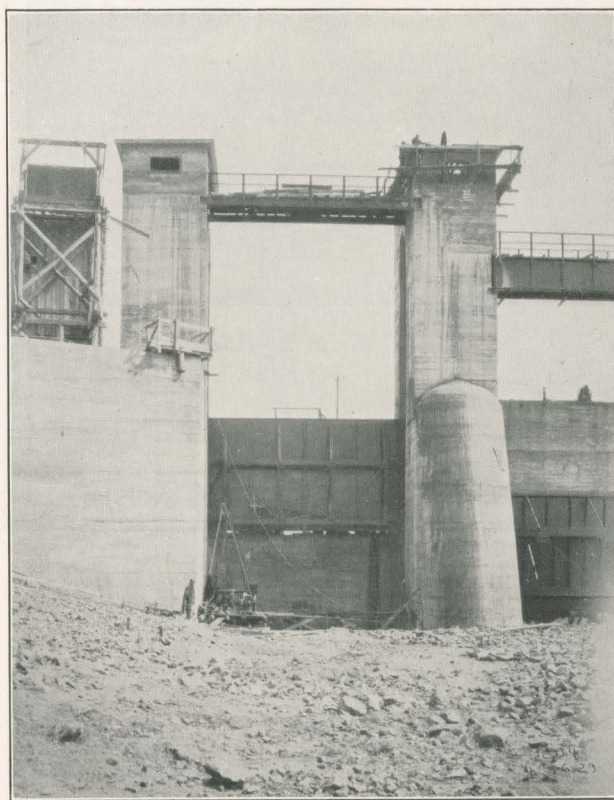
NUMBER 14

The Intake Building

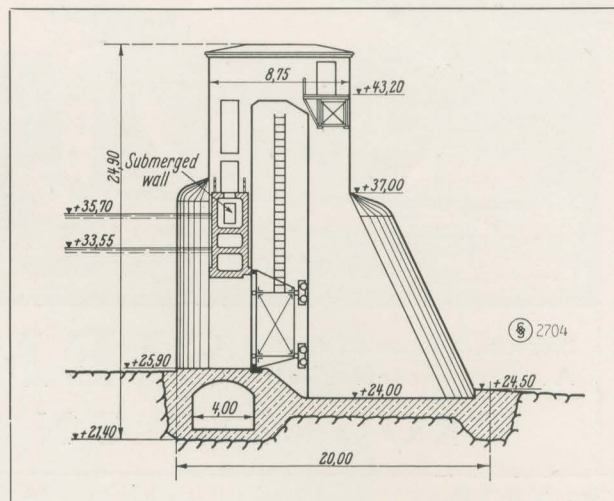
Part II



Erection of the main gates with the finished submerged curtain wall behind them



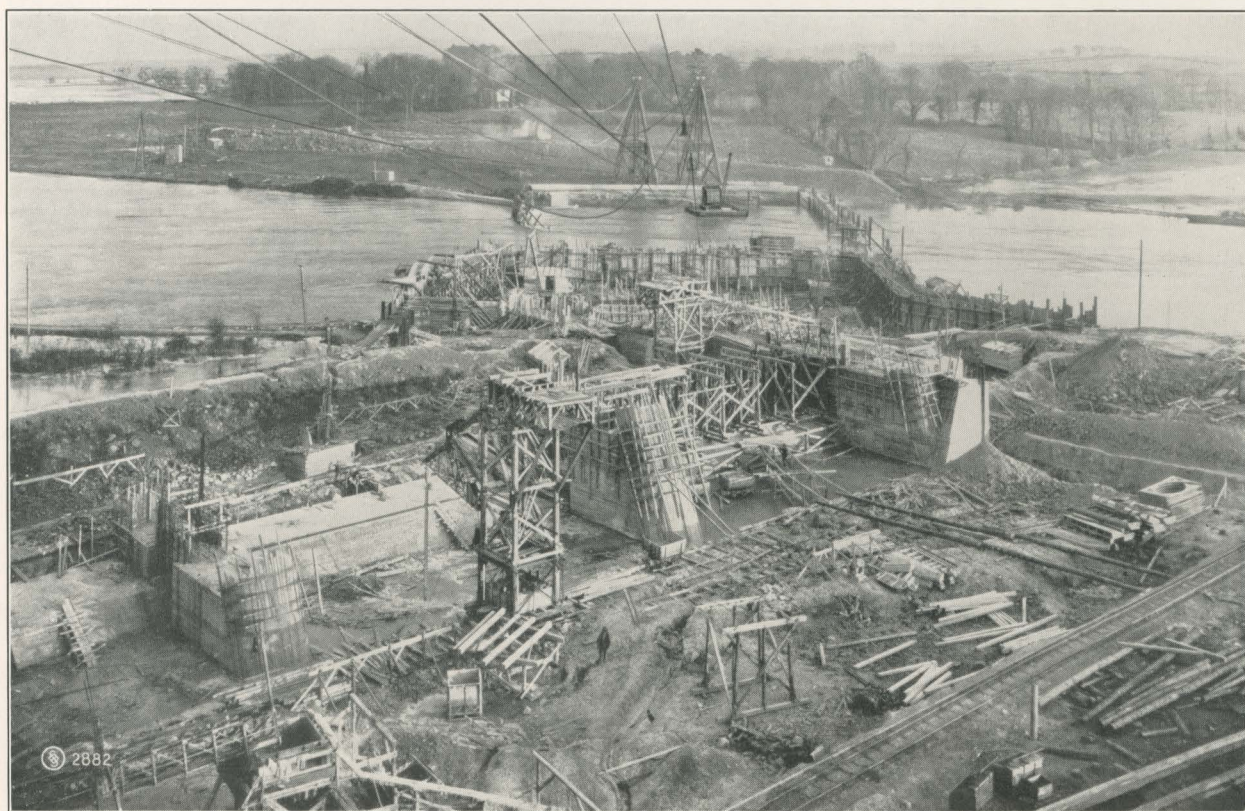
The Ships Pass opening



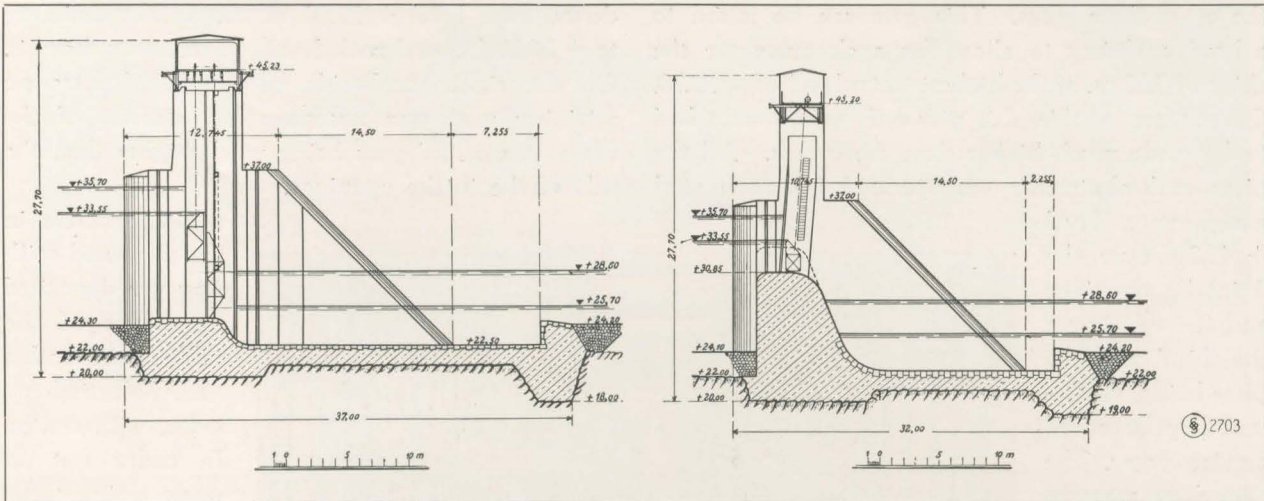
Cross section of Intake Building

The general description of the Intake Building and the submerged wall were given in Part I; other details will now be outlined.

The gates are in steel with lattice girder stiffeners fitted with rollers running on vertical steel guide rails inside the recesses in the piers and suspended on chains. The height of the 3 main gates is 5.70 m., while the length is approximately 27.00 m.



