

CONCRETE LETTERING

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The use of extensive amounts of lettering and numbering, either incised or raised letters in concrete surfaces which are either precast or job cast, has received a substantial boost in recent years as a result of the availability of standard sizes of letters and numbers. Formerly it was necessary for a pattern craftsman to form each individual letter as a pattern for the concrete work and to make a reverse pattern in the case of raised letters. With the standard reversed letters now available in all sizes from 1/4 inch to 6 inches, legends and dates can be tied in with trademarks and other ornamental inscriptions to achieve almost any desired artistic result.

There are three substantial techniques using letters and numbers in precasting inscriptions in concrete. These may be described as the individual letter method; the plaque method; and the changeable inscription method. We will consider each of these in order and suggest some of the possible applications for each method.

The individual letter method is most appropriate where the inscription is constantly changing; it is quite often used for noting the name and birth and death dates of a deceased person on a concrete burial vault. The typical method is to obtain standard letters with metal pins on the back. These pins can either be driven into soft pine or

hard rubber. An alternate method provides for letters without pins which are mounted on a flat surface with an adhesive. The flat surface is then incorporated either in the form or on the top of an open form at the point where it is desired to locate the inscription.

The chief limitation of this technique results from the fact that a considerable amount of hand labor is required to mount the inscription. In addition, because of the large amount of handling involved with fairly small letters, breakage tends to be high; fortunately, in relationship to the cost of the labor involved, the cost of the letters is insignificant.

When it is desired to obtain a repeated inscription by the individual letter method, it is preferable to use hard brass letters which will provide indefinite service, rather than aluminum letters which have a limited life. Brass letters are usually 1 _ inches high and larger and they are drilled and tapped for bolting directly to forms; this does away with the need for a mounting plaque which inevitably leaves its image in the concrete.

The second method of making letter inscriptions is by the use of a permanent plaque produced by mounting individual letters on a pattern and casting the pattern in hard brass. This casting is then permanently affixed to a mold and reverses the impression of the letters as well as of the plaque into the mold. This is the method usually favored on trademarks, advertising slogans, signs of ownership and other places where the same inscription is cast over a period of time repetitiously. The only negative factor

in this technique is that the image of the plaque is also reversed into the concrete for approximately an eighth of an inch depth and the technique is useful only where repetition of inscription is desired.

The third technique, the changeable inscription method, is used where it is necessary to constantly change the identification in some respects but not in all. The dating or numbering of castings would be a typical example. For this purpose, several patented devices are on the market which provide for locking individual letters into a plaque and unlocking one or two letters or parts of the inscription as required. Since this technique is more difficult to use on the inside of a form than it is on the top, changeable letter inscriptions are generally placed on the top side of the form. It is important that the marking device be permitted to remain on the concrete until a permanent set is attained; otherwise there will be a tendency for the letters to lose their full impression. In the event that raised letters are required rather than incised letters, these can be produced by casting in plaster or other substance a reverse image of the pattern and incorporating this in the form.

Some illustrations of the application of the several techniques should prove useful. The use of individual letters with pins is a very desirable technique in the forming of a cornerstone, for instance, where the inscription can be carefully worked out, the letters tacked or glued onto the surface of the form, and where the value of the end product will more than justify the care taken in preparing the pattern for the letter-

ing. This technique is also very useful in casting street marker signs where it might be desirable to mount semi-permanently the name of a street running in one direction and replace the intersectional streets with their appropriate inscriptions in each form.

The plaque technique is most generally used when a producer would like to advertise his products, as for example, "Made by the XYZ Concrete Products Co."; or where an inscription "Property of the City of Snoavalmie" might be cast into a concrete park bench. One of the most frequent uses of this technique occurs when a paving contractor uses a permanent inscription to mark on a pedestrian pavement "Manu-

factured by the A-B Contracting Company." Other examples include individual brass letters permanently mounted in state highway right-of-way marker forms or in boundary marker forms where a repeated inscription is always used.

The technique of the letter slide, where an inscription is changed and fixed to the casting, is most useful in a prestressing plant for beam and job identification and numbering. On prestressed concrete bridge work many state authorities now require that the date of manufacture of the concrete member be marked in incised letters in the concrete. Castings can also be individually identified by number using the letter slide technique. A variation of

this in a somewhat smaller letter slide is very useful in casting lot markers, particularly for cemetery lots where a numbering system is used and each inscription differs somewhat from all others.

The techniques described here are equally applicable to precast products and to site cast concrete; each technique can be carried out as successfully in the field as in a precasting plant. Each lettering or numbering system presents a certain challenge to the concrete forming expert but the availability of standard reverse letters has so simplified this task that lettering need not be a cause for major concern to any contractor or casting plant operator.



Wood lettering molds are sometimes used for incised characters which are to be cast only once, as in the case of the composers' memorial pictured here. Only close, soft-grain lumber such as select white pine should be used for this purpose, since both hard, open-grain wood and plywood are almost certain to swell and warp. As additional insurance against swelling, the entire mold should receive at least two coats of shellac, as well as a coating of some type of stripping agent just before being used.