

## Letter to the Editor

### Specifications for Asphalt Paving; Alternates for Native and Oil Asphalts

Sir,—A circular copy of a letter addressed to Mr. Frank P. Smith, chairman of the sub-committee on asphalt paving of the American Society of Municipal Improvements, by Mr. C. N. Forrest, chief chemist of the Barber Asphalt Paving Company, under date of September 25th, 1917, has recently been forwarded to members of the American Society. This letter makes the proposal that the society so amend its standard specifications for asphalt paving as to differentiate between the native asphalts and the oil asphalts; to which proposal we are most emphatically opposed, and our objections are stated below:

Mr. Forrest advances several reasons for urging the amendments that he proposes, and these we may take up separately, as follows:

First—"To differentiate sharply between the two kinds of asphalt available for sheet asphalt, *viz.*, native asphalts and oil asphalts."

Reply—We do not know of any difference or differences between the hard crudes or native asphalts and the soft crudes or oil asphalts, of sufficient interest to the paving industry from the viewpoint of quality in the resulting asphalt cements, to make it either necessary or desirable to divide asphalt pavements into two classes along this line. The native asphalts must be manufactured into paving cements by refining and fluxing; while the oil asphalts may be so manufactured by refining only. No reason has yet been advanced that convinces us a pavement properly laid of one class of material will last longer or give better service than a pavement properly made from material of the other class.

Second—"To identify, for purposes of record, the kind of asphalt entering into any specific piece of pavement."

Reply—Materials may be identified, for the purpose of record, in other and more desirable ways. The contractor should be required to furnish the asphalt cement manufacturer's certificate of materials and methods; and the city should reserve to itself the right to inspect both the manufacturing plant and its manufacturing records. The sample submitted at the time of bidding, or directly after, should be carefully tested and all shipments checked against such tests. Careful municipal records, showing gradings of aggregate, bitumen content, temperatures, etc., should be kept. These things will make a real record, while the specifying of a given type of asphalt will not even prove that the type specified was used in the pavement. A specification is not a record of work executed, but of work proposed to be done. It establishes promises, not accomplishments.

Third—"To permit municipalities to select the kind of asphalt which, in the judgment of their officials, is best suited for the type of improvement under consideration."

Reply—Standard specifications, we believe, are an attempt to get away from the condition where the officials of each city had to select the kinds of asphalt that, in their judgment, were best suited for the type of improvement under consideration. Most such officials have no proper facts upon which to base such a judgment, and we know only too well how often such judgments are even now based upon improper facts. The differentiating specifica-

tions suggested would make the course of the latter judgments easier to travel by seeming to have the justification of the American Society; where, at present, the official adopting preferential or monopoly-creating specifications has his own explaining to do.

Fourth—"To prevent condemnation of asphalt pavements as a type because of the failure of an unrecorded kind of asphalt to function satisfactorily."

"Reply—As a real record of the asphalt used in a given pavement can be easily kept otherwise, as a specification is not a real record of what actually went into a pavement, and as pavements improperly laid with both types of asphaltic material have already scored discreditable failures in some instances, we see no merit in the fourth reason advanced for the adoption of specifications differentiating pavements to be made with native and with oil asphalts.

Fifth—"To meet the existing demand of many municipalities preferring specifications which differentiate between native and oil asphalts."

Reply—We do not know of any legitimate demand now being made for specifications differentiating native from oil asphalts. Except for clever promotion work, probably no such demand would exist at all. If some of those city officials now clamoring for differentiating specifications would consult an independent asphalt paving chemist and engineer, instead of dependent salesmen, to find out what is wrong with their pavements, the cities for which they work would probably receive some material benefit, both in the quality and the economy of future work.

Mr. Forrest states that "it is well known that there are several essential points of difference between the native and oil asphalts which can not be covered in a blanket specification for both kinds." We do not know several such points that are essential to a degree that would justify the society in adopting specifications differentiating asphalts along the lines suggested, and we presume there are others quite as ill-informed as ourselves. Therefore, we would request that Mr. Forrest state in detail the points he has in mind and the reasons they are essential in the degree claimed. Coming from Mr. Forrest, we shall at least be certain our time will not be wasted in arguments that are merely selling talk; the society is entitled to something more.

Specifications of the blanket type are always unsatisfactory at the best; but why differentiate along the lines of native and oil asphalts? Also, would a blanket specification covering either all the native asphalts or all the oil asphalts be any more satisfactory? It would be more logical, considering the public's point of view, to draw a specification for each one of each type of the asphalts, though at present this does not seem desirable.

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Montreal, P.Q., October 29th, 1917.

In more than one respect coal is the most important mineral mined in India. It gives direct employment to about 180,000 persons, its value at the place of consumption in India or the port of export is greater than that of all the other minerals taken together, and nearly the whole quantity is used in industrial processes in the country, exports to places outside India being for the last six years under 5 per cent. Practically every industry in India is dependent upon coal for the production of power.