The Intake Building in course of construction

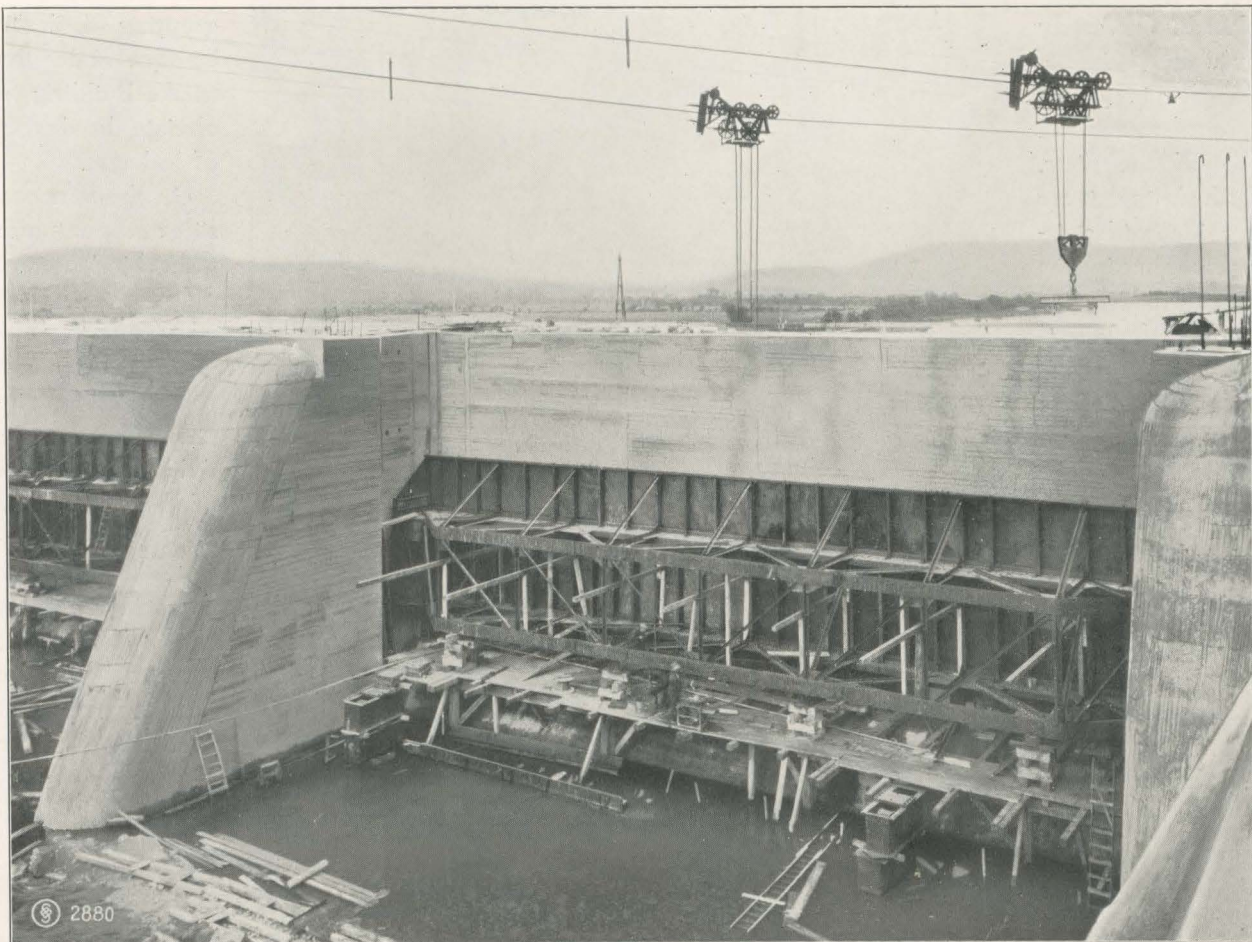


Cross section of Flush-Controller

Cross section of Weir opening

Special water tightening devices have been provided at the top, bottom and sides of the gates where they join with the submerged curtain wall, the sills and piers respectively.

