

and the resulting deflection was not allowed to exceed $\frac{1}{400}$ of the span.

Refrigerating Plant

The refrigeration is effected on the cold-air-circulation system, which in this case materially reduced the weight of the refrigerating equipment in the chambers, since the air ducts are very much lighter than direct expansion pipes or brine pipes would have been. The low temperatures are produced on the Lightfoot ammonia compression system by the expansion of anhydrous ammonia. The ammonia compressors, which are in duplicate, are horizontal, double acting, with pistons 14 in. in diameter and a stroke of 28 in., running at 55 r.p.m. and driven by 150 h.p. electric motors. Each unit is capable of keeping all the chambers at 10 deg. F., when the outside temperature does not exceed 75 deg. The two ammonia condensers, placed on the roof of the machinery room, each contain about 4,720 ft. of iron pipe nearly 2 in. in external diameter. The cooling water is pumped over them by two independent 4 in. electrically driven centrifugal pumps, each capable of discharging 300 gallons a minute. The air-cooler batteries, also in duplicate, consist each of a series of vertical corrugated galvanised steel plates, having a total superficial area of 27,500 square ft., arranged over a wrought iron collecting tray and having above them a series of perforated steel trays, into which a constant stream of cold brine is delivered by an electrically driven centrifugal circulating pump. This pump draws the brine from wrought steel tanks below the trays, in which are placed about 5,420 ft. of ammonia direct expansion coils of $1\frac{1}{2}$ in. external diameter, arranged with suitable baffles to ensure efficient circulation of the brine. Air is blown by means of electrically driven propeller fans between the corrugated plates, when it loses its latent heat and thence passes through a system of air trunks into the cold chambers, returning to the batteries to be again cooled. The delivery air trunk from the batteries has a cross-section measuring 10 ft. 9 in. by 5 ft., and is contained in a reinforced concrete shaft. Six branch trunks conduct the air into the cold chambers, and six others conduct it out of them into the two return trunks.

Insulation

As a precaution against the possibility of moisture condensing on the insulation where it comes in contact with the concrete, the interior of all the outside walls, except that on the east side, was coated with $\frac{3}{4}$ in. of Limmer asphalt put on in two layers. This precaution removed the risk of ice forming in the silicate cotton insulation; should such a thing happen, the value of the insulation would be seriously reduced and great expense incurred in cutting out and making good the damage, besides loss of accommodation and revenue during execution of the repairs. With certain exceptions, the whole of the insulation is of silicate cotton filled in between timber "grounds" and boarding.

For handling the produce there are two vertical continuous mutton conveyors and six goods lifts.

The conveyors, which extend from the level of the loading bank up to the top floor, are of the finger tray type, driven by 5 h.p. electric motors, and have a capacity of 650 carcasses a minute at a speed of 100 ft. a minute. At the bottom the carcasses are placed one by one on a wooden table inclined towards the conveyor, and slide down to and are retained on stationary prongs arranged to miss the fingers of the conveyor trays. From this point they are picked up by the next tray as it ascends, and after passing over the top pulleys are landed on a similar series of prongs at the upper level, thence sliding down upon another wooden table on the sorting floor.

Designers' Names

A rather petty piece of malice on the part of a County Council towards the designer of a bridge in Otago is commented on by the "Otago Daily Times" as follows:—"The inclusion of the name of an engineer from a tablet on a public structure, in the planning of which he took a large part may be regarded by some people as a matter of small consequence to any but the individual directly affected. When, however, it involves a breach of faith it assumes more than a personal importance. Such is the case in the studied refusal of the Vincent County Council to recognise the claim of Mr. E. F. Roberts, a young engineer, who has been absent from the country on active service since early in the war, to have his name placed on the tablet on the Luggate bridge. The "Alexandra Herald," which vigorously condemns the action of the County Council in the matter, says that the facts as admitted are as follows:—"The County Council's engineer, being unable to do the work himself asked for and obtained the sanction of the Council to engage an assistant. Mr. Roberts was engaged on the condition that his name would appear on the plans as joint engineer. His name did so appear—as joint, not assistant engineer. That the credit of the plans belonged to Mr. Roberts is also borne out by the fact that the County engineer stated in writing that Mr. Roberts practically did the whole of the work and designed the plans for both the girder and the cantilever type of bridge. In these circumstances it is not in unduly caustic terms that the "Alexandra Herald" comments on the inclusion in the tablet of every name except the one most entitled to appear on it—that of the designer—and on the cold indifference of the County Council to the claims of Mr. Roberts to recognition. It is certainly due to Mr. Roberts that an acknowledgment should be made, in the permanent form provided on the bridge, of the skilled service which he rendered in designing the plans for the structure. In refusing, as it seems to have repeatedly refused, to accord to him this measure of justice, the County Council is treating him very shabbily."

A girl who was running a London bus was making out her first report. Under the heading "Accidents" she stated: "Bumped into an old gent." Under the heading "remarks" she said: "Simply awful."—"Tit-Bits."