The ships' Pass opening 10 m. wide between the right abutment and the first right hand pier is closed by a single steel lift gate of a lighter construction on account of the length being smaller than that of

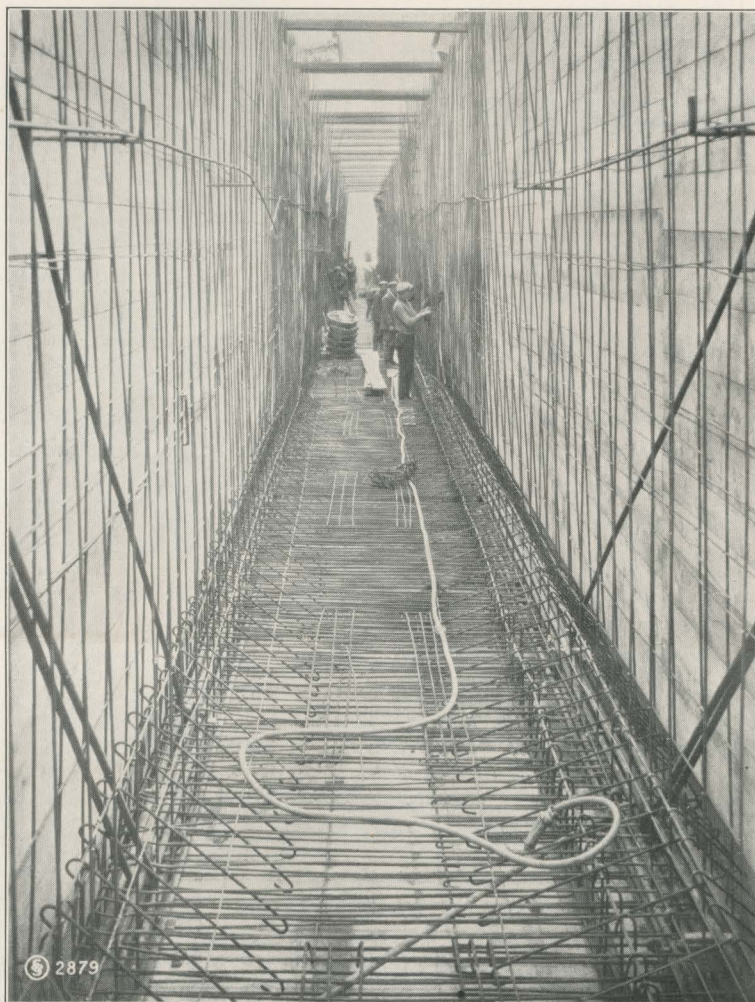


Erection of the main gates

the other three gates. This gate can be raised to a level sufficient to allow for a clearance for the ships of 3.50 m. at the highest water level of + 35.70. On account of this, this pier and the abutment had to be made much higher than the others. All the piers and abutments are spanned by open steel gangways at level + 43.20 over the 3 intake openings and at + 45.70 over the ships' pass, the piers being, surmounted by flat roofed service rooms. The gangways measure 3.50 m. in width and apart from serving as a means of communication, accommodate the electric motors turning the gate winches placed immediately over the chains of the gates inside the service rooms on top of the piers. Both abutments are provided with staircases connecting the gangways with the top of the Head Race banks below at level + 37.00.

The Head Race at the Intake Building to some distance down the canal is in rock cut except for the first 90 m. where the rock level is the same as that of the canal bed, namely + 24.50. To protect the left bank from erosion due to the water entering the canal through the adjoining intake opening, a retaining wall has been built. Its total length is 90 m. and the top gradually slopes

down from level + 37.00 at the Intake Building to + 26.10 (natural rock level) 90 m. away from it. On the right hand side of the Head Race no retaining wall was necessary on account of the sill at the ships' pass being much higher than the sills of the intake openings.



Placing of reinforcement of the submerged curtain wall

The concrete in the piers and spillway was deposited by means of the cable crane and a movable timber tower with chutes. In order not to waste time the mounting of the gates began immediately the piers were concreted to a sufficient level.

A considerable amount of pressure grouting had to be done under the Intake Building to obviate the danger of leakages.

On the Shannon side of the entrance to the ships' pass two dolphins have been provided to safeguard the ships from running into the intake openings; the dolphins are made of heavy timbers anchored to concrete foundations.

The Intake Building is now completed except for several minor mechanical and electrical details.

The general revised elevations of the piers of the Weir and Intake Building (Ref. to pamphlets June 1927 and March 1929) can well be seen from the photos in this pamphlet.